IPART
New South Wales

Independent Pricing and Regulatory Tribunal

Network Operator and Retail Supplier License Application Form:

Water Industry Competition Act 2006 (NSW)

Application Form

June 2013

Northern Water Solutions
Cobaki Estate

PUBLIC VERSION

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

Gary Drysdale	(02) 9290 8477
Narelle Berry	(02) 9113 7722
Kaye Power	(02) 9113 7753

Independent Pricing and Regulatory Tribunal of New South Wales
PO Box K35, Haymarket Post Shop NSW 1240
Level 15, 2-24 Rawson Place, Sydney NSW 2000

T (02) 9290 8400 F (02) 9290 2061

www.ipart.nsw.gov.au

Contents

1 Instructions

The *Water Industry Competition Act 2006* (NSW) (the WIC Act or Act) came into operation on 8 August 2008 and, among other things, provides for the licensing of private sector water utilities.

Under the WIC Act, the Minister for Finance and Services (the Minister) is responsible for granting the following licenses:

- **Network Operator's Licence** for constructing, maintaining and operating water industry infrastructure.
- **Retail Supplier's Licence** to supply water or provide sewerage services, by means of water industry infrastructure.

The Independent Pricing and Regulatory Tribunal of NSW (IPART) is responsible for receiving and assessing Licence applications and for the ongoing administration and enforcement of licences.

1.1 Who should complete this form?

This form is for corporations that wish to become licensees under the WIC Act. Under section 8(1) of the WIC Act, an application for a licence can only be made by or on behalf of a corporation.

A copy of the WIC Act is available on the NSW Government's legislation website at www.legislation.nsw.gov.au.

1.2 Information on filling out and submitting this form

1.2.1 General instructions to applicants

The questions asked in the application form are designed to allow you to establish your capacity and expertise to carry out the proposed activities in compliance with your licence (if granted), the WIC Act and the *Water Industry Competition (General) Regulation 2008* (NSW) (the General Regulation).

Your response should include sufficient information to demonstrate an extensive understanding of the activities you are proposing to undertake, the issues or impacts associated with these activities, and the processes required to address or manage these issues or impacts. The information provided in your application should reflect the type, size, complexity and level of risk associated with the activities to be licensed.[1]

[1] For example, a recycled water scheme involving a single source, basic treatment, and single pipeline to one commercial customer will be less complex and therefore require less supporting information than a multi- source scheme, with complex treatment and a pipe network ultimately supplying a mix of commercial and residential customers.

Following each question in the application form is an explanation (in italics) as to why we have requested the information and how it will be assessed in relation to the requirements of the WIC Act and the General Regulation. These explanations are provided as a general guide to help applicants understand the main ways in which the information sought is likely to be relevant for the assessment of their application. However, we may use the information provided for any other relevant purpose when we assess your application.

We will also have regard to the following licensing principles, in accordance with section 7 of the WIC Act:

- the protection of public health, the environment, public safety and consumers generally
- the encouragement of competition in the supply of water and the provision of sewerage services
- the ensuring of sustainability of water resources
- the promotion of production and use of recycled water
- the promotion of policies set out in any prescribed water policy document
- the potential for adverse financial implications for small retail customers generally arising from the activities proposed to be covered by the licence, and
- 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.

Where more extensive information is required in response to a question (ie, example plans), the information is requested to be included as an appendix to the question. Unless indicated otherwise the appendices must be attached to the application to ensure there is sufficient information for IPART to make an assessment in accordance with the relevant legislation. An application that does not attach the necessary appendices may be considered to be an incomplete application resulting in a delay in processing. All appendices should be labelled as per the instructions.

1.2.2 Confidential information

IPART uses open public processes to consider applications and must invite submissions on applications from the public. Unless they are confidential, we treat your applications and appendices as public documents. We publish these documents on our website and distribute them to interested parties as appropriate.

Subject to our disclosure obligations (referred to below), we will treat as confidential the financial information that we request for the purposes of your application. We may share that information with our consultants, but will do so on a confidential basis.

You should let us know if you consider other aspects of your application to be confidential so that we can discuss your confidentiality concerns with you.

You should provide separate confidential and public copies of your application. In particular, you should provide:

- **a confidential application**, which is clearly marked "confidential" and clearly identifies the confidential information that should not be publicly released, and
- **a public application,** which does not contain the confidential information, for publication and distribution by IPART.

If we agree with all your confidentiality concerns, we will only publish the public application on our website. However we will furnish a copy of the confidential application to the Ministers specified by the WIC Act and General Regulation, as we are required to do under section 9(1)(b) of the WIC Act.

Please note that third parties may apply under the *Government Information (Public Access) Act 2009* for access to applications, including applications that contain confidential information. If we receive such an application, we will determine disclosure in accordance with that Act.

Where an application includes personal information, IPART will deal with that information in accordance with the information protection principles set out in the *Privacy and Personal Information Protection Act 1998*.

1.2.3 Is there an application fee?

The application fee for a network operator's licence is $2,500. The application fee for a retail supplier's licence is $2,500. If you are applying for both a network operator's licence and retail supplier's licence, the fee is $5,000.

The appropriate licence application fee should be paid either by cheque made payable to the Independent Pricing and Regulatory Tribunal of NSW or by electronic transfer to:

Westpac Banking Corporation BSB:
032-001
Account No: 205717 Reference:
WICA app

If payment is made electronically, please provide a copy of the electronic transfer receipt with your licence application.

Please note that once an application has been submitted, the application fee(s) will not be refunded if the application is rejected or withdrawn.

1.2.4 How do you submit the application?

You must submit one hard copy and one electronic copy of each of the versions (public and confidential) of the completed application form and appendices. You may wish to password protect your electronic confidential version. If so, we will contact you to request the password following submission of your application.

The electronic copy should consist of separate files for the application and the appendices for each of the sections. Where there is more than one appendix in a section, they should be combined into a single electronic file. For example, section 3 will have appendices 3.2.1 and 3.6.1 – these appendices should be combined into one electronic file. A summary of the appendices is included in attachment A to this form.

When you have completed your application, you should mark it to the attention of the Water Licensing team, and submit it to IPART in person, via email or via post:

In person	Via email	Via post
Attention: Water Licensing	Attention: Water Licensing	Attention: Water Licensing
Independent Pricing and Regulatory Tribunal	Independent Pricing and Regulatory Tribunal	Independent Pricing and Regulatory Tribunal
Level 15		PO Box K35
2-24 Rawson Place Sydney NSW 2000	*compliance@ipart.nsw.gov .au*	Haymarket Post Shop NSW 1230

1.3 If you require further information

If you have further questions about your application, you can contact the Water Licensing team in IPART by:

- emailing: compliance@ipart.nsw.gov.au, or
- telephoning: (02) 9290-8400 (general number).

We encourage you to discuss your licence application form and obtain assistance from the Water Licensing team *prior* to formally submitting your application. Once we receive your application, we will assign you a contact officer, who will manage your application and remain in contact with you throughout the process.

1.4 Where to from here?

1.4.1 What will happen next?

IPART will check that your application form is complete and that you have supplied all the necessary information and supporting documentation.

If your application is complete, we will undertake consultation and a detailed assessment before preparing a recommendation to the Minister to either grant or refuse the licence(s).

If the application is incomplete, it will not be processed and you will be asked in writing to supply the outstanding information. This is likely to delay the detailed assessment of your application. We may also request additional information in response to submission or our detailed assessment of your application.

If you wish you can withdraw your application at any stage during the process.

IPART uses our best endeavors to process applications quickly. Complete applications are generally processed between 6 to 8 months depending on the complexity of the project.

1.4.2 Audits and ongoing compliance obligations

Licensing obligations are set out in the *Water Industry Competition Act 2006* (NSW) and *Water Industry Competition (General) Regulation 2008* (NSW), which also sets out standard licence conditions.

IPART has also prepared a series of fact sheets explaining the audit and compliance obligations following the grant of a WIC Act licence.

It is particularly important to note that the granting of a network licence does not allow the licensee to bring any *new* water or sewerage infrastructure into immediate commercial operation. **A licensee must also obtain approval from the Minister before commencing commercial operation of new water or sewerage infrastructure.**

For further information, please refer to the following fact sheets or contact the Water Licensing team at IPART on the details provided above.

Fact sheets:

- *Summary of Audit Framework*
- *Commercial operation of new infrastructure*
- *Register of licences and other publicly available information*
- *Potable water services - public health requirements*
- *Water recycling - public health requirement.*

These documents can be downloaded from the IPART website, at http://www.ipart.nsw.gov.au/water/private-sector-licensing/private-sector- licensing.asp.

2 Contact Information

To be completed by all applicants

2.1 Contact Details

You need to nominate a primary contact person for all communication and correspondence between the corporation applying for a license and IPART. This person must be a senior officer of the applicant corporation and not an external consultant. Ideally, this person's role within the corporation will be related to the project/activity to be licensed, and they must have the authority to speak on behalf of the applicant.	
PRIMARY CONTACT	
Full name	
WAYNE WILLIAMSON	
Position title	Email address
CEO	
Business telephone number	Mobile telephone number
Postal address for correspondence	
ADDRESS	
PO BOX 977	
NOOSA HEADS	
STATE	POST CODE
QLD	4567
SECONDARY CONTACT	
☒ Please check if the secondary contact should be copied into all correspondence.	
Full name	
Kim Williamson	
Position title	Email address
Office Administration	
Business telephone number	Mobile telephone number
Postal address for correspondence	
ADDRESS	
PO BOX 977	
NOOSA HEADS	
STATE	POST CODE
QLD	4567

3 General Information

To be completed by all applicants

3.1 Applicant Details

3.1.1	Please provide the following information for the corporation applying for the licence. Please note an application may only be made by or on behalf of a corporation (s8(1)).

Your response to this question is used in ASIC, ITSA and CATSI searches conducted as part of our assessment of your application. The information will also be used to specify the corporation that holds the license (Act s 6(1) (a)), if a license is granted.* ** These are searches of databases kept by the Australian Securities and Investments Commission (**ASIC**), Insolvency and Trustee Service Australia (**ITSA**), and Office of the Registrar of Indigenous Corporations (for corporations registered under the Corporations (Aboriginal and Torres Strait Islander) Act 2006 (**CATSI**))*	
Corporation name	
NORTHERN WATER SOLUTION PTY LTD	
ABN/ARBN	ACN
76 611 142 655	611 142 655
Corporation's registered office	
ADDRESS	
Level 1, 46 Cavill Avenue	
Surfers Paradise	
STATE	POST CODE
QLD	4217
Corporation's principal place of business	
ADDRESS	
Level 1, 46 Cavill Avenue	
Surfers Paradise	
STATE	POST CODE
QLD	4217
3.1.2	Please provide the following information for the Chief Executive Officer and ALL Directors of the applicant corporation
Your response to this question is used in ASIC, ITSA and CATSI searches to determine that the named individual(s) are not disqualified individual(s) and that the applicant corporation is not a disqualified corporation (Act, s10 (3)). The information will also be used to assess, among other things, the applicant corporation's organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).	
PERSON ONE	
Full name	WAYNE WILLIAMSON
Position title	CEO
Date of birth	

Residential address	
ADDRESS	
STATE	POST CODE
PERSON TWO	
Full name	William Robert Ell
Position title	Director
Date of birth	
Residential address	
ADDRESS	
STATE	POST CODE

PERSON THREE

Full name Robert Ell
Position Title Director
Date of Birth
Residential Address
State
Postcode

3.2 Activities for which a license is sought

Please check ALL the applicable boxes for which you are seeking a license

Your response to this question will be used to specify the activities that the applicant corporation will be authorized to undertake (Act s.6 (1) and s.11 (1)), if a license is granted. The response to this question is a requirement for any network operator's license application (Reg cl.6 (1) (a) and 6(2)(a)) and for any retail supplier's license application (Reg cl.10(1)(a) and 10(2)(a)).

3.2.1	**NETWORK OPERATOR** (to construct, maintain and operate water industry infrastructure)
	☒ Water infrastructure - drinking water
	☒ Water infrastructure – non potable water (including recycled water)
	☒ Sewerage infrastructure
3.2.2	**RETAIL SUPPLIERS** (to supply water or provide sewerage services)
	☒ Supply of drinking water
	☒ Supply of non-potable water
	☒ Provision of sewerage services

3.2.3	Have you commenced any of the activities for which you are seeking a licence?	
For example, you may have commenced construction, commercial operation and/or supply of services to customers.		
	☐ Yes please go to 3.2.4	☒ No please go to 3.2.5

3.2.4	Please briefly describe the activities that you have commenced including the date(s) on which they commenced.
Your response to the following question will be used to determine whether transitional arrangements apply to the project.	
N/A	

3.2.5	Please outline the approximate date you anticipate commencing the activities for which you are seeking a license, if they have not yet commenced. For example, construction of the network infrastructure July 2014, construction of the water treatment plant December 2014, operation of the water treatment plant June 2015, supply to small retail customers August 2015.

Your response to the following question will be used as background information for the project.

Leda Manorstead Pty Ltd ("Developer"), is a subsidiary of Leda Holdings Pty Ltd developing a new residential development made up of 17 residential precincts, commercial areas, open space and sports fields to be known as the Cobaki Estate, located at Piggabeen Road Tweed Heads and is adjacent the Tugun bypass on the Gold Coast HWY and the Gold Coast Airport, NSW and in the local Government area of the Tweed Shire Council (TSC)

The development will comprise of approximately 5,500 residential lots and commercial areas. Refer to the Yield table below,

Cobaki Estate Proposed Equivalent Tenement Yield

Precinct	Area (Ha)	ET/Dwelling	No. of ET
Residential Development			
P1	16.928	1 ET/Dwelling	338
P2	28.004	1 ET/Dwelling	560
P3	10.564	1 ET/Dwelling	211
P4	3.268	1 ET/Dwelling	40
P6	15.389	1 ET/Dwelling	307
P7	32.825	1 ET/Dwelling	656
P8	16.96	1 ET/Dwelling	339
P9	22.12	1 ET/Dwelling	442
P10	21.854	1 ET/Dwelling	437
P11	15.28	1 ET/Dwelling	305
P12	21.95	1 ET/Dwelling	439
P13	28.94	1 ET/Dwelling	578
P14	7.876	1 ET/Dwelling	157
P15	11.691	1 ET/Dwelling	234
P16	13.32	1 ET/Dwelling	266
P17	8.256	1 ET/Dwelling	165
SSPP Balance	1.322	1 ET/Dwelling	26
Subtotal	276.55		5,500
Non-Residential Development			
Precinct 5 – Commercial	15	0.003ETm2	450
Precinct 6 - School	3.5	1000 Students x 0.03ET/Student	30
SSPP Club	2.5	0.03ET/m2	75
SSPP Child Care	0.5	150 Children x0.06ET/Child	9
Open Space	20	Irrigation as per Sporting Field Requirements	
Subtotal	56.5		564
Total	333.047		6,064

Northern Water Solutions Pty Ltd (NWS) has been engaged by the developer (LM) to establish a Private Water Utility under the WIC Act (2006) NSW.
NWS is currently making this application to IPART NSW for a Network Operator and Retail License for the Cobaki Estate development to design, construct, own, operate and retail the drinking water, recycled water and sewerage infrastructure to deliver these services to the end customers.
("The Cobaki Scheme").
The private Water Utility will be owned and operated by Northern Water Solutions Pty Ltd which is wholly owned by Leda Holdings Pty Ltd.

The developer's time frame requires NWS to be able to provide compliance certificates for the purpose of subdivision registration from September/October 2017.

NWS would need to be a licensed Network Operator and Retailer for the Cobaki Estate Scheme in accordance with Part 3A of the Water Industry Competition (General) Regulation 2008 (WICR) and section 109j (l) (el) of the Environmental Planning and Assessment Act 1979 (NSW) ("EP&A Act") prior to the above date to be able to provide the supply of these services to small retail customers by February 2018 for Precincts 6 & 7.

Note: The drinking water supply and recycled water supply up to the first 500 lots will be provided by being directly connected to the TSC drinking water rising main until Stage A of the WWTP is completed in December 2018.

The Cobaki Estate Scheme Infrastructure:
The infrastructure will be constructed over four stages A, B, C & D to service the 17 proposed residential precincts, commercial precinct, educational precinct, open space and sports field areas. The estimated drinking water, recycled water and the pressure sewer infrastructure commencement date will be in April 2017 and completion of the first lots by August/September 2017.

Stage A:

Sewerage Services,

To enable servicing of the first 500lots there will an interim period before the WWTP in Stage A located at 425 Piggabeen Road, Lot 1 DP874316 will be constructed, commissioned and validated to commence commercial operation by December 2018. Up to the first 500lots the pressure sewer network will discharge directly to the new Sewerage Pump Station (SPS) to be built and located at the Cobaki Parkway and Sandy road roundabout by LM and upon completion and sign off will be gifted to TSC to own and operate. The new SPS will be connected to the existing TSC sewerage network located in Piggabeen road.
When the MBR WWTP in Stage A is completed and has been authorized to commence commercial operation the pressure sewer network will be connected to the new pressure sewer rising main from the development that is connected to the WWTP site. (Note: All waste water generated from the Cobaki Estate development will be treated on site by the MBR WWTP after the first 500 Lots in Stage A.)
The discharge of waste water for up to the first 500lots will be under a trade waste agreement with the TSC. NWS will provide tanker support under an approved IOP in the case of an emergency during this period.
Stage A of the WWTP proposed start date for construction on site will be October 2017 (or when the Network Operators license is issued by IPART) and

Will be commissioned, receive validation and be signed off to commence commercial operation by December 2018.

The staging of the WWTP will be as follows,

Stage - A 0 to 1,636 lots December 2018 to 2022 Stage - C 1,637lots to 4,911 lots 2023 to 2028 Stage - D 4,912lots to 6,064 lots 2029 to 2033

For more information Refer to WWTP Layout Staging Plan in Appendix 4.3.10(d).

The pressure sewer collection network will be rolled out by the developer (LM) as required and after quality assurance checks and ITPS have been signed off by NWS or its representative the developer will gift the infrastructure to NWS to own and operate. Note: After the WWTP in Stage A is validated for commercial operation the new SPS will provide the emergency discharge facility for treated effluent only from the Cobaki Estate from the WWTP permeate storage tank via the discharge rising main to the TSC SPS under a trade waste agreement with TSC. This will mainly occur during wet weather events (Approximately 132 days PA) when the demand on the recycled water network will be reduced and there could be excess treated effluent available.
Note: It is envisaged the pressure sewer infrastructure construction start date for Stage A in precincts 6 & 7 will be in February/March 2017.
NWS will install the pressure sewer infrastructure under an EPA EPL infrastructure license. NWS is able to rely on exemptions in clause 1 of schedule 3 to undertake the Piping Works within the work area prior to being issued the Network Operators license under the WIC Act as it meets the exemption criteria set out above.

For more information refer to the Cobaki Water Balance Report in Appendix 4.1.6(a).

Drinking Water Services:

The drinking water supply will be sourced from the TSC network under the Water Management Act 2000 section 305 agreement between TSC and NWS.
The drinking water supply will fill the 8ML of storage tanks located at the WWTP site. The variable speed pump stations will maintain the flow and pressures to the drinking water network to meet the average daily flow, peak hourly flow and the peak instantaneous flows 24/7 to the Cobaki Estate development.

The drinking water infrastructure will be rolled out by LM and after sign off of quality assurance and ITPs by NWS or its representative the drinking water network will be gifted to NWS to own and operate.

Note: It is envisaged the drinking water infrastructure construction start date for Stage A in precincts 6 & 7 will be in February/March 2017. NWS is able to rely on exemptions in clause 1 of schedule 3 to undertake the Piping Works within the work area prior to being issued the Network Operators license under the WIC Act as it meets the exemption criteria set out above.

For more information refer to the Cobaki Water Balance Report in Appendix 4.1.6(a).

Recycled Water Services:

The recycled water reticulation constructed in Stage A will be initially serviced by drinking water until up to the first 500 lots have been connected and the AWTP has been constructed, commissioned and received validation to start commercial operation in Stage B by July 2019.

The recycled water infrastructure will be rolled out by LM and after sign off of quality assurance and ITPs by NWS or its representative the drinking water network will be gifted to NWS to own and operate.

Note: It is envisaged the Recycled Water infrastructure construction start date for Stage A in precincts 6 & 7 will be in February/March 2017. NWS is able to rely on exemptions in clause 1 of schedule 3 to undertake the Piping Works within the work area prior to being issued the Network Operators license under the WIC Act as it meets the exemption criteria set out.

For more information refer to the Cobaki Water Balance Report in Appendix 4.1.6(a).

To provide operations and servicing of the scheme, during the construction of the WWTP site in Stage A it will include the Operations Building, the WWTP building comprising of Stage A membrane bio reactor plant, UV disinfection, chemical dosing, 2ML permeate storage, 2 ML Recycled Water Storage, 2ML of Drinking Water Storage, 340 KL Redundancy tank, Variable Speed Recycled Water & Drinking Water Pump Stations and emergency discharge pumps & rising main to the TSC sewer metered connection point at the Cobaki Parkway & Sandy Road roundabout SPS.

An AWTP will be constructed in Stage B with Ultra Filtration, UV & Chlorine Contact tanks.

Note: The drinking water supply from the TSC metered connection point located at the Cobaki Parkway & Sandy Road roundabout will provide feed water to the 8ML of storage tanks, back up residual chlorine dosing and variable speed pump stations to maintain flow and pressure throughout the Network and provide for the fire hydrants installed on the drinking water reticulation system throughout the development build out.

The construction of the 4 stages of the WWTP A, B, C and D will depend on the rate of sales.

The construction of the reticulation infrastructure for the Drinking Water, Recycled Water & Pressure Sewer will be installed by the developer as required during the staged buildout. The developer will receive practical completion once the quality assurance inspections and ITPs have been signed off by NWS or its chosen representative. Once practical completion has been achieved the infrastructure will be gifted to NWS to own, operate and maintain which forms part of the Network Operator License application.

The proposed dates for the commencement of providing commercial services to precincts 6 & 7 are:

- Drinking water for the first 500 lots in Stage A will be from January/February 2018 and after Stage A of the WWTP has been completed and approved for commercial operation in December 2018 the drinking water and recycled water supply will be provided from the NWS WWTP.

- Recycled water network for the first 500 lots will be supplied from the drinking water network in January/February 2018. Upon construction and completion and validation for commercial operation of the AWTP in Stage B the recycled water network will be supplied from the recycled water storage and pump stations located at the WWTP site from July 2019.

- The pressure sewer collection network will discharge all waste water to the new SPS located at Cobaki Parkway and Sandy road roundabout under a trade waste agreement with TSC from January/ February 2018 until Stage A of the WWTP is constructed, commissioned, validation and approval to commence commercial operation in December 2018.
For more information refer to,

- Appendix 3.2.5(a) Development location plan
- Appendix 3.2.5(b) Development precinct plan
- Appendix 3.3.5(c) Development Plan and ET table
- Appendix 3.3.5(d) Development Plan and staging table

3.3 Insurance Details

3.3.1	What types of insurance do you have or intend to obtain particularly in relation to the activities for which you are seeking a license? Provide details of the level (i.e. amount) of insurance you are covered or intend to be covered by for each type. Include a summary of itemized inclusions and exclusions for each type of insurance you hold. **Attach copies of all relevant insurance certificates in Appendix 3.3.1.**

Types of insurance may include but are not limited to professional indemnity insurance, public liability insurance, workers' compensation and product liability insurance.

Your response to this question will be used to ascertain whether the applicant corporation has made appropriate arrangements with respect to insurance (Act s10 (4) (c)).

NWS insurance cover and amount is tabled below,

Type of Insurance	Cover Amount
Industrial Special Risks	Cover all declared physical assets including loss of revenue for up to 24 months
Workers Compensation	Full amount of the employers liability under the Workers Compensation Act 1987
Public and Products Liability	$200,000,000
Professional Indemnity	$20,000,000
Steadfast Contract Works and Legal Liability	$20,000,000
Plant and Equipment	$7,500,000

3.3.2	Explain why the level of cover provided or proposed by your insurer is sufficient for the size and nature of your proposed activities

For existing (brownfield) schemes, you must provide us with a report from an independent insurance broker which holds an Australian financial services license under Part 7.6 of the *Corporations Act 2001 (Cth)* for the provision of insurance broking services ("Insurance Expert"), that:

(a) identifies the key risks of undertaking the activities to be authorized under the license (if granted)
(b) sets out the types and levels of insurance obtained by you in relation to the activities being undertaken
(c) certifies whether, in the Insurance Expert's opinion, the type and level of insurance obtained by you is appropriate for the size and nature of the activities to be authorized under the license
(d) provides reasons as to why the types and levels of insurance are appropriate for the size and nature of the activities being undertaken, and
(e) If any risks arising from undertaking the activities remain uninsured, provides reasons as to why.

Your response to this question will be used to ascertain whether the applicant corporation has made appropriate arrangements with respect to insurance (Act s10 (4) (c)).

NWS in relation to its business operation has arranged the above insurance cover. NWS reviews its insurance requirements annually with our broker to make sure our insurance requirements are kept up to date.

A specific insurance risk assessment for the Cobaki Estate Scheme will be conducted as required by IPART's standard licensing condition prior to the Ministers approval for commercial operations.

3.4 Third parties undertaking activities

3.4.1	If you intend on using third parties to undertake any **significant** activities for which you are seeking a license (e.g.) construction of the reticulation network, management of the billing system) please provide their details below. If there are multiple third parties, please provide the details for each party as well as an explanation of the activities it will be undertaking.

Third parties undertaking minor sub-contracting works on behalf of the applicant corporation such as electrical or plumbing contractors do not need to be named in the application. If you are unsure of whether the works are significant or otherwise please include the details or contact IPART.

Your response to this question will be used to determine whether any other persons should be specified on the license (Act s6 (1) (a)), if a license is granted. Where applicable, information from those third parties named may also be used to assess the applicant corporation's technical, organizational and financial capacity to undertake the activities for which it is seeking a license.

Corporation No-1 name	
Tweed Shire Council (Drinking Water Supply Under Agreement with NWS)	
ABN/ARBN	ACN
90 178 732 496	178 732 496
Corporation's registered office	
ADDRESS	
PO Box 816 Murwillunbah	
STATE	POST CODE
NSW	2484

Corporation No-2 name	
Tweed Shire Council (Waste Water Discharge Under Trade Waste Agreement with NWS)	
ABN/ARBN	ACN
90 178 732 496	178 732 496
Corporation's registered office	
ADDRESS	

PO Box 816	
Murwillunbah	
STATE	POST CODE
NSW	2484
Corporation No-3 name	
Leda Manorstead Pty Ltd (Developer)	
ABN/ARBN	ACN
	003 467 605
Corporation's registered office	
ADDRESS	
Suite 14, Level 1, 46 Cavill Ave,	
Surfers Paradise	
STATE	POST CODE
QLD	4217

3.4.2	Please provide a detailed description of the activities that the third party, named above, will undertake on the applicant corporation's behalf.

Corporation No-1 Drinking Water Supply

- The Tweed Shire Council (TSC) is the local government authority for the area and will provide under a 305-307 of the Water Management Act 2000 NSW the requested volume of drinking water 1,709KLD for the Cobaki Estate Development with NWS.

The TSC will provide all the lead infrastructure to the Cobaki Estate Boundary as detailed in the Boundary Conditions Report (BCR). The lead in infrastructure works will be designed and constructed to TSC standards by Leda Manorstead (LM) and once signed off will be gifted to the TSC to be owned and operated by the TSC.

Note: These agreements will come into effect once the Network Operators License under the WIC Act (2006) NSW has been issued to NWS by IPART

For more information refer to,

- Appendix 4.1.1(b) TSC Letter of Feasibility,

- Appendix 4.1.1(d) Drinking Water Boundary Conditions Report, (Contents Pages)

Corporation No-2 Waste Water Discharge under a TSC Trade Waste Agreement

- The Tweed Shire Council (TSC) is the local government authority for the area and will provide the infrastructure for the volume specified for the emergency waste water discharge 518KLD under a Trade Waste Agreement with NWS.

The lead in infrastructure works including the sewer rising mains, new sewer pump station and metered connection point will be provided by Leda Manorstead (LM) and once signed off will be gifted to the TSC to be owned and operated by the TSC.

For more information refer to,

- Appendix 4.1.1(b) TSC Letter of Feasibility,

- Appendix 4.2.1(e) Waste Water Discharge Boundary Conditions Report

(Contents Pages)

- Corporation No-3

NWS has entered into a Preliminary Service Agreement with Leda Manorstead the developer to provide a Private Water Utility to design, construct, own, operate and retail the Water Services under the WIC Act (2006) NSW for the Cobaki Estate located at Tweed Heads NSW.

3.4.3	Please provide details of the contractual arrangements the applicant corporation has in place with the third party, named above, to ensure the third party undertakes the activities in accordance with the license (if granted).

The contractual arrangements that will be entered into by the parties once the Network Operators license has been issued by IPART will be,

(a) Bulk Drinking Water Supply Agreement under section 305 - 307 of the Water Management 2000 NSW with the TSC

(b) Excess Waste Water Offsite Discharge will be under a Trade Waste Agreement with the TSC.

(c) Cobaki Preliminary Services Agreement between LM & NWS.

For more information Refer to,

- Appendix 3.4.3(a) Cobaki Preliminary Services Agreement, (Commercial in Confidence)

- Appendix 3.4.3(b) Drinking Water Supply Agreement BCR, (Contents Pages)

- Appendix 3.4.3(c) Waste Water Trade Waste Agreement BCR, (Content Pages)

- Appendix 4.1.1(b) TSC Letter of Feasibility,

3.5 Other regulatory approvals

3.5.1	Please list any other regulatory approvals that have been obtained (or are being sought) for any of the activities for which the applicant corporation is seeking a license. Include any regulatory approvals also related to the activities or the project. Such approvals may include development consents for a housing development under the *Environmental Planning and Assessment Act 1979*, section 68 approval under the *Local Government Act 1993*, an Environment Protection License under the *Protection of the Environment Operations Act 1997*. **Provide a copy of any other regulatory approvals and/or licenses in Appendix 3.5.1.**

Your response to this question will be used to determine whether IPART needs to co-ordinate this approvals process with other regulatory authorities. Information required in other approval processes may also be requested and used by us in determining this license application.

The Developer Leda Manorstead Planning Proposal.

The Cobaki development has been the subject of a number of related approvals assessed and granted by both the NSW Department of Planning and Environment and also the Tweed Shire Council (TSC) as per standard conventional requirements.

The revised water and waste water servicing strategy now involves the use of a private water utility licensed under the WIC Act (2006) NSW to provide drinking water, recycled water and waste water services to the customers based on a Decentralized Onsite Waste Water Treatment and Water Recycling Model. A Part 5 approval for the Cobaki Estate Scheme is now being sought by NWS under the WIC Act (2006) NSW from the Minister and IPART.

To facilitate the Part 5 approval of the scheme by IPART the original PART 3A Concept Planning Approval and associated project and Council approvals are being amended by the developer to facilitate the use of a wastewater solution under the WIC Act (2006) NSW.

The NWS IWMP is being supplied to IPART along with preparing a Review of Environmental Factors (REF) for the Part 5 approval of the Cobaki Estate Scheme. Once the Network Operators License is received from IPART
(Assuming all assessments indicate suitability) can also grant approval to the activity under Part 5 of the Environmental Planning & Assessment Act, 1979.

The Integrated Water Management Plan (IWMP) details the works to be undertaken for the scheme and is being submitted for the Part 5 approval under

the Environmental Planning and assessment (EP&A) Act (NSW Government 1979) to IPART for approval for an Environmental Protection License (EPL) from the NSW Environmental Protection Agency (EPA)

The proposed WWTP site located at 425 Piggabeen Road is zoned RU2 pursuant to the Tweed Shire Council Local Environment Plan (LEP) 2014. As such, Clause 106 of the State Environmental Planning Policy (Infrastructure) is applicable and states that development for the purpose of a Sewerage Treatment Plant and or the Recycled Water & Sewerage Reticulation Systems do not require consent, if carried out by an entity licensed under the Water Industry Competition Act (2006) NSW and on land within a prescribed zone. In this regard, the RU2 zone is a prescribed zone.

Furthermore, the NSW Independent Pricing & Regulatory Tribunal (IPART) have advised that they will assess an application under Part 5 of the Environmental Planning & Assessment Act, 1979 concurrent with the application for a license under the Water Industry Competition Act (2006) NSW.

This will be an activity under Part 5 of the EP&A Act and will show compliance with the Environmental WIC Act, NWS is preparing a review of environmental factors (REF) for the pressure sewer, and recycled water networks for the Cobaki Estate Development.

The developer's application for each subdivision stage will coordinate the detailed drinking water, recycled water and pressure sewer reticulation networks and will supersede the NWS REF if there are any inconsistencies.

The Concept Plan Approval MP06_0316 was approved (determined) on
06/12/2010.

The approved project description under MP06_ 0316 is as follows:

A1 Project Description

Concept plan approval is granted for the Cobaki Estate project as described below:

Residential development for approximately 5,500 dwellings;
Town Centre and neighborhood center for future retail and commercial uses; Community and education facilities;
Open space;
Wildlife corridors;
Landscaping and vegetation management;

Environmental protection areas and rehabilitation of environmentally sensitive land;
Water management areas;
Roads, bicycle and pedestrian network; and
Utility services infrastructure.

The NSW Department of Planning Major Project website all the relevant approvals.

For more information refer to Appendices,

- Appendix 3.5.1(b) Cobaki Estate IWMP, (Table of Contents)

- Appendix 3.5.1(c) Existing Consents and Proposed Modifications,

- Appendix 3.5.1(a) Cobaki REF WWTP Planning Proposal ,(Table of Contents)

3.6 Monopoly supply

3.6.1	In your opinion, will the supply of water and/ or sewage services to customers be a monopoly service? If yes, please specify whether the monopoly service is in relation to: ▾ a specified water supply or sewerage service ▾ a specified area, and ▾ a specified class of customers.

Your response to this question will be used to determine whether the Minister should consider declaring the licensee a monopoly supplier in accordance with section 51 of the WICAct.

The supply of drinking water, recycled water and pressure sewer services within the Cobaki Estate Boundary is a monopoly serviced area even though it is within the Tweed Shire Council area of operation.

All customer classes will have access to these services and will be charged at the same rates for drinking water, recycled water and sewerage services as the local water and sewerage provider (TSC) for the Local Government area.

3.7 Licensing principles

3.7.1	How does your proposed activity address the following principles (if applicable): ▾ The protection of public health, the environment, public safety and consumers generally ▾ The encouragement of competition in the supply of water and the provision of sewerage services ▾ The ensuring of sustainability of water resources ▾ The promotion of production and use of recycled water ▾ The promotion of policies set out in any prescribed water policy document ▾ The potential for adverse financial implications for small retail customers generally arising from the activities proposed to be covered by the licence, and ▾ 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?

Your response to this question will be used in consideration of the licensing principles, in accordance with section 7 of the WIC Act

The protection of public health, the environment, public safety and consumers generally.

Public health, the environment, public safety and consumers will be protected by implementing the following steps,

- NWS operations and maintenance schemes will be implemented so that the public health, the environment, public safety and customers will be protected by introducing incident & emergency response plans, disaster recovery plans and continuous supply of services will be in full compliance with the relevant laws and regulations and meet IPART requirements when audited.

- NWS will be submitting to EPA NSW an EPL application including a review of environmental factors (REF) and an Integrated Water Management Plan
(IWMP). These assessments will show that no harm will be done to the environment.

- All infrastructure will be designed, installed, tested, quality assurance sign off and ITPs to the relevant codes WASA, AS3500, Plumbing code of NSW and the Water Supply Code of Australia.

- The Recycled Water will be processed to produce Class A+ recycled water to the end customers as to the Australian Recycled Water Guidelines (ARWG). Signage will be placed in areas advising the public in open space areas and adjacent sports fields.

- Education to the end users will be provided by NWS by way of homeowner manuals and information posted on the NWS Web site in regards to the responsible use of recycled water.

For more information refer to,

- Appendix 3.7.1(a) Cobaki Estate Draft Home Owner's Manual

The encouragement of competition,

- NWS takes pride in providing affordable solutions to developers and end users in the water market under the WIC Act. By reducing developer charges, treating all waste water onsite, providing recycled water for domestic reuse and open space irrigation thus reducing the impact to waterways and land areas which is helping protecting the environment and reducing WWTP foot prints reduces the impact on the current public utilities water and sewerage services which assists in driving their services further, reduces the cost of lead in infrastructure which all in all is making a contribution to providing affordable developable land. Providing these services at competitive prices encourages development, value to end customers and healthy competition in the NSW water industry.

The Sustainability of water resources

- Encouraging the use of recycled water for domestic reuse (toilet flushing, cold water for washing machines, garden and lawn watering, wash down of paths & driveways, Bin washing, open space irrigation, sports fields, nurseries, golf courses other industrial and commercial uses reduces the use of drinking water by around 53% which drives existing water infrastructure further and reduces the burden on feed water sources (Rivers, Creeks & Aquafers) especially to large public utilities. This in turn reduces the discharge of treated effluent to land and waterways which is a major contribution to reducing the impact and protecting the environment.

- To retrofit existing built up areas is not really affordable due to the implementation costs and upgrading of existing plants but to encourage new green field developments to become more self-sustainable by introducing treating all waste water generated onsite, providing recycled water for domestic reuse & open space irrigation and sealed pressure sewer systems to reduce I&I can only be a bonus in the future.

The promotion of the production and use of recycled water:

- Under the WIC Act the Private Water Utilities like NWS have the chance to promote the use of recycled water, the benefits to the community and reducing the impact on the environment. By education via home owner manuals, providing information on rate bills and providing a local Web site to the end user helps create a community wellbeing in health, reducing environmental impacts in their community plus reducing cost to the end user by providing recycled water at a cheaper rate than drinking water.

The promotion of policies set out in any prescribed water policy documents:

- NWS promotes sustainable water solutions where ever possible by progressive marketing, education to the public, developers and the industry as a whole. NWS provides its skill and expertise in providing new and improved technologies to further develop options that can improve future development of sustainable water solutions that can help shape future water policies both in the short term and long term for both the government and the developing private water industry sector.

The potential for adverse financial implications for small retail customers generally arising from the activities proposed to be covered by the license:

- NWS water charging policy is to be in line with the local water & sewerage authority in the area. Our customers are not to be financially disadvantaged but to the contrary by providing recycled water at a cheaper rate and a providing a greener environment does not create adverse financial implications.

- NWS provides concessions and medical dependent rebates the same as Government backed Incorporated Water Utilities and Local Council Water Utilities.

- NWS charge the same administration fees and one off connection fees as the local water authority so our customers are not disadvantaged.

The promotion of the equitable sharing among participants in the drinking water market of the costs of the water industry infrastructure that significantly contributes to water security.

- NWS provides drinking water to all end users inside the development at the same rates as the local utility. With recycled water being made available to all customers provides at least a 53% reduction in drinking water charges at the higher rate. Recycled water is provided to all open space areas, sports fields, parks and municipal gardens and water features free of charge to the TSC by NWS. This helps provide savings and water security not only within the Cobaki Estate boundary but around the region as it is assisting the TSC in driving the existing infrastructure further as the TSC has issues with providing future water supply to the region due to the water storage limitation on the existing dams in the region.

NWS is making a significant contribution in this area not only to the Cobaki Estate customers but the wider community as a whole.

Refer to Appendix 3.7.1(a) Home Owner's Manual (Contents Pages)

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4 Network Operator

You need to complete the following section of this form if the applicant corporation is seeking a network operator's license**.** Please note the sections are divided into the types of infrastructure as follows:

- 4.1 Water infrastructure - drinking water
- 4.2 Water infrastructure – non potable water (including recycled water and storm water reuse)
- 4.3 Sewerage infrastructure.

Please complete only those sections that relate to your response in question 3.2.1 above.

4.1 Water infrastructure – drinking water

Only provide a response to the questions in the following section if the applicant corporation is seeking a license for the construction, maintenance and operation of water infrastructure for the supply of drinking water.

4.1.1	Describe the proposed drinking water infrastructure from the source of the drinking water through to the end use (i.e. catchment to tap). Please include in your description all of the infrastructure for which the applicant corporation is seeking a license. This will include any infrastructure that is to be used for the production, treatment, filtration, storage, conveyance or reticulation of the drinking water. Please list all sources and end uses in the description. Identify the infrastructure for which the applicant corporation is seeking a license. **Provide a detailed process flow diagram of the proposed infrastructure from source to end use in Appendix 4.1.1.**

You must attach a process flow diagram in response to this question. The process flow diagram should only include the drinking water infrastructure where the scheme includes more than one type of infrastructure and must cover the process from source to end use. You may also include a piping and instrumentation diagram for additional information.

The response to this question will be used to draft a proposed license. The license will specify the type of water industry infrastructure, if a license is granted (Act s.6 (1) (a)). The response will also be used to ensure you have applied for the correct license(s) and as a context for our assessment of the applicant corporation's technical, organizational and financial capacity to undertake the activities for which you are seeking a license (Act s.10(4)(a)).

Source of the Drinking Water Supply:

The drinking water supply will be sourced from the TSC under agreement with the Tweed Shire Council (TSC) under sections 305 - 307 of the Water Management Act 2000.

TSC have advised after receiving endorsement from Council that the supply of the drinking water requested by NWS is technically feasible. (Refer to letter received from Council in Appendix 4.1.6(b) and the Boundary Conditions Report between TSC & NWS detailing the proposed scope of works, terms & conditions for the drinking water supply.

For a detailed description of the drinking water infrastructure refer to the relevant appendices listed below,

- Appendix 4.1.1(a) Description of the drinking water infrastructure

- Appendix 4.1.6(b) TSC letter of feasibility

- Appendix 4.1.1(c) Process Flow Diagrams

- Appendix 4.1.1(d) Drinking Water Boundary Conditions Report (Content Pages)

- Appendix 4.1.1(e) Drinking Water Master Plans

- Appendix 4.1.6(a) Water Balance Report

4.1.2	Describe whether the infrastructure is existing infrastructure or is to be constructed. If the infrastructure is existing, please describe its current condition and operability. If the infrastructure is a mixture of existing and to be constructed **identify the infrastructure as existing or to be constructed on the process flow diagram in Appendix 4.1.1**.

The response to this question will be used as a context for the assessment of environmental risks from the proposed scheme (Act s.10 (4) (e), Reg cl.7).

All the drinking water infrastructure inside the Cobaki Estate Boundary as detailed in this license application is too be constructed (New).

For more relevant information refer to Appendices listed below,

- Appendix 4.1.1(a) Drinking Water Infrastructure Description

- Appendix 4.1.1(c) Drinking Water PFDs

- Appendix 4.1.1(e) Drinking Water Master Plans

4.1.3	Describe the location of the proposed infrastructure. For example include: ▾ The identification of specific lot descriptors (e.g. lot and DP numbers) for the production, treatment, filtration and/or storage infrastructure. ▾ the location of infrastructure for the conveyance and/or reticulation of drinking water by street name, local government area or other description as appropriate to the size of the scheme. **Provide a map showing the location of the proposed infrastructure from source to end use in Appendix 4.1.3.**

The map may include all water industry infrastructure (i.e., drinking water, non-potable water and/or sewerage) where the scheme includes more than one type of infrastructure.

The response to this question is a requirement for any network operator's license (Reg cl.6 (1) (a)). The response to this question will be used to specify the authorized area of operations (Act s.11 (1)), if a licensee is granted. The response will also be used as a context for the assessment of environmental risks from the proposed scheme (Act s.10 (4) (e), Reg cl.7).

The drinking water infrastructure described above and described in Appendix 4.1.1 is contained within the development boundary and as shown in the Drinking Water Master Plan. The drinking water storages, variable speed pump stations and the chlorine correction residual chemical dosing equipment are located on the separate WWTP site located at 425 Piggabeen Road, Lot 1, and DP874316 adjacent precinct 10 of the Cobaki Estate development.

The Cobaki Estate development Lot and DP areas are detailed as follows,

Refer to table below for summary of the lots and DP numbers that make up the Cobaki Estate as approved under MP06_0316

Lot 1	DP570076
Lot 2	DP566529
Lot 1	DP562222
Lot 1	DP570077
Lot 1	DP823679
Lot 46	DP755740
Lot 54	DP755740
Lot 55	DP755740
Lot 199	DP755740
Lot 200	DP755740
Lot 201	DP755740
Lot 202	DP755740
Lot 205	DP755740
Lot 206	DP755740
Lot 209	DP755740
Lot 228	DP755740
Lot 305	DP755740

There should also be additional reference to Lot 1 in DP 874316 and the Piggabeen Road reserve (which we traverse with pipes) being the land to which the WWTP and connecting pipes relate.

For more information refer to,

- Appendix 4.1.1(e) Drinking Water Master Plan,

- Appendix 4.1.3(a) Drinking Water Plan, Source to Connection Point,

4.1.4	Describe any interconnections between the proposed drinking water infrastructure and other infrastructure not part of this scheme (e.g., interconnections with other licensed network operators or public utilities). Identify in your description who is responsible for the construction, operation and maintenance of which infrastructure. **Identify all interconnections with other infrastructure on the process flow diagram in Appendix 4.1.1 and the map in Appendix 4.1.3.**

The response to this question will be used to ensure the correct area of operation is specified in the license, if a license is granted (Act s.11 (1)). The response will also be used as a context for the assessment of risks from the proposed scheme and to identify possible additional license conditions relating to the inter-connected systems and responsibilities for risks.

The drinking water will be sourced from the Tweed Shire Councils existing drinking water network located in Piggabeen Road under a Drinking Water Supply Agreement once the Network Operators license has been issued to NWS by IPART.

The metered connection point will be located at the Cobaki Parkway and Sandy Road roundabout. From the connection point the drinking water supply main will be installed in the road reserves and up through precinct 10 by LM to the new WWTP site boundary located at 425 Piggabeen Road where the drinking water storages and pump stations will be located.

The drinking water supply will provide up to the first 500 Lots directly with drinking water and will substitute the recycled water network until,

(a) The drinking water storages and pump stations are completed in stage A,

(b) Will continue to feed the recycled water network from the new recycled water storages and pump station constructed in Stage A and

(c) When the AWTP is completed, commissioned and validated and has received an approval to commence commercial operation from IPART in Stage B on or before the first 500 lots. From this point on the Cobaki Estate will be provided with Class A+ recycled water for domestic reuse, open space and sports field area irrigation from the Lilac colored recycled water network installed throughout the development.

The drinking water infrastructure from the connection point at the WWTP boundary and throughout the Cobaki Estate will provide a drinking water service to each lot with an approved stop tap, a dual check valve located at 400mm inside of the boundary of each lot will be provided by the developers Civil Works contractor. The water meter will be provided by NWS upon receiving a correctly filled out connection notice, copy of a cross flow connection certificate and fee by the customer.

For further information refer to,

- Appendix 4.1.1(c) PFD Diagrams,

- Appendix 4.1.1(e) Drinking Water Master Plans,

- Appendix 4.1.5(a) Standard Metered Drinking Water Service to each lot,

4.1.5	Where applicable, describe the connection point to customers or end users (e.g. the customer connection point may be a water meter). Identify in your description who is responsible for the construction, operation and maintenance of which infrastructure. **Identify all customer and/or end user connections on the process flow diagram in Appendix 4.1.1 and the map in Appendix 4.1.3.**

The response to this question will be used to ensure the correct area of operation is specified in the licence, if a licence is granted (Act s.11 (1)). The response will also be used as a context for the assessment of risks from the proposed scheme.

NWS will provide the drinking water to the WASA code, AS 3500 and the Plumbing Code of NSW design standards and as to the detailed master plans for the drinking water infrastructure up to each lot boundary. The drinking water infrastructure throughout the Cobaki Estate development will be provided by the developer Civils Work's contractor. The Drinking Water infrastructure after quality assurance checks and sign off, of ITPs will be gifted to NWS to own, maintain and operate.

NWS is responsible for the operation and maintenance of the drinking water infrastructure and up to the drinking water meter provided by NWS to each customer when a connection notice has been received and the appropriate fees paid to NWS by the customer. NWS will install the water meter so that the customers licensed plumber can connect to the drinking water meter after it is installed by NWS.

Each customer is responsible for the drinking water service downstream of the drinking water meter. The NSW Department of Fair Trading or delegate (Council or PCA) is responsible for the inspection of the customer's drinking water infrastructure downstream of the meter. NWS will liaise with DOFT or its delegate to ensure compliance has been met (Providing a Cross Flow Connection Certificate will be mandatory) before drinking water meters can be installed.

Refer to other relevant appendices for more information,

- Appendix 4.1.1(c) PFD

- Appendix 4.1.5(a) Standard Drinking Water Meter Connection Drawing.

- Appendix 4.1.1(e) Drinking Water Master Plans

4.1.6	What volume of water is available from the proposed source? Where applicable, please provide the capacity of the source and the (allowable) average daily extraction rate from the source. If there is more than one source, please provide the requested information for each of the sources. **Where relevant, provide a copy of any agreements and/or licenses to access the source water in Appendix 4.1.6.**

The response will also be used as a context for the assessment of the technical, organizational and financial capacity of the applicant corporation (Act s.10 (4) (a)).

The drinking water will be sourced from the TSC drinking water existing supply network located in Piggabeen Road.

The new drinking water rising main will be connected to the TSC existing network in Piggabeen Road and the TSC will provide a new metered connection point at the Cobaki Parkway and Sandy Road roundabout under a 305 - 307 Water Management Act 2000 agreement with NWS.

To service the Cobaki Estate at maximum yield (6,064lots) for drinking water only the development will require an average daily flow of 1,709kL/day at 19.8L/s over a 24-hour period to be provided by the TSC network to the connection point.

For more information refer to Appendices,

- Appendix 4.1.6(a) Water Balance Report, (Content Pages)

- Appendix 4.1.6(b) TSC Technical Feasibility Letter,

4.1.7	What volume of water will be treated by the scheme? Please provide the average and peak daily flow rates treated by the scheme.

This information will be used to determine the fee category for the scheme, if a license is granted. The response to this question may be used to draft a proposed license, if a license is granted.

The treated drinking water being supplied to ADWG from the TSC as outlined in section 4.1.6.

The only requirement for any additional treatment will be monitoring the chlorine residual 24/7 by the NWS SCADA CMS in the storages and downstream of the variable speed pump stations. A sodium hypochlorite dosing system will be installed to maintain the chlorine residual levels when required.

For more information refer to Appendices,

- Appendix 4.1.9(a) Preliminary Drinking Water Risk Assessment.

4.1.8	What volume of drinking water will be produced by the scheme? Please provide the average and peak daily volume supplied to end users or retail suppliers.

This information will be used to assess the retail supplier's obligation not to over commit, if a license is granted. The response to this question may be used to draft a proposed license, if a license is granted.

NWS will source the drinking water required for the development from Tweed Shire Council under an agreement with NWS.

The NWS water strategy for the Cobaki Estate development has been separately developed. A water balance report has been developed which takes into account BASIX requirements and other factors in a high level conservative approach. The current water balance modelling shows that no top up for the recycled water network to meet the required water demand will be required during the rollout of the development after Stage B. During Stage A up to the first 500 lots on the recycled water network will be subsidize with drinking water.

To meet the drinking water demands NWS has taken a staged approach in providing 8ML of storage, variable speed pump stations to maintain flow and pressure and chlorine dosing to maintain the required chlorine residual levels at the furthest points in the drinking water networks. The following water demands have been used for design purposes,

(a) Average Day Demand 19.84l/S 1,709kL/day

(b) Peak Day Demand 37.51l/S 3,240kL/day

(c) Peak Hour Demand 41.94l/S 151kL/hour

For further information refer to Appendices',

- 4.1.1(c) Drinking Water PFDs,

- 4.1.6(a) Cobaki Water Balance Report,

4.1.9	**Provide your preliminary risk assessment for the scheme from source to end use in Appendix 4.1.9**. It is important that your preliminary risk assessment accurately identifies any hazards present in the source water or likely to result from the proposed treatment process. The risk assessment will also address the intended, inadvertent and unauthorized end uses (and therefore routes of exposure) to the water. The preliminary risk assessment will identify any reasonably foreseeable risk event with the potential to expose people or the environment to hazards. The preliminary risk assessment will outline the broad mitigation measures where the risk of exposure to a hazard is unacceptable to human health or the environment in order to reduce the risk of exposure. The risk assessment must also identify the events and circumstances that could adversely affect the applicant corporation's ability to carry out the activities for which the license is sought (including any activities undertaken by a nominated third party), the probability of the occurrence of any such event or circumstance and the measures to be taken by the applicant corporation to prevent or minimize the likelihood of any such event or circumstance.

The preliminary risk assessment should demonstrate the application of a consistent methodology for identifying hazards and assessing potential impacts and risks to health and the environment. We strongly recommend that the applicant corporation utilizes an established risk management system, such as outlined in AS/NZS ISO 31000:2009 (Risk management – Principles and guidelines), which is consistent with the approach outlined in the Australian Drinking Water Guidelines (element 2).

The response to this question is a requirement for any network operator's license for water infrastructure (Reg cl.6 (1) (b) and cl.6 (1) (c) (ii)). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response to this question will also be used to draft a proposed license. The license will specify the purpose for which the infrastructure can be used, if a license is granted (Act s.6 (1) (a)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has prepared a preliminary drinking water risk assessment in accordance with the "Australian Drinking Water Guidelines".

- Section 2.2.4 Hazard identification and risk assessment

- Section 2.3.2 Critical Control Points

For more information refer to,

Appendix - 4.1.9(a) Preliminary Drinking Water Risk Assessment Summary.

Appendix - 3.5.1(b) Integrated Water Management Plan, (Table of Contents)

4.1.10	Describe how the 12 elements of the framework for the management of drinking water quality, as detailed in the Australian Drinking Water Guidelines (ADWG), have been addressed and will be implemented and maintained. **Provide evidence of the applicant corporation's capacity to implement the 12 elements of the framework in the ADWG in Appendix 4.1.10.**

The evidence should be in the form of management plans for either the proposed scheme or other similar schemes undertaken by the applicant corporation, or in a comprehensive statement detailing the process by which the management plan will be developed. For existing (brownfield) schemes you should provide the actual water quality plan for the site.

The response to this question is a requirement for any network operator license for water infrastructure (Reg cl.6 (1) (d) (i). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has prepared a drinking water quality plan based on the 12 elements of the framework in the ADWG.

Note: Some of the elements or components that make up the elements of the 12 element framework for the management of the drinking water quality are covered by TSC as the producer and provider of the drinking water for the

Cobaki Estate development.

For more information refer to Appendices,

- Appendix 4.1.10(a) Preliminary Drinking Water Quality Plan, (Table of Contents)

- Appendix 3.5.1(b) Integrated Water Management Plan, (Table of Contents)

4.1.11	How will the continuity of supply of the drinking water be ensured? What contingency plans are in place in the case of failure of the infrastructure? What alternative supplies of drinking water will be used when the infrastructure is inoperable?

The response to this question is a requirement for any network operator's licence for water infrastructure (Reg cl.6 (1) (c)). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a licence (Act s.10 (4)(a)).

NWS has ensured the continuity of the drinking water supply by providing the following measures,

- NWS will have a commercial agreement in place with the TSC to supply drinking water to ADWG to the boundary gate at the required flow and pressure to supply the drinking water at the average daily demand over a 24-hour period for the Cobaki Estate development at 19.8l/S providing 1,709kL/day. The supply agreement will be under section 305 - 307 of the Water Management Act NSW 2000.

- As part of the TSC drinking water supply agreement, TSC have guaranteed the drinking water supply will not be interrupted for more than any 24-hour period. Note: for more details on the drinking water supply agreement between TSC & NWS refer to the TSC letter of feasibility in Appendix 3.4.3 (a).

- The required amount of redundancy has been built into the Cobaki drinking water scheme. NWS has calculated that 8ML of storage will be required. The staged storage facility will be built on the WWTP site.

- The variable Speed pump stations will be provided with adequate duty standby pumping arrangements to provide continuous supply at the pressure and flow to meet the peak daily, peak hourly, instantaneous and firefighting demands required throughout the networks.

- An emergency power supply has been designed into the drinking water scheme. In the event of a power failure or a notified shut down by the energy provider an emergency power generator with auto changeover switch will be activated automatically with the loss of power. This system is monitored and maintained by the NWS WWTP SCADA CMS.

- NWS has developed the following contingency plans as a last resort backup in the event of infrastructure failure which include:

(a) Minimize the use of drinking water through customer notification by letter drop, Web site posting and verbal contact notification,

(b) Rapid response to infrastructure failure by putting in place rapid emergency plans and response times with NWS operations staff, site operators and contractors,

(c) If the interruption will be longer than 48 hours or storage levels are reduced to the emergency level (30%) NWS in conjunction with the TSC will organize trucking in of drinking water by a fully qualified tanker operators from the nearest Tweed Shire Council fill points.

4.1.12	Describe the systems and processes that the applicant corporation will have in place to manage the water infrastructure. **Provide evidence of the applicant corporation's capacity to develop and implement an infrastructure operating plan in Appendix 4.1.12.**

The evidence may include examples of processes and procedures for either the proposed scheme or other similar schemes undertaken by the applicant corporation. The processes and/or procedures should demonstrate good operational practice including life cycle planning, system redundancy, contingency planning, condition monitoring, management maintenance processes and processes of supporting skills needs. The examples should demonstrate links to a risk management process. For existing (brownfield) schemes you should provide the actual water quality plan for the site.

The response to this question is a requirement for any network operator's license for water infrastructure (Reg cl.6 (1) (c)). The response will be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has adopted an Infrastructure Operating Plan for all services which follows a common risk based approach to the operating and maintaining all infrastructure in the Cobaki Estate development owned and operated by NWS. The IOP includes for Maintaining Built in Redundancy, Routine & Preventative Maintenance of all infrastructure and Equipment, Asset Management and replacement when required, Contingency Planning and Operational Emergency Plans,

The final IOP will be reviewed through the IPART audit process. The IOP will comply with the requirements of the WIC Act and Table A5.1 from the Audit Guidelines and will include:

- Asset Register (SMS) that details the use, age, design life, model number, capacity performance requirements of all assets in a functional software system;

- Geographical Information System (GIS) Showing locations of all assets;

- Standard Operating Procedures;

- Emergency Response Plans;

- Maintenance Schedules and Procedures;

- Asset Monitoring Processes;

- Asset Renewal Processes;

- Process control of Sinking Funds;

- Processes and Procedures for Monitoring Compliances;

- Details of Roles and Responsibilities;

- Training and Competency requirements of Staff;

For more information refer to Appendices,

- Appendix 4.1.12(a) NWS Draft Infrastructure Operating Plan, (Table of Contents)

- Appendix 4.1.10(a) NWS Drinking Water Quality Plan, (Table of Contents)

- Appendix 3.5.1(b) IWMP, (Table of Contents)

4.1.13	Describe the studies that have been completed to investigate any environmental impacts (including but not limited to water quality, quantity, air, odour, noise, sea level rise, biodiversity and Aboriginal cultural heritage) from the construction and operation of the infrastructure? Have the studies identified any significant environmental impacts from the scheme? If so, how are the environmental impacts proposed to be managed? **Provide a copy of any environmental study and/or risk assessment in Appendix 4.1.13.**

As a minimum, an application must be accompanied by a statement of environmental effects (SEE) (unless the development is designated development, Part 5 development or a major project, in which case either an environmental impact statement (EIS) or comprehensive environmental assessment is required). The SEE may be prepared by the applicant corporation or by a consultant acting on behalf of the applicant. The SEE must identify the environmental impacts of the proposed scheme, and the steps which will be taken to protect the environment or reduce the harm. Where the study is in the form of a comprehensive environmental assessment or EIS, please include only the executive summary.

The response to this question will be used to determine whether the activities authorized by a license (if granted) present a significant risk of harm to the environment (Reg cl.7). The response to this question may be used to draft a proposed license, if a license is granted.

The Cobaki Estate develop has planning approval under PART 3A Concept Planning Approval and Associate Council approvals.

The Environmental Assessments.

The Cobaki development has been subject of a number of related approvals assessed and granted by both the NSW Department of Planning and Environment and also the Tweed Shire council (TSC) as per standard conventional requirements.

The revised water and waste water servicing strategy now involves the use of a private water utility licensed under the WIC Act (2006) NSW to provide drinking water, recycled water and waste water services to customers based on a Decentralized Onsite Waste Water Treatment and Water Recycling Model. A Part 5 approval for the Cobaki Estate Scheme is now being sought by NWS under the WIC Act (2006) NSW from the Minister and IPART.

To facilitate the Part 5 approval of the scheme by IPART the original PART 3A Concept Planning Approval and associated project and Council approvals are being amended by the developer to facilitate the use of a wastewater solution under the WIC Act (2006) NSW.

The NWS IWMP is being supplied to IPART along with preparing a Review of Environmental Factors (REF) for the Part 5 approval of the Cobaki Estate Scheme. Once the Network Operators License is received IPART (assuming all assessments indicate suitability) can also grant approval to the activity under Part 5 of the Environmental Planning & Assessment Act, 1979.

Reticulation Networks:

NWS as the licensed Network Operator will have the ability to design and develop pressure sewer, recycled water & drinking water reticulation networks on any land within the development (Licensed area) without consent being required under Part 4 of the EP&A act. As these activities, will be under Part 5 of the EP&A Act and must show compliance with the WIC Act. NWS is preparing a review of environmental factors (REF) for the above services for the entire development.

This will be an activity under Part 5 of the EP&A Act and will show compliance with the Environmental WIC Act, NWS is preparing a review of environmental factors (REF) for the pressure sewer, drinking water and recycled water networks for the Cobaki Estate Development.

The developer's application for each subdivision stage will coordinate the detailed drinking water, recycled water and pressure sewer reticulation networks and will supersede the NWS REF if there are any inconsistencies.

The Waste Water Treatment Plant Site (WWTP)

The proposed WWTP site located at 425 Piggabeen Road is zoned RU2 pursuant to the Tweed Shire Council Local Environment Plan (LEP) 2014. As such, Clause 106 if the State Environmental Planning Policy (Infrastructure) is applicable and states that development for the purpose of a Sewerage Treatment Plant and or Sewerage Reticulation Systems do not require consent, if carried out by an entity licensed under the Water Industry Competition Act (2006) NSW and on land within a prescribed zone. In this regard, the RU2 zone is a prescribed zone.

Furthermore, the NSW Independent Pricing & Regulatory Tribunal (IPART) have advised that they will assess an application under Part 5 of the Environmental Planning & Assessment Act, 1979 concurrent with the application for a license under the Water Industry Competition Act (2006) NSW.

For more information refer to the following Appendices,

- Appendix 3.5.1(a) REF (Table of Contents),

- Appendix 3.5.1(b) Integrated Water Management Plan, (Table of Contents)

4.1.14	If a treatment process forms part of the infrastructure for which the applicant corporation is seeking a license, what waste streams will be generated by the proposed treatment plant and how will the waste be disposed of or handled?

The response to this question will be used to determine whether the activities authorized by a license (if granted) present a significant risk of harm to the environment (Reg cl.7). The response will also be used as a context for our assessment of the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).
NWS will not be providing feed water for further onsite treatment to provide drinking water for the Cobaki Estate development. The drinking water will be supplied under agreement with TSC there for no waste streams will be generated.

4.2 Water infrastructure – non-potable water

Only provide a response to the questions in the following section if the applicant corporation is seeking a license for the construction, maintenance and operation of water infrastructure for the supply of non- potable water.

4.2.1	Describe the proposed non-potable water infrastructure from the source of the water through to the end use (i.e., catchment to tap). Please include in your description all of the infrastructure for which the applicant corporation is seeking a license. This will include any infrastructure that is to be used for the production, treatment, filtration, storage, conveyance or reticulation of the non-potable water. Please list all sources and end uses in the description. Identify the infrastructure for which the applicant corporation is seeking a license. **Provide a detailed process flow diagram of the proposed infrastructure from source to end use in Appendix 4.2.1.**

You must attach a process flow diagram in response to this question. The process flow diagram should only include the non-potable water infrastructure where the scheme includes more than one type of infrastructure and must cover the process from source to end use. You may also include a piping and instrumentation diagram for additional information.

The response to this question will be used to draft a proposed license. The license will specify the type of water industry infrastructure, if a license is granted (Act s.6 (1) (a)). The response will also be used to ensure you have applied for the correct license(s) and as a context for our assessment of the applicant corporation's technical, organizational and financial capacity to undertake the activities for which you are seeking a license (Acts.10(4)(a)).

The infrastructure that is involved in the production of the recycled water, storage, distribution is listed below.

Note: All wastewater generated on the Cobaki Estate is treated on site via the NWS Membrane Bioreactor (MBR) WWTP with a peak design capacity of 2,640kL/day (Average Daily Volume 2,215kL/day). The full capacity of the MBR WWTP will be reached during Stage D.

All incoming wastewater from the pressure sewer network is stored in the 2 x 330 KL Redundancy Tanks which provides extra redundancy to the system to accommodate the morning and evening peak flows and provide extra redundancy in the case of an emergency. When each MBR inlet tank signals that it needs, more waste water the inlet valve to the screening unit which is mounted on the inlet side of the screening unit inlet tank will open. The waste water then undergoes primary treatment in the screening unit with a 1 mm perforated plate inlet screen to ensure removal of gross solids, hair, grit and other pollutants to protect the downstream treatment process and submerged membranes.

The screening unit automatically dewaters and stores the solids collected from the screen in a bagging unit. When each bag is full it will be removed from the site by a licensed solid waste contractor and taken to the nearest accepting licensed landfill facility.

The MBR WWTP General Operation:

The Primary treated wastewater from the inlet screen is discharged into the inlet tank.

The inlet tank provides buffer storage capacity to ensure the flow of wastewater into the downstream treatment process is controlled.

If the inlet tank is full during peak periods, the flow of wastewater from the pressure sewer network will be stored in the redundancy tanks and the redundancy built into the pressure network until the screening unit inlet tanks are ready to receive more waste water.

Primary treated wastewater from the inlet tank is pumped into the anaerobic tank in a controlled manner. The anaerobic tank is used to pre-condition wastewater and microorganisms for the downstream biological processes.

Wastewater from the anaerobic tank is pumped into the anoxic tank where it is mixed with nitrified water from the aeration tank to create conditions suitable for denitrification to occur. Excess liquid from the anoxic tank flows back to the anaerobic tank via an overflow weir. Acetic acid will be supplied to the anoxic tank as an additional carbon source for denitrification.

Wastewater from the anoxic tank is pumped into the aeration tank where microorganisms break down BOD and nitrify ammonia. Excess liquid from the aeration tank flows back to the anoxic tank via an overflow weir.

Dissolved Oxygen (DO) in the aeration tank is maintained to an adjustable set point of 2 mg/L via continuous online monitoring of DO and a variable speed drive blower unit that supplies the submerged fine bubble diffuser grid at the base of the Aeration tank.

The system operates with a high biomass concentration of around 8000-13000 mg/L Mixed Liquor Suspended Solids (MLSS). The MLSS concentration in the aeration tank can be maintained during low demand periods with supplementary carbon dosing into the anoxic tank if required.

The Waste Activated Sludge (WAS) is pumped from the MBR tank when MLSS increases above approximately 13,000 mg/L and will be stored in two 30 kL Sludge Tanks until it is removed from the site by a licensed liquid waste transport contractor to the nearest accepting licensed facility.

Wastewater from the aeration tank is pumped into the submerged membrane tank. Excess liquid from the membrane tank flows back to the aeration tank via an overflow weir.

The MBR tank includes 3 double tier modules of submerged membranes which provide a peak flow of 330 kL/day.

The MBR permeate is drawn through the submerged membranes under an outside→inside arrangement from a dry mounted vacuum suction pump located adjacent to the membrane tank. The membranes are cleaned by air scour headers by coarse bubble diffusers located at the base of the membrane module.

The permeate generated by the MBR system is continuously being monitored for turbidity, pH, TDS, Nitrogen, Phosphorous levels, the trans-membrane pressure (TMP) and flow to ensure the system is operating effectively. Membrane cleaning regimes are implemented on a routine basis as per manufacturer recommendations, and/or when TMP reaches a set point.

The MBR permeate passes through a pre-validated inline ultraviolet disinfection unit to provide an additional disinfection barrier in the treatment train. The UV unit will achieve a 3-log reduction in bacteria and protozoa.

The UV system is continuously monitored for UV intensity, UV transmission, flow and lamp run hours to ensure the system is operating effectively.

Typical effluent quality from the MBR is outlined below

BOD/SS	<10mg/L
pH	6-8.5
Turbidity	<1 NTU
TN	<10mg/L
TP	<0.3mg/L
TDS	700-850mg

Stage B - The Advanced Water Treatment Plant

The two 1.2ML/day Ultra Filtration (UF) Skids that make up the Advanced Water Treatment Plant (AWTP) will further process the MBR Class A permeate to produce Class A+ recycled water suitable for domestic reuse as to the Australian Recycled Water Guidelines will be installed inside the WWTP building during Stage B of the WWTP staged construction. It will be commissioned and operational by the time the first 500 lots have been connected to the scheme.

Note: Prior to the first 500 lots being connected to the scheme the recycled water network will be substituted with drinking water.

The feed water for the AWTP will be taken from the MBR permeate 2ML storage tank located adjacent the WWTP building on the WWTP site. The surplus permeate water will accumulate in the 2ML permeate storage tank and will be managed by land irrigation in Stage A or offsite discharge to the TSC existing sewerage network. Once the AWTP becomes operational in Stage B the volume of surplus permeate water will reduce due to it being used as the feed water to the AWTP to produce the supply of Class A+ recycled water to households and other end users.

Preliminary information on recycled water uses, log reduction targets, the proposed treatment train and critical control points are outlined below.

The Class A+ Recycled Water Quality, Uses and Log Reduction Targets

Recycled Water Quality for Domestic Re-Use Class A+

BOD/SS	<5mg/L
pH	6.5-8.5
Turbidity	<1 NTU
TN	<7mg/L
TP	<25mg/L
TDS	500mg/L
Virus	6 log removal
Protozoa	7 log removal

The Class A+ Recycled Water supplied to individual customers will be used for the following uses:

Toilet flushing;
Laundry washing machine cold water service, hard plumbed;
Outdoor cleaning including bin washing, car washing and general hosing down of foot paths and driveways; and
Irrigation of private lot gardens and lawns;
Water features throughout the development;
Open space irrigation for sports fields, parks and road verges;
Industrial uses Cooling Towers, Urinals, Concrete production;
Nurseries, Golf courses and food crops;

The AWTP is designed to produce high quality Class A+ recycled water that complies with the highest bacteria, virus and protozoa log reduction targets for dual reticulation from the Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) (NRMMC; EPHC; AHMC, 2006).

An overview of the log reduction targets and log reduction credits being claimed for the processes in the AWTP are outlined below.

Pathogen Log Reduction Target and Credits Being Claimed for the AWTP

Target Pathogen	Log Reduction Target1	Log Reduction Credits Claimed for AWTP				
		MBR + UV	Ultrafiltration Membrane	Ultraviolet Disinfection	Chlorine Contact	Total Log Reduction
Bacteria	5.3	0	4	3	4	11
Virus	6.5	0	4	0	4	8
Protozoa	5.1	0	4	3	0	7

1 From Table 3.7 in Australian Guidelines for Water Recycling: Managing Health and Environmental Risks (Phase 1) with recycled water used for dual reticulation.

AWTP Processes Description

Pre-validated/accredited Ultrafiltration membrane skids; Ultraviolet disinfection unit; and
Chlorine contact tank.

An overview of the AWTP process is provided in the PFD in Appendix 4.2.1(a). All equipment selected for the AWTP must have USEPA pre-validation for the UF skids and UV units.

The salinity control in the recycled water system will be provided by using a side stream of drinking water which will be used to maintain recycled water TDS less than 600 mg/L.

A description of each of the AWTP unit processes and preliminary Critical Control Points are outlined below.

Process	AWTP Process Description and Preliminary Critical Control Points
Ultrafiltrati on Membrane s	The Ultrafiltration Membrane units (2 x 1.2MLD) will be installed into the WWTP building and will draw water from the 2ML Permeate Storage Tank when the water level in the Recycled water storage tank drops below the set point (70%). The proposed UF units are of a skid mounted type to be supplied and commissioned by the selected equipment supplier and will be supplied with INGE brand membranes or equal. The skids are a complete factory tested package type units and contain the membrane Modules, pumps, controls and mechanical equipment to operate the units. The installation of the units in the WWTP building will be by NWS. The membranes have been pre-validated based on USEPA guidelines (USEPA, 2005) to achieve >5 Log virus removal, however 4 log is being claimed for the process. The preliminary Critical Control Points (CCP) and Critical Limits (CL) for the UF system from the manufacturers pre-validation information are: Max permeate flow per skid 15.8 L/s (for downstream UV and CCT processes); Transmembrane Pressure < 201.5 KPA; Average normalised flux of <100 L/m2/hr; Direct Integrity Test pressure decay <1 KPA/minute at 1 bar hold pressure; Permeate turbidity <0.15 NTU (95%ile) and < 0.5 NTU shut down. All CCPs will be continuously monitored with alarms and automatic shutdown if the critical limits are reached and be mirrored to WWTP SCADA System CCPs and CLs are subject to refinement during detailed design and commissioning stage.
Ultraviolet Disinfectin	Recycled Water from the UF is directed straight into an inline UV disinfection unit. The UV unit will be USEPA accredited (USEPA, 2006) unit with a pre-validated dose to achieve 3 log reduction in bacteria and protozoa at 60% UVT. The preliminary Critical Control Point and Critical Limits for the UV from the manufacturers pre-validation information are: Max flow of <15 L/s per unit as measured on the UF permeate line; Max pressure < TBC with manufacturer; UVT of incoming water >60%; UV Intensity inside the UV reactor > TBC with manufacturer; Lamp run life; Lamp faults. The CCPs will be continuously monitored with alarms and automatic shutdown if the critical limits are reached. CCPs and CLs are subject to refinement during the detailed design and commissioning phase.

Chlorine Contact Tank	Water from the inline UV disinfection units is discharged into the chlorine contact tank (CCT). The CCT has been designed to achieve the CT values to achieve a 4-log reduction in viruses as outlined in using the design process documented in the USEPA Disinfection Profiling and Benchmarking Technical Guidance Manual (USEPA, 2003). The CCT will include: 60 minutes' total hydraulic detention time with liquid volume of >52 kL in each tank; A Baffled reactor to maximize mixing and plug flow. Target CT value of 16, based on a pH of 8 and a temperature of 100C. Sodium hypochlorite dosing using variable speed dosing pumps; Continuous online monitoring of pH and free chlorine with dosingfacilities. The preliminary Critical Control Points and Critical Limits for the CCT are: pH 6.5 to 8; Free chlorine at the CCT outlet >0.6 mg/L; Maximum flow of 15 L/s as measured on the UF Recycled Water Flow line; Water level monitoring to ensure detention time control; The CCPs will be continuously monitored with alarms and automatic shutdown if the critical limits are reached. CCPs and CLs are subject to refinement during detailed design and commissioning phase.

Residual Chlorination	The treated recycled water from the CCT with a minimum free chlorine residual of 0.6 mg/L is pumped into the 2 x 2 ML recycled water storage tanks. Chlorine residual in the recycled water storage tanks will be maintained using a recirculation system with continuous chlorine monitoring and dosing at the discharge of the Recycled Water Variable Speed Pump sets. Sufficient free chlorine residual will be maintained in the recycled water to ensure the minimum free residual chlorine is achieved at the furthest points in the reticulation networks. Seasonal chlorine dosing rates will be determined during operation to achieve the minimum residuals required throughout the network. The recycled water storage tank is a sealed tank to prevent vermin and mosquito access. All required tank openings, like overflows, will be screened with mosquito proof mesh. The preliminary Critical Control Points and Critical Limits for the recycled water storage is: Free chlorine on supply >0.6 mg/L (or higher set point to maintain residuals throughout the network); Weekly visual inspection for evidence of tank damage or vermin access. The free chlorine CCP will be continuously monitored with alarms and automatic shutdown if the critical limits are reached. CCPs and CLs are subject to refinement during detailed design and the commissioning phase.

Waste Products generated by the processes at the WWTP Site

MBR Screenings

All influent to the MBR Modules receives primary treatment by a 1 mm perforated plate inlet screen to remove hair, gross pollutants and other foreign matter in the inlet tank of the screening Unit. The screen includes a rotating brush, dewatering auger and automatic bagging unit to avoid operator contact with screenings. As each bag is filled with dewatered screening at approximately fortnightly intervals the waste will be disposed of by a licensed waste transport contractor to an approved solid waste landfill facility.

MBR Waste Sludge

The MBR WWTP is an activated sludge process that produces waste activated sludge at approximately 1.2% of the inflow rate.
The waste sludge will be stored in 2 x 30KL sealed sludge waste tanks until it is removed from the site by a licensed liquid waste transport contractor and disposed of to the nearest approved municipal wastewater treatment plant.

UF Filtration Back Wash

The Ultra Filtration (UF) membrane skids will backwash every day on a set timer or when the trans-membrane back pressure exceeds the set point with Class A + recycled water. The back wash waste water is discharged to the inlet of the MBR tank in Stage A for processing.
The chemical enhanced back wash (CEB) which consists of chlorine and caustic dosing being directly injected into the back wash line on a set timer or when the membrane pressure exceeds the back pressure on a regular basis. The waste water is then neutralized in a Neutralizing Backwash Tank and when neutralized it is discharged to the inlet tank of the MBR train in Stage A for processing.

Note: No backwash from the AWTP process is discharged off site.

The Recycled Water Supply

All recycled water from the AWTP is stored in the 2 x 2 ML recycled water storage tanks. The 4 ML of recycled water storage provides more than 48 hours storage at ultimate peak day recycled water demands.
During Stage A the 2ML recycled water tank will be filled with drinking water. Once the AWTP is commissioned and signed off for commercial operation by IPART in stage B (After the first 500 lots) the 2ML storage tank will be filled with Class A+ recycled water from the AWTP and drinking water will only be used for top-up and emergency backup to the recycled water system.

The chlorine residual in the recycled water storage tank will be maintained with continuous on line monitoring and providing top up dosing when required. Sufficient free chlorine residual will be maintained in the recycled water network to ensure the minimum free residual chlorine is achieved at the furthest point in the reticulation system at all times.

24/7 monitoring of the chlorine dosing rates will be carried out during operation to achieve the minimum residuals required throughout the network.

The recycled water storage tanks will be operated based on the set points outlined below.

Recycled Water Storage Tank Operation

Operating Parameter 1	Action
>99% full	Shut down AWTP
<70% full	Start AWTP
>50% full	Open drinking water top-up valve
<30% full	Close drinking water top up valve – Low Level Alarm
<20% full	Critical alarm
<5% full	Shut off recycled water supply pumps

1. Set points are adjustable and will be optimized by the operator during operation. Recycled water from the 4 ML recycled water storage will be supplied to customers through a separate purple pipe network using a variable speed drive pump stations located at the WWTP site. An emergency standby diesel generator with automatic changeover switch for the WWTP operation will be provided to back up the recycled water supply pumps to ensure provision of essential services is continuously maintained.

For further information refer to Appendices,

- Appendix 4.2.1(a) PFD Diagram,

- Appendix 4.2.1(b) P&IDs, (Commercial in Confidence)

- Appendix 4.2.1(c) Recycled Water Master Plans,

- Appendix 4.2.1(d) WWTP Layout Drawings,

- Appendix 4.2.1(e) Waste Water Discharge BCR Report, (Table of Contents)

- Appendix 4.3.10(e) HAZOP & HAZID Workshop Report, (Table of Contents)

4.2.2	Describe whether the infrastructure is existing infrastructure or is to be constructed. If the infrastructure is existing, please describe its current condition and operability. If the infrastructure is a mixture of existing and to be constructed **identify the infrastructure as existing or to be constructed on the process flow diagram in Appendix 4.2.1**.

The response to this question will be used as a context for the assessment of environmental risks from the proposed scheme (Act s.10 (4) (e), Reg cl.7).

All the Recycled Water infrastructure to be provided for the Cobaki Estate Scheme is new.

For more information refer to,

Appendix - 4.2.1(c) Recycled Water Master Plan,

4.2.3	Describe the location of the proposed infrastructure. For example, include: ▾ The identification of specific lot descriptors (e.g., lot and DP numbers) for the production, treatment, filtration and/or storage infrastructure. ▾ The location of infrastructure for the conveyance and/or reticulation of non-potable water by street name, local government area or other description as appropriate to the size of the scheme. **Provide a map showing the location of the proposed infrastructure from source to end use in Appendix 4.2.3.**

The map may include all water industry infrastructure (i.e., drinking water, non-potable water and/or sewerage) where the scheme includes more than one type of infrastructure.

The response to this question is a requirement for any network operator's license for water infrastructure (Reg cl.6 (1) (a)). The response to this question will be used to specify the authorized area of operations (Act s.11 (1)), if a license is granted. The response will also be used as a context for the assessment of environmental risks from the proposed scheme (Act s.10 (4) (e), Reg cl.7).

The Recycled Water infrastructure is contained in the Cobaki Estate Boundary as described above. The AWTP, Storages, Pumps & chemical dosing is contained on the WWTP adjacent the Cobaki Estate at 425 Piggabeen Road Lot No 1, DP874316.

The lilac colored recycled water reticulation networks will run throughout the Cobaki Estate development.

The development area is described on Lot No and DP references in Appendix 4.1.3.

For more information refer to,

- Appendix 4.1.3 Lot No & DP Table

- Appendix 4.2.1(c) Recycled Water Master Plan

- Appendix 4.2.1(d) WWTP layout Plans

4.2.4	Describe any interconnections between the proposed non-potable water infrastructure and other infrastructure not part of this scheme (eg, interconnections with other licensed network operators or public utilities such as sewers or water mains). Identify in your description who is responsible for the construction, operation and maintenance of which infrastructure. **Identify all interconnections with other infrastructure on the process flow diagram in Appendix 4.2.1 and the map in Appendix 4.2.3.**

Examples of interconnections may include potable water top up or trade waste disposal, as well as to other network operators.

The response to this question will be used to ensure the correct area of operation is specified in the license, if a license is granted (Act s.11 (1)). The response will also be used as a context for the assessment of risks from the proposed scheme and to identify possible additional license conditions relating to the inter-connected systems and responsibilities for risks.

There are no interconnections with any other outside water sources for the supply to the Recycled Water scheme for the Cobaki Estate.
Drinking water top up/back up will be provided by connection to the Recycled Water Storage tanks via a 300mm physical air gap for backflow protection.
Prior to NWS issuing and installing a recycled water meter to the customer, the customer must provide a copy of the cross-flow connection certificate from the authority or PCA with their connection application.

For more information refer to,

- Appendix 4.2.1(a) Recycled Water PFDs,

4.2.5	Where applicable, describe the connection point to customers or end users (e.g., the customer connection point may be a water meter). Identify in your description who is responsible for the construction, operation and maintenance of which infrastructure. **Identify all customer and/or end user connections on the process flow diagram in Appendix 4.2.1 and the map in Appendix 4.2.3.**

The response to this question will be used to ensure the correct area of operation is specified in the license, if a license is granted (Act s.11 (1)). The response will also be used as a context for the assessment of risks from the proposed scheme.

NWS is responsible for the Recycled Water network from the source to the end customer within the Cobaki Estate development boundary.

The detailed design and master plan for the construction of the recycled water infrastructure from the connection point at the WWTP boundary to the networks that run throughout the development and the recycled water service from street main to the stop tap located 400mm inside of each customer boundary. These services will be provided by the developer and signed off by NWS.

The developer upon completion of the construction of the staged recycled water network and achieving the necessary sign offs including quality assurance, pressure testing and ITPs from NWS, will gift the recycled water infrastructure to NWS to own and operate up stream of the recycled water stop tap and meters.

NWS will provide the recycled water meter to the customer upon receiving a completed connection notice to NWS from the customer/property owner's builder and must provide a cross flow test certificate as a prerequisite by NSW Fair Trading or its delegate before a recycled water meter can be issued and installed by NWS.

For more information refer to Appendices,

- Appendix 4.2.1(a) Recycled Water PFDs

- Appendix 4.2.1(c) Recycled Water Master Plans

- Appendix 4.2.5(a) Recycled Water Service to Meter Drawings,

4.2.6	What volume of water is available from the proposed source? Where applicable, please provide the capacity of the source and the (allowable) average daily extraction rate from the source. If there is more than one source, please provide the requested information for each of the sources. **Where relevant, provide a copy of any agreements and/or licenses to access the source water in Appendix 4.2.6.**

The response will also be used as a context for the assessment of the technical, organizational and financial capacity of the applicant corporation (Act s.10 (4) (a)).

The source for the recycled water is from the waste water generation from the Cobaki Estate. The projected waste water generation is approximately 2.260kL/day. After losses by the treatment by the MBR and AWTP the recycle water production volume will be 2,215kL/day.

As outlined above drinking water will be substituted in Stage A for up to the first 500 lots. The AWTP to produce the Class A+ recycled water for domestic reuse will be completed for commercial operation in Stage B.

After that time the recycled water will be supplied to the network and drinking water will be provided as back up in the case of an emergency. As detailed in the Water Balance report there is a surplus of recycled water throughout the development stages even taking into account the open space and sports field irrigation requirements as to the application rates detailed in the Cobaki Soil Assessment report and the Water Balance Report.

For more information refer to Appendices,

- Appendix 4.2.1(a) Recycled Water PFDs,

- Appendix 4.3.13(a) Cobaki Soil Assessment Report for open space & sports field areas,

- Appendix 4.1.6(a) Cobaki Water Balance Report,

4.2.7	What volume of water will be treated by the scheme? Please provide the average and peak daily flow rates treated by the scheme.

This information will be used to determine the fee category for the scheme, if a licence is granted. The response to this question may be used to draft a proposed licence, if a licence is granted.

The Cobaki scheme AWTP can treat up to 2.4MLD of MBR permeate. All waste water generated by the Cobaki Estate will be pre-treated by the MBR WWTP. The treated effluent permeate will then provide the source feed water for the AWTP to further process and provide the Class A+ recycled water as the end product to be used for domestic reuse.

The recycled water is then stored in the 4ML Storage Tanks located at the WWTP site to provide the redundancy necessary to meet the morning, evening peaks and irrigation requirements when required. The storage also provides more than 48 hours' emergency storage if required to meet the schemes requirements for recycled water for domestic reuse, open space area and sports field area irrigation purposes an average daily volume of 1,108kL/day will be provided by the scheme.

Average Day Flow Rate 11.01l/S 1,108kL/day Peak Day

Flow Rate 20.82l/S 1,798kL/day Peak Hour Flow Rate

23.28l/S 83.8k/L/hour For more information refer to,

- Appendix 4.1.6(a) Cobaki Water Balance Report,

4.2.8	What volume of non-potable water will be produced by the scheme? Please provide the average and peak daily volume supplied to end users or retail suppliers.

This information will be used to assess the retail supplier's obligation not to over commit, if a license is granted. The response to this question may be used to draft a proposed license, if a license is granted.

The Cobaki recycled water scheme has the capacity to produce 2.4MLD of Class A+ recycled water.

The scheme will require 1,108kL/day and the balance will be used for other purposes both onsite and offsite but not limited to,

- Industrial uses,

- Agricultural uses,

- Nurseries,

- Golf Courses, road verges and water features,

For more information refer to,

- Appendix 4.1.6(a) Cobaki Water Balance Report

4.2.9	List all the intended end uses for the non-potable water generated by the scheme.

The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response to this question will also be used to draft a proposed license. The license will specify the purpose for which the infrastructure can be used, if a license is granted (Act s.6 (1) (a), Reg cl.8 (1)).

The NWS Cobaki Estate scheme will provide recycled water for the following end uses,

Toilet flushing;
Laundry washing machine cold water service, hard plumbed;
Outdoor cleaning including bin washing, car washing and general hosing down of foot paths and driveways; and
Irrigation of private lot gardens and lawns;
Water features throughout the development;
Open space irrigation for sports fields, parks and road verges;
Industrial uses Cooling Towers, Urinals, Concrete production;
Nurseries, Golf courses and food crops;

There is an excess of recycled water as indicated in the water balance report. The excess occurs when we have wet weather events on an average of 132 days PA, when these events happen the excess permeate is discharged to the TSC sewerage system under a trade waste agreement with TSC. NWS has allowed in its modelling that at least 50% of the excess will be taken up during the build out of the development for open space, verge, water features and commercial uses over the 15/20-year period. The other 50% if available at the time will be provided for offsite customers which include golf course, nurseries and agricultural use.

For more information refer,

- Appendix 4.1.6(a) Cobaki Water Balance Report,

4.2.10	**Provide your preliminary risk assessment for the scheme from source to end use in Appendix 4.2.10**. It is important that your preliminary risk assessment accurately identifies any hazards present in the source water or likely to result from the proposed treatment process. The risk assessment will also address the intended, inadvertent and unauthorized end uses (and therefore routes of exposure) to the non- potable water. The preliminary risk assessment will identify any reasonably foreseeable risk event with the potential to expose people or the environment to hazards. The preliminary risk assessment will outline the broad mitigation measures where the risk of exposure to a hazard is unacceptable to human health or the environment in order to reduce the risk of exposure. The risk assessment must also identify the events and circumstances that could adversely affect the applicant corporation's ability to carry out the activities for which the license is sought (including any activities undertaken by a nominated third party), the probability of the occurrence of any such event or circumstance and the measures to be taken by the applicant corporation to prevent or minimize the likelihood of any such event or circumstance.

The preliminary risk assessment should demonstrate the application of a consistent methodology for identifying hazards and assessing potential impacts and risks to health and the environment. We strongly recommend that the applicant corporation utilizes an established risk management system, such as outlined in AS/NZS ISO 31000:2009 (Risk management – Principles and guidelines), which is consistent with the approach outlined in the Australian Guidelines for Water Recycling (element 2).

The response to this question is a requirement for any network operator's license for water infrastructure (Reg cl.6 (1) (b) and cl.6 (1) (c) (ii)). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response to this question will also be used to draft a proposed license. The license will specify the purpose for which the infrastructure can be used, if a license is granted (Act s.6 (1) (a), Reg. cl.8 (1)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has prepared a preliminary risk assessment in accordance with sections of the "Australian Guidelines for Water Recycling": Managing Health and Environmental Risks (Phase-1) 2006.

For more information refer to,

- Appendix 4.2.10(a) Preliminary Non Potable Water Risk Assessment Summary.

4.2.11	Describe how the 12 elements of the framework for the management of recycled water, as detailed in the Australian Guidelines for Water Recycling (AGWR), have been addressed and will be implemented and maintained. **Provide evidence of the applicant corporation's capacity to implement the 12 elements of the framework in the AGWR in Appendix 4.2.11.**

The evidence should be in the form of management plans for either the proposed scheme or other similar schemes undertaken by the applicant corporation, or in a comprehensive statement detailing the process by which the management plan will be developed. For existing (brownfield) schemes you should provide the actual water quality plan for the site.

The response to this question is a requirement for any network operator's license for water infrastructure (Reg cl.6 (1) (d) (i)). The response to this question will also be used to draft a proposed license. The license will specify the purpose for which the infrastructure can be used, if a license is granted (Act s.6 (1) (a), Reg. cl.8 (2)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license.

NWS has prepared a preliminary recycled water quality management plan

(RWMP) including the 12 elements of the framework for the management of recycled water, as detailed in the Australian Guidelines for Water Recycling (AGWR)

For more information refer to,

- Appendix 4.2.11(a) Preliminary Recycled Water Quality Management Plan, (Table of Contents)

4.2.12	How will the continuity of supply of the non-potable water be ensured? What contingency plans are in place in the case of failure of the infrastructure? What alternative supplies of non-potable water will be used when the infrastructure is inoperable?

The response to this question is a requirement for any network operator's license for water infrastructure (Reg cl.6 (1) (c)). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has put in place the following to ensure the continuity of supply in case there is a failure in the recycled water infrastructure,

1. 48 hours' redundancy has been built into the storage facility of 4ML,

2. The variable speed pumping units have duty/standby configurations built in,

3. NWS has an agreement with TSC for drinking water back up/ top up in an emergency,

4. Emergency Generator power supply has been provided in the case of a power failure,

5. Trucking arrangements will be put in place with a fully licensed operator in the case of an extreme emergency to truck in drinking water,

NWS will develop detailed contingency plans in the event of infrastructure failure. The contingency plans are included in the NWS Infrastructure Operating Plan and include,

- Minimizing the use of recycled water through customer notification by Web site, Media outlets, Mail or Verbal contact with customers in the Cobaki Community.

- Providing emergency response network set up to go in the case of an emergency.

For more information refer to Appendices,

- Appendix 4.1.6(a) Cobaki Water Balance Report,

- Appendix 3.5.1(b) IWMP, (Table of Contents)

- Appendix 4.1.12(a) IOP, (Table of Contents)

- Appendix 4.2.11(a) Recycled Water Quality Management Plan, (Table of Contents)

4.2.13	Describe the systems and processes that the applicant corporation will have in place to manage the non-potable water infrastructure. **Provide evidence of the applicant corporation's capacity to develop and implement an infrastructure operating plan in Appendix 4.2.13.**

The evidence may include examples of processes and procedures for either the proposed scheme or other similar schemes undertaken by the applicant corporation. The processes and/or procedures should demonstrate good operational practice including life cycle planning, system redundancy, contingency planning, condition monitoring, management maintenance processes and processes of supporting skills needs. The examples should demonstrate links to a risk management process. For existing (brownfield) schemes you should provide the actual water quality plan for the site.

The response to this question is a requirement for any network operator's license for water infrastructure (Reg cl.6 (1) (c)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has produced an Integrated Water Management Plan for the Cobaki Development which covers in detail the above and should be read in conjunction with the Recycled Water Quality Management Plan, Water Infrastructure Operating Plan, The Recycled Water Risk Assessment and the Functional Specification. The HAZOP and HAZID for the Recycled Water Infrastructure have been produced as a result from workshops assessing the Functional Specifications for the Cobaki Estate Scheme. These reports have been produced and have been included in the IWMP with this application.

For more information refer to,

- Appendix 3.5.1(b) Cobaki Integrated Water Management Plan, (Table of Contents)

- Appendix 4.1.6(a) Cobaki Water Balance Report,

- Appendix 4.1.12(a) IOP, (Table of Contents)

- Appendix 4.2.1(a) Recycled Water PFDs,

- Appendix 4.2.1(b) Cobaki P&IDs, (Commercial in Confidence)

- Appendix 4.2.10(a) Recycled Water Preliminary Risk Assessment,

- Appendix 4.2.11(a) Recycled Water Quality Management Plan, (Table of Contents)

- Appendix 4.3.10(b) MBR Operations & Maintenance Manual, (Table of contents)

- Appendix 4.3.10(e) HAZOP & HAZID workshop report, (Table of Contents)

4.2.14	Describe the studies that have been completed to investigate any environmental impacts (including but not limited to water quality, quantity, air, odor, noise, sea level rise, biodiversity and Aboriginal cultural heritage) from the construction and operation of the infrastructure? Have the studies identified any significant environmental impacts from the scheme? If so, how are the environmental impacts proposed to be managed? **Provide a copy of any environmental study and/or risk assessment in Appendix 4.2.14.**

As a minimum an application must be accompanied by a statement of environmental effects (SEE) (unless the development is designated development, Part 5 development or a major project, in which case either an environmental impact statement (EIS) or comprehensive environmental assessment is required). The SEE may be prepared by the applicant corporation or by a consultant acting on behalf of the applicant. The SEE must identify the environmental impacts of the proposed scheme, and the steps which will be taken to protect the environment or reduce the harm. Where the study is in the form of a comprehensive environmental assessment or EIS, please include only the executive summary.

The response to this question may be used to draft a proposed license, if a license is granted. The response to this question will be used to determine whether the activities authorized by a license (if granted) present a significant risk of harm to the environment (Reg cl.7).

NWS is preparing a Review of Environmental Factors that will be submitted shortly after this application for the WWTP site and reticulation areas as part of the planning requirements under Part 5. Included in the REF is the EPL WWTP & EPL Pressure Sewer Works Application to EPA NSW, SEE, CEMP, Odor Report, Noise Testing Report, Soil Assessment, Open Space & Sports Fields Irrigation Management Plan, Storm Water Management Plan, Civil Works, WWTP layout drawings and all other relevant studies issued with the development planning proposal by the developer.

For more information refer to the following Appendices,

- Appendix 3.5.1(a) REF, (Table of Contents)

- Appendix 3.5.1(b) IWMP (Table of Contents)

4.2.15	If a treatment process forms part of the infrastructure for which the applicant corporation is seeking a license, what waste streams will be generated by the proposed treatment plant and how will the waste be disposed of or handled?

The response to this question will be used to determine whether the activities authorized by a license (if granted) present a significant risk of harm to the environment (Reg cl.7). The response will also be used as a context for our assessment of the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

The waste streams created by the Cobaki Estate are from the waste water processes. All waste water generated from within the Cobaki Estate boundary will be transported by the pressure sewer networks to the redundancy tanks located on the WWTP site for processing by the MBR WWTP. Note: All waste water from the Cobaki Estate is treated on site by the Cobaki Scheme WWTP. The waste streams created by the different processes and how they will be handled and disposed of are as follows,

1. Solid waste in the form of dewatered screenings will be collected by a sealed polyethylene bagging unit adjacent the MBR screening unit. The bag when full will be sealed and replaced. The screenings will be collected by a fully qualified waste contractor for disposal off site at a licensed land fill disposal facility.

2. Activate Sludge Waste generated by the MBR process will be pumped when advised automatically by the system to Activated Sludge waste holding tanks located adjacent the MBR Redundancy tanks. The Tanks have a purpose built concrete bund truck out loading facility to collect the sludge waste by an authorized waste management contractor for disposal at a licensed facility.

3. All Excess treated effluent permeate that is not used for recycled water production will be discharged to the TSC existing sewerage network via a new sewerage pump station and rising main located at the Cobaki Parkway and Sandy Road roundabout owned and operated by TSC under a trade waste agreement with NWS. The main discharge events will be when the Cobaki Estate has a rain event or the AWTP is shut down for routine preventative maintenance or a plant failure. In the case of an extreme emergency a truck out procedure will be put in place by NWS with an authorized waste contractor for disposal at a licensed facility.

4. Backwash waste water generated from the AWTP UF plant will be reused by processing through the MBR WWTP. In an extreme emergency, the back wash water would trucked offsite by an authorized contractor and disposed of at a licensed facility.

5. The AWTP chemical enhanced backwash (CEB) will be neutralized in a holding tank and when neutralized it will be discharged to the MBR inlet tank in Stage A for reprocessing. In an extreme emergency, the CEB back wash water would trucked offsite by an authorized contractor and disposed of at a licensed facility.

6. Waste Water which contains chemicals from the MBR Clean in Place (CIP) process will be pumped to the Sludge Waste holding tanks. The Tanks have a purpose built concrete bund truck out loading facility to collect the sludge waste by an authorized waste management contractor for disposal at a licensed facility.

7. Chemical drums used during the different processes will be stored and housed in purpose built concrete bund storage on the WWTP site. The chemical drums when empty will be stored in a protected area for collection and disposal by an authorized contractor at a licensed facility.

Note: All movement of waste products collected, transported and disposed of from the Cobaki Scheme WWTP site will be by authorized contractors that will provide records and copies of receipts from the disposal site, will be provided to NWS for recording.

For more information refer to Appendices,

- Appendix 4.2.1(a) Recycled Water PFDs,

- Appendix 4.2.1(b) WWTP P&IDs, (Commercial in Confidence)

- Appendix 4.2.1(d) WWTP Layout Plans,

- Appendix 4.3.10(b) Cobaki Scheme MBR O&M, (Table of Contents) Appendix 4.3.10(e)

- HAZOP & HAZID Workshop Report, (Table of Contents)

4.3 Sewerage infrastructure

Only provide a response to the questions in the following section if the applicant corporation is seeking a license for the construction,
Maintenance and operation of sewerage infrastructure.

4.3.1	Describe the proposed sewerage infrastructure from the collection to disposal or reuse. Include in your Description all of the sewerage infrastructure for which the applicant corporation is seeking a license. This will include any infrastructure that is to be used for the collection, treatment, filtration, storage, Conveyance or disposal of the sewerage or treated effluent. **Provide a detailed process flow diagram** **of the proposed infrastructure from collection to disposal or reuse in Appendix 4.3.1.**

You must attach a process flow diagram in response to this question. The process flow diagram should only include the sewerage
Infrastructure where the scheme includes more than one type of infrastructure and must cover the process from source to end use.
You may also include a piping and instrumentation diagram for additional information.

The response to this question will be used to draft a proposed license. The response to this question is a requirement for any
network operator's license for sewerage infrastructure (Reg cl.6 (2) (d) (ii)). The license will specify the type of water industry
infrastructure, if a license is granted (Act s.6 (1) (a)). The response will also be used to ensure you have applied for the correct
license(s) and as a context for our assessment of the applicant corporation's technical, organizational and financial capacity to undertake the activities for which you are seeking a license (Act s.10(4)(a)).

The NWS sewerage infrastructure consists of the following from the collection, treatment, providing treated effluent for the feed source for the production of recycled water and the discharge of the excess permeate in the case of wet weather events or an emergency from the Cobaki Estate development.

The Pressure Sewer Collection Network

All lots in the Cobaki scheme will be serviced using a pressure sewer system. The pressure sewer units (PSU) are owned and operated by NWS and each PSU can service up to four lots. Each lot connects to the PSU via a sub-gravity sewer from the customer connection points located on each lot installed during the construction of the subdivision. The pressure sewer lot plans and master plans are provided in Appendix 4.3.1(d)

The pressure sewer network is owned and operated by NWS and includes a continuous online SCADA monitoring and control system to ensure all flows, faults and alarms are detected. The pressure sewer network includes:

- The sub gravity sewer from each lot can connect up to four lots to each PSU;
- A duty and standby grinder pumps are installed in each PSU;
- 24 hours redundancy has been designed for in each pressure sewer unit (PSU);
- Every PSU is fitted with an electrical type pillar that houses the control panel connected to the central SCADA system for controlling pump operation and - -provision of flow monitoring and alarms 24/7 for:
- Wet well water level;
- Number of starts and hours run for each pump;
- Each PSU voltage, current and power factor;
- Pump and electrical faults; and
- Communications signal strength.
- A fibre type communication cabling system will be installed with the piping network to connect all PSU control panels to the central SCADA system which will enable central integration, monitoring and control of the pressure sewer network with the WWTP operation 24/7.

The NWS designed pressure sewer network provides the following benefits to the Cobaki Estate scheme compared to a business as usual gravity sewerage system:

- Reduced groundwater and storm water infiltration;
- Control peak inflows into the wastewater treatment plant by utilizing network storage;
- Each PSU provides a minimum of 24 hours storage that will be utilized during power outages, when carrying out preventative maintenance on the network system or during WWTP routine shutdowns or break downs;
- The fusion welded PN 16 HDPE pipe network will minimize pressure pipe breakages and ground water infiltration (i&i) and leaks.

The pressure system reduces the potential of blockages as all sewage is macerated into a slurry before entering the network and is transported via the network at high velocity to keep the transport system clean;

- The monitoring of each pump operation at each PSU allows for detection of abnormal inflows which can be caused by incorrect storm water connections, swimming back wash or ground water pooling etc;
- Waste Water quality is monitoring 24/7 via probes (i.e. pH, TDS, NTU, Phosphorous and Nitrogen etc) which will be installed in specific locations in the - WWTP to detect inappropriate waste disposal practices;
- Simple staging in line with the rate of development; and

The system is continuously monitored with alarms hence residents are not required to respond to audible alarms or flashing lights as is the case with conventional pressure sewer systems.

Wastewater Treatment

An overview of the four stages for the proposed Cobaki Water & Waste Water Treatment Plant (WWTP) can be found in the Process Flow Diagrams (PFDs) in Appendix 4.3.1(a). The WWTP Site Civil Concept Plans can be found in Appendix D.

Membrane Bioreactor Stages A, C & D

All wastewater generated on the Cobaki Estate is treated on site via the NWS membrane bioreactor (MBR) WWTP with a peak design capacity of 2,640kL/day. The full capacity of the MBR WWTP will be reached during Stage D.

The MBR WWTP Process Description

The MBR is designed and constructed by NWS and is a modified activated sludge process with a number of treatment zones as outlined below.

Description of the MBR WWTP Process

	MBR Process Description
Primary Treatme nt	All incoming wastewater from the pressure sewer network is stored in the 2 x 330 KL Redundancy Tanks which provides extra redundancy to the system during morning and evening peak flows and in emergencies. When each MBR inlet tank signals that it needs more waste water the inlet valve to the screening unit which is mounted on the inlet side of the screening unit inlet tank will open. The waste water then undergoes primary treatment in a screening unit with a 1 mm perforated plate inlet screen to ensure removal of gross solids, hair, grit and other pollutants to protect the downstream treatment process and submerged membranes. The screening unit automatically dewaters and stores the solids collected from the screen in a bagging unit. When each bag is full it will be removed from the site by a licenced solid waste contractor and taken to the nearest accepting licenced landfill facility.
Inlet Tank	Primary treated wastewater from the inlet screen is discharged into the inlet tank. The inlet tank provides buffer storage capacity to ensure the flow of wastewater into the downstream treatment process is controlled. If the inlet tank is full during peak periods the flow of wastewater from the pressure sewer network will be stored in the redundancy tanks and the redundancy built into the pressure network until the screening unit inlet tanks are ready to receive more waste water.

Anaerobic Tank	Primary treated wastewater from the inlet tank is pumped into the anaerobic tank in a controlled manner. The anaerobic tank is used to pre-condition wastewater and microorganisms for the downstream biological processes.
Anoxic Tank	Wastewater from the anaerobic tank is pumped into the anoxic tank where it is mixed with nitrified water from the aeration tank to create conditions suitable for denitrification to occur. Excess liquid from the anoxic tank flows back to the anaerobic tank via an overflow weir. Acetic acid will be supplied to the anoxic tank as an additional carbon source for denitrification.
Aeration Tank	Wastewater from the anoxic tank is pumped into the aeration tank where microorganisms break down BOD and nitrify ammonia. Excess liquid from the aeration tank flows back to the anoxic tank via an overflow weir. Dissolved Oxygen (DO) in the aeration tank is maintained to an adjustable set point of 2 mg/L via continuous online monitoring of DO and a variable speed drive blower unit that supplies the submerged fine bubble diffuser grid at the base of the Aeration tank. The system operates with a high biomass concentration of around 8000-13000 mg/L Mixed Liquor Suspended Solids (MLSS). The MLSS concentration in the aeration tank can be maintained during low demand periods with supplementary carbon dosing into the anoxic tank if required. The Waste Activated Sludge (WAS) is pumped from the MBR tank when MLSS increases above approximately 13,000 mg/L. The WAS generation from each MBR train will be stored in two 30 kL Sludge Tanks until it is removed from the site by a licenced liquid waste transport contractor to the nearest accepting licenced facility.
Submerged Membrane Tank	Wastewater from the aeration tank is pumped into the submerged membrane tank. Excess liquid from the membrane tank flows back to the aeration tank via an overflow weir. The MBR tank includes 3 double tier modules of membrane area and will operate at a peak flow of 330 kL/day. The MBR permeate is drawn through the submerged membranes under an outside→inside arrangement from a dry mounted vacuum suction pump located adjacent to the membrane tank. The membranes are cleaned by air scour headers by coarse bubble diffusers located at the base of the membrane module. The permeate generated by the system is continuously being monitored for turbidity, pH, TDS, Nitrogen, Phosphorous levels, the trans-membrane pressure (TMP) and flow to ensure the system is operating effectively. Membrane cleaning regimes are implemented on a routine basis as per manufacturer recommendations, and/or when TMP reaches a set point.
Ultraviolet Disinfection Unit	MBR permeate passes through a pre-validated inline ultraviolet disinfection unit to provide an additional disinfection barrier in the treatment train. The UV unit will achieve a 3 log reduction in bacteria and protozoa. The UV system is continuously monitored for UV intensity, UV transmission, flow and lamp run hours to ensure the system is operating effectively.

Typical effluent quality from the MBR

MBR Treated Effluent Permeate Class A	
BOD/SS	<10mg/L pH 6-8.5
Turbidity	<1 NTU
TN	<10mg/L
TP	<0.3mg/L
TDS	700-850mg/L

Stage B - The Advanced Water Treatment Plant

The two 1.2ML/day Ultra Filtration (UF) Skids that make up the Advanced Water Treatment Plant (AWTP) that further processes the MBR Class A permeate to produce Class A+ recycled water suitable for domestic reuse as to the Australian Recycled Water Guidelines for use inside the home for supply to customers will be installed inside the WWTP building during Stage B of the WWTP and will be commissioned and operational by the time the first 500 lots have been connected to the scheme. Note: Prior to the first 500 lots being connected to the scheme the recycled water network will be substituted with drinking water.

The feed water for the AWTP will be taken from the MBR permeate 2ML storage tank located adjacent the WWTP building at the WWTP site. The surplus permeate water will accumulate in the 2ML permeate storage tank and be managed by land irrigation in Stage A or offsite discharge to the TSC existing sewerage network as outlined in Section **Error! Reference source not found.**. Once the AWTP becomes operational in Stage B the volume of surplus permeate water will reduce due to it being used as the feed water to the AWTP that produces the supply of Class A+ recycled water to households and other end users.

Recycled Water Quality for Domestic Re-use Class A+

BOD/SS	<5mg/L
pH	6.5-8.5
Turbidity	<1 NTU
TN	<7mg/L
TP	<.25mg/L
TDS	500mg/L
Virus	6 log removal
Protozoa	7 log removal

The Class A+ Recycled Water supplied to individual customers will be used for the following uses:

Toilet flushing;
Laundry washing machine cold water service, hard plumbed;
Outdoor cleaning including bin washing, car washing and general hosing down of foot paths; and
Irrigation of private lots gardens, lawns;
Water features throughout the development;
Open space irrigation for sports fields, parks and road verges;
Industrial uses Cooling Towers, Urinals, Concrete production;
Nurseries, Golf courses and food crops;

Waste Products generated by the processes at the WWTP Site

MBR Screenings

All influent to the MBR Modules receives primary treatment by a 1 mm perforated plate inlet screen to remove
hair, gross pollutants and other foreign matter in the inlet tank of the Huber screening Unit. The Huber screen includes a rotating brush, dewatering auger and automatic bagging unit to avoid operator contact with screenings.
As each bag is filled with dewatered screening at approximately fortnightly intervals the waste will be disposed
of by a licensed waste transport contractor to an approved solid waste landfill facility.

MBR Waste Sludge

The MBR is an activated sludge process that produces waste activated sludge at approximately 1.2% of the inflow rate. At Stage A of the development approximately 5 kL/day of waste activated sludge at a solids content of approximately 10,000 mg/L will be generated from each of the MBR modules. When the development reaches full maturity the Waste sludge production will be approximately 40 kL/day.
The waste sludge will be stored in 2 x 30KL sealed sludge waste tanks until it is removed from the site by a Licensed liquid waste transport contractor and disposed of to the nearest approved municipal wastewater treatment plant.

UF Filtration Back Wash

The Ultra Filtration (UF) membrane skids will backwash every day on a set timer or when the trans-membrane
back pressure exceeds the set point with Class A + recycled water. The back wash waste water is discharged to the inlet of the MBR tank in Stage A for processing.

The chemical enhanced back wash (CIB) which consists of chlorine and caustic dosing being directly injected into the back wash line on a set timer or when the membrane pressure exceeds the back pressure on a regular basis. The waste water is then neutralized in a Neutralizing Backwash Tank and when ready discharged to the inlet tank of the MBR train in Stage A for processing.
No backwash from the AWTP process is discharged off site to land or waterways.

For more information refer to,

- Appendix 4.3.1(a) Sewerage PFDs

- Appendix 4.3.1(b) Sewerage Management plan, (Table of Contents)

- Appendix 4.3.1(c) Pressure Sewer Master Plan Report, (Table of Contents)

- Appendix 4.3.1(d0 Pressure Sewer Master Plans

- Appendix 4.3.1(e) Waste Water BCR Report, (Table of Contents)

4.3.2	Describe whether the infrastructure is existing infrastructure or is to be constructed. If the infrastructure is existing, please describe its current condition and operability. If the infrastructure is a mixture of existing and to be constructed **Identify the infrastructure as existing or to be constructed on the process flow diagram in Appendix 4.3.1**.

The response to this question will be used as a context for the assessment of environmental risks from the proposed scheme
(Act s.10 (4) (e), Reg cl.7).

All the sewerage infrastructure under this license application inside the Cobaki Estate Boundary is to be constructed

For more information refer to,

Appendix 4.3.1(a) Sewerage PFDs

4.3.3	Describe the location of the proposed infrastructure. For example include: ▾ the identification of specific lot descriptors (e.g., lot and DP numbers) for the collection, treatment, filtration and/or storage infrastructure ▾ the location of infrastructure for the conveyance and/or reticulation of sewage by street name, local government area or other description as appropriate to the size of the scheme. **Provide a map showing the location of the proposed infrastructure from source to end use in Appendix 4.3.3.**

The map may include all water industry infrastructure (i.e., drinking water, non-potable water and/or sewerage) where the scheme includes more than one type of infrastructure.

The response to this question is a requirement for any network operator's license for sewerage infrastructure (Reg cl.6 (2) (a)).
The response to this question will be used to specify the authorized area of operations (Act s.11 (1)), if a license is granted.
The response will also be used as a context for the assessment of environmental risks from the proposed scheme (Act s.10 (4) (e), Reg cl.7).

All the sewerage infrastructure described above in 4.3.1 is contained inside the Cobaki Estate Boundary area as shown in the pressure sewer master plan and the WWTP site located at 425 Piggabeen Road Lot 1, DP874316.

The development area Lot and DP Nos refer to table in Section 4.1.3,

For more information refer to,

- Appendix 4.3.1(d) Pressure Sewer Master Plans,

- Appendix 4.3.10(d) WWTP Layout Plans,

- Appendix 4..1.3(a) Waste Water Discharge Plan from source to end,

4.3.4	Describe any interconnections between the proposed sewerage infrastructure and other infrastructure not part of this scheme (e.g., interconnections with other licensed network operators or public utilities such as sewers). Identify in your description who is responsible for the construction, operation and maintenance of which infrastructure. **Identify all interconnections with other infrastructure on the process flow diagram in Appendix 4.3.1 and** **the map in Appendix 4.3.3.**

The response to this question will be used to ensure the correct area of operation is specified in the license, if a license is granted (Act s.11 (1)). The response will also be used as a context for the assessment of risks from the proposed scheme and to identify possible additional license conditions relating to the inter-connected systems and responsibilities for risks.

An emergency discharge point will be provided by TSC located a Cobaki Parkway and Sandy Road roundabout.

A new sewerage pump station (SPS) and rising main will be installed by the developer and gifted to the TSC on completion and sign off. The new rising main will be connected to the existing TSC network in Piggabeen Road.

The new SPS and rising main will provide a metered connection point the NWS will connect the new emergency permeate discharge main from the WWTP sit boundary during construction of Stage A. A temporary connection of the pressure sewer network will be provided for up to the first 500 lots.

When the WWTP has been commissioned and gained approval for commercial use the pressure sewer network will be connected to the Cobaki Estate pressure sewer network

For the collected waste water to be treated by the MBR WWTP. All waste water collected will be treated via the MBR WWTP from this point on.

For more information refer to,

- Appendix 4.3.1(a) Sewerage PFDs,

4.3.5	What volume of sewage will be treated by the scheme? Please provide the average and peak daily (hydraulic and biological, where relevant) flow rates treated by the scheme.

This information will be used to determine the fee category for the scheme, if a license is granted. The response to this question may be used to draft a proposed license, if a license is granted.

The waste water treatment plant has a peak capacity to treat the waste water generated by the scheme is 2.620KLD when fully built out. As detailed in the water balance report the Cobaki scheme will generate approximately 2,260KLD.

The MBR WWTP has a peak flow rate of 30l/S.

- The instantaneous peak flows will be buffered by the redundancy in the pressure sewer network system,

- The controlled flow from the pressure sewer network by the SCADA control system,

- WWTP redundancy tanks,

- The pressure sewer system will eliminate i&i during wet weather events due to the sealed network system thus eliminating peak wet weather flows,

- The peak daily flow will be maintained to be equal to the average daily flow at all times by the distribution from the redundancy tanks located at the WWTP to the MBR influent tanks.

For further information refer to,

- Appendix 4.1.6(a) Water Balance Report,

- Appendix 3.5.1(b) Integrated Water Management Plan, (Table of Contents)

- Appendix 4.3.1(c) Pressure Sewer Master Plan Report, (Table of Contents)

- Appendix 4.3.5(a) TSC letter of feasibility,

4.3.6	What volume of treated effluent will be disposed of from the scheme? Please provide the average and peak daily disposal rates disposed from the scheme.

The response will be used as a context for the assessment of environmental risks from the proposed scheme (Act s.10 (4) (e), Reg cl.7). The response to this question may be used to draft a proposed license, if a license is granted.

All the waste water collected from the Cobaki Estate will be treated onsite by the MBR WWTP. The treated effluent will be disposed from the scheme by different means as shown in the table below,

Summary of Cobaki Integrated Water Scheme Average Daily Flows

Cobaki Integrated Water Scheme Average Daily Flows (kL/Day)							
Total Drinking Water	Total Wastewater Generated	WWTP Waste Generation	Recycled Water Generated	Development Recycled Water Internal Demand	Residential External Water Use	Public Space Irrigation	Offsite Recycled Water Demand
1,709	2,260	-45	2,215	1,108	437	160	1,107

Recycled Water Balance

Recycled Water Balance		
Daily Volume of Recycled Water Generated (kL/d)	Daily Volume of Recycled Water Consumed Within Development (kL/d)	Daily Excess Recycled Water for other uses (kL/d)
2,215	1,108	1,107

Emergency Waste Water Discharge

Based on the findings of the water balance in the event of a significant wet weather event the ability to discharge excess recycled water may be required. In order to provide a suitable level of redundancy into the system NWS require there to be suitable back up discharge options available to cater for the worst case operating scenario. Based on this requirement the emergency waste water discharge agreement with TSC will cater for the following:

Provide access to discharge a maximum daily volume of treated waste water of 518 kL/Day

Discharge to the metered discharge point at the new TSC SPS at Cobaki Parkway and Sandy Road roundabout of no more than 6 l/s
Annual discharge cap of 172.8 ML/PA

For more information refer to,

- Appendix 4.1.6(a) Cobaki Estate Water Balance Report,

4.3.7	How will the treated effluent be disposed of from the scheme?

The response to this question may be used to draft a proposed licence, if a licence is granted. The response will also be used as a context for the assessment of environmental risks from the proposed scheme (Act s.10 (4) (e), Reg cl.7).

Refer to the above section 4.3.6. For more

information refer to,

- Appendix 4.1.6(a) Cobaki Estate Water Balance Report,

- Appendix 3.5.1(b) IWMP, (Table of Contents)

4.3.8	What wastewater and/or catchment characterization studies have been undertaken? **Provide a summary report of any wastewater characterization or catchment studies including results in Appendix 4.3.8.**

This information will be used as a context to the potential health and environmental risks posed by the scheme.

Refer to section 4.3.6 above. For more information refer to,

- Appendix 4.1.6(a) Cobaki Water Balance Report,

- Appendix 4.3.1(c) Pressure Sewer Master Plan Report, (Table of Contents)

4.3.9	**Provide your preliminary risk assessment for the scheme from collection to disposal in Appendix 4.3.9**. It is important that your preliminary risk assessment accurately identifies any hazards present in the sewage or likely to result from the proposed treatment process. The risk assessment should also address the intended method of disposal and any in advertent releases (and therefore routes of exposure) to the treated effluent. The preliminary risk assessment will identify any reasonably foreseeable risk event with the potential to expose people or the environment to hazards. The preliminary risk assessment will outline the broad mitigation measures where the risk of exposure to a hazard is unacceptable to human health or the environment in order to reduce the risk of exposure. The risk assessment must also identify the events and circumstances that could adversely affect the applicant corporation's ability to carry out the activities for which the license is sought (including any activities undertaken by a nominated third party), the probability of the occurrence of any such event or circumstance and the measures to be taken by the applicant corporation to prevent or minimize the likelihood of any such event or circumstance.

The preliminary risk assessment should demonstrate the application of a consistent methodology for identifying hazards and assessing potential impacts and risks to health and the environment. We strongly recommend that the applicant corporation utilizes an established risk management system, such as outlined in AS/NZS ISO 31000:2009 (Risk management – Principles and Guidelines).

Where relevant, the risk assessment should identify and include any environmental risks and/or management actions identified in the development approval.

The response to this question is a requirement for any network operator's license for sewerage infrastructure (Reg cl.6 (2) (b), cl.6 (2) (c) (ii), cl.6 (2) (d) (i)).

The response to this question will be used to determine whether there are any issues of public

Interest arising from the proposed scheme (Act s.10 (4) (f)). The response to this question will also be used to draft a proposed license. The license will specify the purpose for which the infrastructure can be used, if a license is granted (Act s.6 (1) (a)).

The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has prepared a preliminary risk assessment in accordance with the "Australian Guidelines for Water Recycling"

For more information refer to,

- Appendix 4.3.9(a) Preliminary Sewerage Risk Assessment,

4.3.10	Describe the systems and processes that the applicant corporation will have in place to manage the sewerage infrastructure. **Provide evidence of the applicant corporation's capacity to develop and implement an infrastructure operating plan in Appendix 4.3.10.**

The evidence may include examples of processes and procedures for either the proposed scheme or other similar schemes undertaken by the applicant corporation. The processes and/or procedures should demonstrate good operational practice including life cycle planning, system redundancy, contingency planning, condition monitoring, management maintenance processes and processes of supporting skills needs. The examples should demonstrate links to a risk management process.

For existing (brownfield) schemes you should provide the actual water quality plan for the site.

The response to this question is a requirement for any network operator's license for sewerage infrastructure (Reg cl.6 (2) (c)).

The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has developed a draft infrastructure operating plan (IOP) for the Cobaki Estate development.

This should be read in conjunction with other management plans, risk assessments and detailed reports submitted with this application.

For more information refer to,

- Appendix 3.5.1(b) Cobaki Integrated Water Management Plan, (Table of Contents)

- Appendix 4.3.9(a) Preliminary Sewerage Risk Assessment,

- Appendix 4.3.10(a) IOP, (Table of Contents)

- Appendix 4.3.10(b) MBR O&M Manual, (Table of Contents)

- Appendix 4.3.10(c) WWTP & AWTP Functional Specification, (Table of Contents)

- Appendix 4.3.10(d) WWTP Layout Plans,

- Appendix 4.3.10(e) HAZOP & HAZID Reports, (Table of Contents)

4.3.11	How will the continuity of the provision of sewerage services be ensured? What contingency plans are in place in the case of failure of the infrastructure?

The response to this question is a requirement for any network operator's license for sewerage infrastructure (Reg cl.6 (2) (c)).
The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (act s.10 (4) (a)).

NWS will ensure the continuity of the provision of sewerage services through the following contingency's,

- The Pressure sewer network will provide up to 24 hours redundancy storage for each lot in each PSU tank well,

- The pressure sewer SCADA control system provides controlled flow at all times especially after a power outage

- The SCADA control system provides 24/7 monitoring and alarms of each individual PSU the network and

All ancillary systems (WWTP, AWTP, Storages, Pumping Units & Power supply) associated with the Sewerage Services,

- The MBR WWTP, Storages and pumping systems are interlinked with the pressure sewer network via the SCADA,

- The redundancy built into the scheme provides over 24 hour back up in the case of an emergency by providing

(a) 24 hour redundancy in the pressure sewer network,

(b) Up front 660KL redundancy tanks,

(c) 500KL in the MBR Inlet and anoxic tanks

- A concrete bund truck out facility has been provided as a further back up located at the Redundancy tank at

WWTP site for emergency purposes,

- A back up emergency power generator with auto-changeover switch has been provided for in the event of a

Failure.

- Emergency discharge system from the Permeate Storage Tank to the TSC sewerage network under a trade waste for treated effluent has been included in the case AWTP has a failure and is off line, AWTP routine maintenance or reduces use due to wet weather events. This will enable the MBR WWTP to continue to treat the Cobaki Estate waste water if any of these events occur.

For more information refer to,

- Appendix 3.5.1(b) IWMP, (Table of Contents)

- Appendix 4.3.10(c) WWTP Functional Specification (Table of Contents)

- Appendix 4.3.10(e) HAZOP & HAZID Workshop Report, (Table of Contents)

4.3.12	Describe the studies that have been completed to investigate any environmental impacts (including but not limited to water quality, quantity, air, noise, sea level rise, biodiversity and Aboriginal cultural heritage) from the construction and operation of the infrastructure? Have the studies identified any significant environmental impacts from the scheme? If so, how are the environmental impacts proposed to be managed? **Provide a copy of any environmental study and/or risk assessment in Appendix 4.3.12.**

As a minimum an application must be accompanied by a statement of environmental effects (SEE) (unless the development is designated development, Part 5 development or a major project, in which case either an environmental impact statement (EIS) or comprehensive environmental assessment is required). The SEE may be prepared by the applicant corporation or by a consultant acting on behalf of the applicant. The SEE must identify the environmental impacts of the proposed scheme, and the steps which will be taken to protect the environment or reduce the harm. Where the study is in the form of a comprehensive environmental assessment or EIS, please include only the executive summary.

The response to this question may be used to draft a proposed license, if a license is granted. The response to this question will be used to determine whether the activities authorized by a license (if granted) present a significant risk of harm to the environment (Reg cl.7).

NWS is preparing a Review of Environmental Factors (REF) that will be submitted after this application for the WWTP site and reticulation areas as part of the planning requirements under Part 5. Included in the REF is the

EPL WWTP, EPL Pressure Sewer Works, SEE, CEMP, Odor, Noise, Soil

Assessment, Storm Water, Civil Works and all relevant studies

issued with the development planning proposal by the developer.

For more information refer to the following,

- Appendix 3.5.1(a) Cobaki Estate REF, (Table of Contents)

4.3.13	Where relevant, what land capability assessments have been undertaken on the proposed land disposal area? **Provide a copy of any soil capability assessment in Appendix 4.3.13.**

The response to this question may be used to draft a proposed license, if a license is granted. The response to this question will be used to determine whether the activities authorized by a license (if granted) present a significant risk of harm to the environment (*Reg cl.7).*

NWS has prepared a soil capability assessment to produce the Water Balance report for open space areas and sports field areas.

For more information refer to,

- Appendix 4.1.6(a) Water Balance Report,

- Appendix 4.3.13(a) Soil Capability Assessment Report,

- Appendix 3.5.1(b) IWMP, (Table of Contents)

4.3.14	If a treatment process forms part of the infrastructure for which the applicant corporation is seeking a license, what waste streams will be generated by the proposed treatment plant (such as screenings and bio solids but not including the treated effluent) and how will the waste be disposed of or handled?

The response to this question will be used to determine whether the activities authorized by a license (if granted) present a significant risk of harm to the environment (Reg cl.7). The response will also be used as a context for our assessment of the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

Refer to section 4.2.15 of this Application which describes the waste streams generated by the treatment processes and how they are disposed of.

5 Retail Supplier

Only to be completed by applicants seeking a retail supplier's license.

Note a retail supplier's license may only be granted if sufficient quantities of the water supplied will have been obtained otherwise than from a public water utility (Act s.10(4)(d)).

5.1 Supply of water

Please provide a response to the questions in the following section if you are seeking a license for the supply of water by means of any water industry infrastructure. This section applies to the supply of drinking water and non-potable water.

5.1.1	Describe the water industry infrastructure that the applicant corporation will access to supply water.

The response to this question is a requirement for any retail supplier's licence for water industry infrastructure (Reg cl.10 (1) (a). The response will also be used to ensure you have applied for the correct licence(s)).

NWS will provide the drinking water and recycled water retail services for all the infrastructure in the Cobaki Estate Scheme. The water services will be approved under the WIC Act as outlined in Section 4.1 and 4.2 of this IPART application.

Source of the Drinking Water Supply.

The drinking water supply will be sourced under an agreement from the Tweed Shire Council (TSC) under sections 305 - 307 of the Water Management Act 2000.

TSC have advised after receiving endorsement from Council the supply of the drinking water requested by NWS is technically feasible. (Refer to letter received from Council in Appendix 4.1.6(b) and the drinking water Boundary Conditions Report between TSC & NWS detailing the proposed scope of works, terms & conditions for the drinking water supply.

For a detailed description of the drinking water infrastructure refer to the relevant appendices listed below,

- Appendix 4.1.1 Description of the drinking water infrastructure,

- Appendix 4.1.1(b) TSC letter of feasibility,

- Appendix 4.1.1(c) Process Flow Diagrams,

- Appendix 4.1.1(d) NWS Water Servicing Strategy,

- Appendix 4.1.1(e) Drinking Water Master Plan,

- Appendix 4.1.6(a) Drinking Water Balance Report,

The Recycled Water Supply

The Class A+ Recycled Water supplied to individual customers will be used for the following uses:

Toilet flushing;
Laundry washing machine cold water service, hard plumbed;
Outdoor cleaning including bin washing, car washing and general hosing down of foot paths and driveways; and
Irrigation of private lot gardens and lawns;
Water features throughout the development;
Open space irrigation for sports fields, parks and road verges;
Industrial uses Cooling Towers, Urinals, Concrete production;
Nurseries, Golf courses and food crops;

The AWTP is designed to produce high quality Class A+ recycled water that complies with the highest bacteria, virus and protozoa log reduction targets for dual reticulation from the Australian Guidelines for WaterRecycling:

Managing Health and Environmental Risks

All recycled water from the AWTP is stored in the 2 x 2 ML recycled water storage tanks. The 4 ML of recycled water storage provides more than 48 hours storage at ultimate peak day recycled water demands.
During Stage A the 2ML recycled water tank will be filled with potable water. Once the AWTP is commissioned and signed off for commercial operation by IPART in stage B (After the first 500 lots) the 2ML storage tank will be filled with Class A+ recycled water from the AWTP and potable water will only be used for top-up and emergency backup to the recycled water system.

The chlorine residual in the recycled water storage tank will be maintained with continuous on line monitoring and providing top up dosing when required. Sufficient free chlorine residual will be maintained in the recycled water network to ensure the minimum free residual chlorine is achieved at the furthest point in the reticulation system at all times.

24/7 monitoring of the chlorine dosing rates will be carried out during operation to achieve the minimum residuals required throughout the network.

5.1.2	What volume of water is available from the proposed source? Where applicable, please provide the capacity of the source and the (allowable) average daily extraction rate from the source. If there is more than one source, please provide the requested information for each of the sources. **Where relevant, provide a copy of any agreements and/or licences to access the source water in Appendix 5.1.2.**

The response to this question will be used to determine whether sufficient quantities of the water supplied will have been obtained otherwise than from a public water utility (Act s.10(4)(d)).

NWS will be responsible for providing the volume of drinking water and recycled water as the authorized private network operator and retailer for the Cobaki Estate Scheme.

The Drinking Water:

Tweed Shire Council under agreement with NWS will provide the drinking water supply to a metered connection point located at Cobaki Parkway and Sandy road roundabout in the Cobaki Estate. For more detailed information refer to Section 4.1.1 of this application.

The volume of drinking water per day is 1.709MLD.

Refer to the following Append ice for more information,

- Appendix 4.1.6(b) Letter from the TSC,

- Appendix 4.1.6(a) Cobaki Estate Water Balance Report,

The Recycled Water Scheme:

The NWS recycled water scheme AWTP can treat up to 2.4MLD. All waste water generated by the Cobaki Estate will be pre-treated by the MBR WWTP the treated effluent permeate will then provide the source for the AWTP to process and provide the recycled water as the end product.

The recycled water is then stored in the 4ML Storage Tanks to provide the redundancy necessary to meet the morning, evening peaks and irrigation requirements when required. The storage also provides more than 48 hours emergency storage if required to meet the schemes requirements for recycled water for domestic reuse, open space area and sports field irrigation purposes an average daily volume of 1,018kL/day will be provided by the scheme.

Average Daily Flow Rate = 11.8l/S

For more information refer to,

- Appendix 4.1.6(a) Cobaki Water Balance Report,

5.1.3	What customers or classes of customers does the applicant corporation propose to supply with water?

Classes of customers may include residential, industrial, commercial or agricultural.

The response to this question is a requirement for any retail supplier's licence (Act s.6 (1) (b)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a licence (Act s.10 (4) (a)).

The Cobaki Estate is mainly made up of residential, commercial and Educational customers.

The classes of customers proposed to be supplied by the NWS Cobaki Scheme,

1. Residential
2. Commercial
3. Light Industrial
4. Recreational
5. Agricultural

Proposed Developable Area Summary for proposed type of customers

Land Use	Area
Total Developable Area	333 Ha
Residential Development	277 Ha
Medium Density Housing	15 Ha
School and Child Care Precinct	6 Ha
Commercial Precinct	15 Ha
Public Open Space & Sports Fields	20 Ha

5.1.4	Will you be supplying small retail customers with water (i.e., less than 15Ml/year)?

A person is a small retail customer in relation to water supply if the maximum rate at which water is supplied, pursuant to one or more water supply contracts, to all premises that the person owns, leases or occupies is less than 15 mega liters per year.

The response will be used as context to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)). The response will also be used as a context for the assessment of risks from the proposed scheme and to identify possible additional license conditions relating to the supply of water to small retail customers.

The majority of customers supplied under the Cobaki Estate Scheme will be residential and small commercial customers. There will be no high end users that will have a demand in excess of 15ML/ year.

5.1.5	**Provide your preliminary risk assessment for the retail activities related to the scheme in Appendix 5.1.5.** The risk assessment must identify the events and circumstances that could adversely affect the applicant corporation's ability to carry out the activities for which the license is sought (including any activities undertaken by a nominated third party), the probability of the occurrence of any such event or circumstance and the measures to be taken by the applicant corporation to prevent or minimize the likelihood of any such event or circumstance.

The preliminary risk assessment should demonstrate the application of a consistent methodology for identifying hazards and assessing potential impacts and risks. We strongly recommend that the applicant corporation utilizes an established risk management system such as outlined in AS/NZS 4360 (Risk Management).

The response to this question is a requirement for any retail supplier's license (Reg cl.10 (1) (b). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)).

NWS has developed a preliminary retail & business risk assessment that identifies the events and circumstances that may adversely affect the retail services.

For more information refer to,

- Appendix 5.1.5 Retail Risk & Business Assessment, (Commercial in Confidence)

5.1.6	How will the continuity of the supply of water to customers be ensured? What contingency plans are in place in the case of failure of the infrastructure?

The continuity of supply may differ between customer classes. If this is the case for your project please define the different levels of service for each customer class and how the continuity of supply of water, relevant to that class of customer, will be maintained.

The response to this question is a requirement for any retail supplier's licensee (Reg cl.10 (1) (b) (iii)). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has ensured the continuity of the drinking water and recycled water supply as the retail supplier have been catered for within the design parameters in the network infrastructure.

The networks have been designed to provide an uninterrupted supply of services to the customers in the event of an incident that causes an interruption to the retail services. The network operators risk management assessment policies will ensure that any interruption will be kept to a bare minimum.

Drinking Water:

- NWS will have a commercial agreement in place with the TSC to supply metered drinking water to ADWG to the gate at the required flow and pressure to supply the drinking water at the average daily demand of 1,709kL/day at 19.8 l/S over 24 hour period for the development. The supply agreement will be under section 305 - 307 of the Water Management Act NSW 2000.

- As part of the TSC drinking water supply agreement TSC have guaranteed the drinking water supply will not be interrupted for more than any 24 hour period. Note: for more details on the drinking water supply agreement between
TSC & NWS refer to the Boundary Conditions Report in Appendix 3.4.2(a).

- The required amount of redundancy has been built into the Cobaki drinking water scheme. NWS has calculated that 8ML of storage tanks will be required. The storage facility will be built on the WWTP site.

- Variable Speed pump stations will be provided with adequate duty standby pumping arrangements to provide continuous supply at the pressure and flow required throughout the networks.

- Emergency power supply has been designed into the drinking water scheme. In the event of a power failure or a notified shut down by the energy provider an emergency power generator with auto changeover switch will be activated

Automatically with the loss of power. This system is monitored and maintained by the NWS WWTP SCADA CMS.

- NWS has developed the following contingency plans as a last resort backup in the event of infrastructure failure which include:

(a) Minimize the use of drinking water through customer notification by letter drop, Web site posting and verbal contact notification,

(b) Rapid response to infrastructure failure by putting in place rapid emergency plans and response times with NWS operations staff, site operators and contractors,

(c) If the interruption will be longer than 48 hours or storage levels are reduced to the emergency level (30%) NWS in conjunction with the TSC will organize trucking in of drinking water by a fully qualified tanker operators from the nearest Tweed Shire Council fill points.

Recycled Water:

NWS has put in place the following to ensure continuity of supply of recycled water in case there is a failure in the infrastructure,

1. 48 hours redundancy has been built into the storage facility of 4ML,

2. The variable speed pumping units have duty/standby configurations built in,

3. NWS has an agreement with TSC for drinking water back up/ top up in an emergency,

4. Emergency power supply has been provided in the case of a power failure,

5. Trucking arrangements will be put in place with a fully licensed operator in the case of an extreme emergency to truck in drinking water,

NWS will develop detailed contingency plans in the event of infrastructure failure. The contingency plans are included in the NWS Infrastructure Operating Plan and include,

- Minimizing the use of recycled water through customer notification by Web site, Media outlets, Mail or Verbal contact with customers in the Cobaki Community.

- Providing emergency response network set up to go in the case of an emergency.

For more information refer to,

- Appendix 4.1.6(a) Cobaki Water Balance Report,

- Appendix 4..1.9(a) Drinking Water Risk Assessment,

- Appendix 4.2.10(a) Recycled Water Preliminary Risk Assessment,

5.1.7	Describe the systems and processes that the applicant corporation will have in place to manage retail activities including billing systems, complaint and debt recovery procedures. **Provide evidence of the applicant corporation's capacity to develop and implement a retail supply management plan in Appendix 5.1.7.**

The evidence may include examples of processes and procedures for either the proposed scheme or other similar schemes undertaken by the applicant corporation. The examples should demonstrate links to a risk management process. For existing (brownfield) schemes you should provide the actual systems and procedures.

The response to this question is a requirement for any retail supplier's licence (Reg cl.10 (1) (b) (iv)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a licence (Act s.10 (4) (a)).

NWS has developed a preliminary Retail Supply Management Plan utilizing systems and processes that will be put in place for our customers. Before commencing retail operations a detailed retail audit procedure will be put in place.

NWS will operate to the requirements and standards set out by the IPART and the relevant NSW Legislation.

For more Informational refer to,

- Appendix 5.1.7 Draft Retail Supply Management Plan, (Table of Contents)

- Appendix 5.1.7(a) Preliminary Retail Audit Procedures, (Table of Contents)

5.2 Provision of sewerage services

Please provide a response to the questions in the following section if you are seeking a license for the provision of sewerage services by means of any water industry infrastructure.

5.2.1	Describe the water industry infrastructure that the applicant corporation will access to provide sewerage services.

The response to this question is a requirement for any retail supplier's licence for water industry infrastructure (Reg cl.10 (2) (a)). The response will also be used to ensure you have applied for the correct licence(s).

NWS will provide the sewerage retail services for all the infrastructure in the Cobaki Estate Scheme. The sewerage services will be approved under the WIC Act as outlined in Section 4.3 of this IPART application.

For more detailed description of the sewerage infrastructure refer to Section 4.3.1 of this application,

For more information refer to,

- Appendix 4.3.1(a) Sewerage PFDs,

5.2.2	What customers or classes of customers does the applicant corporation propose to provide with sewerage services?

Classes of customers may include residential, industrial, commercial or agricultural. The licence may also specify whether the customers are small retail customers.

The response to this question is a requirement for any retail supplier's licence (Act s.6 (1) (b)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a licence (Act s.10 (4) (a)).

For more information on classes of customers refer to Section 5.1.3 of this IPART application.

5.2.3	Will you be providing small retail customers with sewerage services (i.e. less than 10.5 ML/year)?

A person is a small retail customer in relation to the provision of sewerage services if the maximum rate at which sewage is discharged, pursuant to one or more sewerage service contracts, from all premises that the person owns, leases or occupies is less than 10.5 mega litres per year, as determined in accordance with guidelines issued by IPART.

The response will be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a licence (Act s.10 (4) (a)). The response will also be used as a context for the assessment of risks from the proposed scheme and to identify possible additional licence conditions relating to the supply of water to small retail customers.

The majority of NWS customers will be residential and small commercial customers.

NWS is providing the sewerage services for the Cobaki Estate development and will not be providing services to customers that produce in excess of 10.5ML/year waste water or trade waste customers.

5.2.4	**Provide your preliminary risk assessment for the retail activities related to the scheme in Appendix 5.2.4.** The risk assessment must also identify the events and circumstances that could adversely affect the applicant corporation's ability to carry out the activities for which the licence is sought (including any activities undertaken by a nominated third party), the probability of the occurrence of any such event or circumstance and the measures to be taken by the applicant corporation to prevent or minimise the likelihood of any such event or circumstance.

The preliminary risk assessment should demonstrate the application of a consistent methodology for identifying hazards and assessing potential impacts and risks. We strongly recommend that the applicant corporation utilises an established risk management system such as outlined in AS/NZS 4360 (Risk Management).

The response to this question is a requirement for any retail supplier's licence (Reg cl.10 (2) (b)). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)).

NWS has developed a preliminary retail risk assessment that identifies the events and circumstances that may adversely affect the retail services.

For more information refer to,

- Appendix 5.1.5 Retail Risk & Business Assessment, (Commercial in Confidence)

5.2.5	How will the continuity of the provision of sewerage services be ensured? What contingency plans are in place in the case of failure of the infrastructure?

The response to this question is a requirement for any retail supplier's license (Reg cl.10 (2) (b) (iii)). The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS has ensured the continuity of the sewerage services as the retail supplier have been catered for within the design parameters in the network infrastructure.

For more information on continuity of sewerage supply refer to Section 4.3.11 of this IPART Application.

The networks have been designed to provide an uninterrupted supply of services to the customers in the event of an incident that causes an interruption to the retail services. The network operators risk management assessment policies will ensure that any interruption will be kept to a bare minimum.

NWS will ensure the continuity of the provision of sewerage services through the following contingency's,

- The Pressure sewer network will provide up to 24 hours redundancy storage for each lot in each PSU tank well,

- The pressure sewer SCADA control system provides controlled flow at all times especially after a power outage

- The SCADA control system provides 24/7 monitoring and alarms of each individual PSU the network and

All ancillary systems (WWTP, AWTP, Storages, Pumping Units & Power supply) associated with the Sewerage Services,

- The MBR WWTP, Storages and pumping systems are interlinked with the pressure sewer network via the SCADA,

- The redundancy built into the scheme provides over 24 hour back up in the case of an emergency by providing

(a) 24 hour redundancy in the pressure sewer network,

(b) Up front 660KL redundancy tanks,

(c) 500KL in the MBR Inlet and anoxic tanks in the 4 Stages,

- A concrete bund truck out facility has been provided as a further back up located at the Redundancy tank at the WWTP site for emergency purposes,

- A back up emergency power generator with auto-changeover switch has been provided for in the event of a power failure,

- Emergency discharge system from the Permeate Storage Tank to the TSC sewerage network under a trade waste for treated effluent has been included in the case AWTP has a failure and is off line, AWTP routine maintenance or reduces use due to wet weather events. This will enable the MBR WWTP to continue to treat the Cobaki Estate waste water if any of these events occur,

For more information refer to,

- Appendix 3.5.1(b) IWMP, (Table of Contents)

- Appendix 4.3.10(c) WWTP Functional Specification, (Table of Contents)

- Appendix 4.3.9(a) Sewerage Risk Assessment,

- Appendix 4.3.10(e) HAZOP & HAZID Workshop Report, (Table of Contents)

5.2.6	Describe the systems and processes that the applicant corporation will have in place to manage retail activities including billing systems, complaint and debt recovery procedures. **Provide evidence of the applicant corporation's capacity to develop and implement a retail supply management plan in Appendix 5.2.6.**

The evidence may include examples of processes and procedures for either the proposed scheme or other similar schemes undertaken by the applicant corporation. The examples should demonstrate links to a risk management process. For existing (brownfield) schemes you should provide the actual systems and procedures.

The response to this question is a requirement for any retail supplier's licence (Reg cl.10 (2) (b) (iv)). The response will also be used to assess the applicant corporation's technical capacity to undertake the activities for which you are seeking a licence (Act s.10 (4) (a)).

Prior to NWS being issued a retail operator's license NWS will have in place processes and systems to operate to the requirements and standards set out by IPART and the relevant NSW legislation.

For more information refer to,

- Appendix 5.1.7 Preliminary Supply Management Plan, (Table of Contents)

- Appendix 5.1.7(a) Preliminary Audit Procedures,(Table of Contents)

6 Applicant experience and systems

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

6.1 Network operator

Only provide a response to the questions in the following section if the applicant corporation is seeking a network operator's license

6.1.1	Describe the structure of the applicant corporation. Include in the description a list of the entities that have an ownership interest in the applicant corporation, whether legal or equitable. **Provide an organizational diagram in an Appendix 6.1.1.** The diagram should clearly show all entities that have an ownership interest in the applicant corporation,

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

Northern Water Solutions Pty Ltd is a fully owned subsidiary of Leda Holdings Pty Ltd.

NWS has the benefit of significant additional resourcing and financial support from its parent, Leda Holdings Pty Ltd.

For more information refer to,

- Appendix 6.1.1(a) Ownership Chart

- Appendix 6.1.1(b) Parent Company (Leda Holdings Profile)

- Appendix 6.1.1(c) NWS Organizational Chart

6.1.2	Describe the applicant corporation's (and, where relevant, the nominated third parties) current experience in the construction, maintenance and operation of water and/or other utility infrastructure such as gas, electricity or telecommunications.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

Northern Water Solutions Pty Ltd (NWS) is a new clean skin company that is wholly owned subsidiary of Leda Holdings Pty Ltd.

NWS experience in the Water Industry is based on the collective experience of selected Directors and CEO and other personal that have formed the executive management team who are key members of the NWS Project Construction, Operations, Maintenance and future Retail team.

The experienced members of the team will provide the Senior Management skills in Providing and understanding of NWS Financial Requirements, Equity, Insurance, Legal, Design, Planning Requirements, Construction Project Management, Procurement, Operations and Maintenance in providing Water and Sewerage Schemes as a Private Water Utility under the WIC Act (2006) NSW and in other States over many years to come.

With the support of the Board and the Shareholders, NWS CEO and senior staff have been given a mandate to develop the company with what is required into being a market leader in the Private Water Utility market in NSW operating under the WIC Act (2006).

NWS has currently orders to provide services to over 13,000 customers over the next 17 years in NSW. The Cobaki Estate development is the current NWS flag ship with over 6,064 new customers to come online over the next 15 years.

With the experience and support of the Tweed Shire Council in providing drinking water and offsite waste water treatment for excess treated effluent under agreement is a valued partner to have on board for the Cobaki Estate Development.

For more information refer to,

- Appendix 6.1.1(a) NWS Ownership Chart,

- Appendix 6.1.1(c) NWS Organization Chart,

6.1.3	List the key personnel involved in each of the significant activities (construction, maintenance and operation) and summarize their required skills, qualifications and experience. **Provide a position description for each of the key personnel positions in Appendix 6.1.3.**

Clearly identify whether the key personnel are employees of the applicant corporation or, where relevant, the nominated third party. It is not necessary to list all the employees. Ensure that the key personnel include the person or persons responsible for managing the applicant corporation's compliance with their legislative responsibilities.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

Wayne Williamson - NWS Chief Executive Officer

Shane Corbell - Chief Financial Officer (Responsible for all financial requirements for overheads, design, construction, operations and maintenance)

- Project Manager TBA (Responsible for project planning, environmental assessments, project delivery, quality compliance and project safety.)

Adam Smith - Planning & Licensing (Responsible for licensing and compliance with all regulatory authorities)

Andrew Wells - Head of the Design Team (Responsible for all design engineering, drawing, equipment selection and documentation specifications and reports required for NWS, contractors and regulatory authorities)

Chris Burrell - Legal Counsel (Responsible for providing legal advice on regulatory and other matters and formulating contracts and agreements when required)

Operations Manager TBA - (Responsible for operations and maintenance of NWS schemes)

Risk & Compliance Officer TBA - (Responsible for all risk management, licensing compliance with all regulatory requirements)

For more information refer to,

- Appendix 6.1.3(a) Position Descriptions of Key Personal,

6.1.4	Please provide details of any other regulatory approvals or licenses the applicant corporation or nominated third party holds in relation to the infrastructure activities for which you are seeking a license.

Include relevant approvals for similar projects interstate or overseas to demonstrate the experience of the applicant corporation. We may seek confirmation of your compliance history in relation to other regulatory approvals or licenses as part of our assessment.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS is a new company and is putting together an experienced team in the Private Water Industry in NSW to operate under the WIC Act.

Leda Holdings Pty Ltd civil works company Ecovale Pty Ltd has delivered many new residential, Industrial & commercial developments over the years and provided water and sewerage infrastructure for these developments which has been after sign off been gifted to Local Councils and State Incorporated Government Water Utilities in NSW and QLD. Ecovale Pty Ltd will oversee and provide the water and sewerage infrastructure for the Cobaki Estate development. After NWS are satisfied that all quality assurance and ITPs have been witnessed and signed off by NWS or its representative, the drinking water, recycled water and pressure sewer infrastructure will be gifted to NWS to operate and maintain.

The Tweed Shire Council has many years of experience in the Water & Sewerage industry in NSW. The TSC will be providing NWS Cobaki Estate Scheme with drinking water and Emergency discharge of excess treated waste water under agreement with NWS.

6.1.5	What business systems will the applicant corporation have in place to ensure they can comply with your regulatory requirements? Are any of the systems certified or will they be certified?

Business systems may include but not be limited to quality assurance, asset management and environmental management systems.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS will put in place the following management systems that will be audited by an approved IPART auditor before commencing commercial operations;

1. Compliance and Risk Management
NWS will cover all relevant laws and regulations as well as ensuring compliance with all contractual agreements. NWS will have in place best practice reporting management plans for all internal and external reporting which will include but not limited to,

(a) Requirements under the WIC Act Licenses,

(b) BASIX Planning Requirements,

(c) EPA, EPL Reporting Requirements,

(d) TSC Supply Agreement Reporting,

(e) Corporate Requirements (i.e. ATO, WHS, ASIC etc)

2. Legal Requirements,

NWS has appointed FUSE Lawyers to provide advice to NWS of any changes to legislative, regulatory, corporate, WHS, ATO or environmental requirements that may have an effect on NWS business or meeting licensing obligations,

3. Asset Management Requirements,

Enterprise Asset Management System (EAMS)

IBM Maximo Asset management system provides NWS a system that accurately accounts for total value of assets within the Cobaki networks. The system provides schedule maintenance alerts of the assets, assigns work flows and provides forecasting of upcoming maintenance and replacement costs. The EAMS also integrates this information into the financial accounting system.

The Maximo Asset Management System includes six management modules,

- Asset Management,

- Work Management,

- Service Management,

- Contract Management,

- Inventory Management,

- procurement Management,

4. Work Place Health and Safety(WHS)

NWS will have in place systems to monitor and record work place incidents to ensure that safety processes and procedures include consultation and training of all NWS staff, employees and contractors. NWS is in the process of being certified to AS4801 and OSHAS18001 for safety management systems.

5. Retail Management Systems,

NWS will have in place the following systems,

(a) The Oracle System will provide NWS Customer Management System (CMS) and Customer Relationship Management (CRM) will provide NWS

with the ability to handle customer complaints, account enquiries and reporting incidents.

(b) To provide 24/7 customer back up out of hours Service Works will provide the road map to meet NWS requirements.

(c) The billing system ACCESS will provide the billing services with NWS customers and is compatible and integrate with the CMS system.

(d) NWS will provide an online customer portal on its WEB site to allow customers to lodge enquiries, complaints, provide feedback and view
their quarterly invoices and water usages on-line.

6. Quality Assurance and Environmental Management

NWS is developing its business using the principles of ISO 9001 for quality assurance systems and ISO 14001 for Environmental management systems. At present NWS is going through the ISO process for gaining accreditation.

7. Document Control System

NWS has a central server system that access is provided to all staff and employees. The system archives all procedures, policies, management plans, work procedures, project specifications, equipment details, project drawing registers and drawings, OH&S documents, operation reports etc,

Or more information refer to,

- Appendix 5.1.7 Retail & Operation Systems, (Table of Contents)

6.2 Retail supplier

Only provide a response to the questions in the following section if the applicant corporation is seeking a retail supplier's license

6.2.1	Describe the structure of the applicant corporation. Include in the description a list of the entities that have an ownership interest in the applicant corporation, whether legal or equitable, and a list of the entities that the applicant corporation has an ownership interest in. **Provide an organizational diagram in Appendix 6.2.1.** The diagram should clearly show all entities that have an ownership interest in the applicant corporation.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS is solely owned by Leda Holdings Pty Ltd. For more

information refer to,

- Appendix 6.2.1(b) Applicant Corporation and related

entities that have ownership, (Commercial in

confidence)

- Appendix 6.2.1(a) NWS Organizational Chart,

6.2.2	Describe the applicant corporation's (and, where relevant, the nominated third parties) current experience in the supply of water or the provision of sewerage services. Please also outline any previous experience in the retailing of other services such as gas, electricity or telecommunications.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS staff have current experience in the supply of water and sewerage services under the local government act and WIC Act in NSW. Our third party the TSC have had many years as a water and sewerage provider under the local government act in NSW.

Clearly identify whether the key personnel are employees of the applicant corporation or, where relevant, the nominated third party. Ensure that the key personnel include the person or persons responsible for managing the applicant corporation's compliance with their legislative responsibilities.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

NWS will set up their retail business with experienced staff in the following retail management positions,

- Retail Manager
- Customer Relations Manager
- Customer Complaints Manager

For more information refer to,

- Appendix 6.2.3(a) Retail Staff Position Descriptions

6.2.4	Please provide details of any other regulatory approvals or licenses the applicant corporation or nominated third party holds in relation to the retail activities for which you are seeking a license.

Include relevant approvals for similar projects interstate or overseas to demonstrate the experience of the applicant corporation. We may seek confirmation of your compliance history in relation to other regulatory approvals or licenses as part of our assessment.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

Refer to information above in other Sections and refer to relevant Appendices.

6.2.5	What business systems will the applicant corporation have in place to ensure they can comply with your regulatory requirements? Are any of the systems certified or will they be certified?

Business systems may include but not be limited to quality assurance and environmental management systems. Retails systems such as billing and complaint management should be included in the response to this question.

The response will be used to assess the applicant corporation's technical and organizational capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

At present NWS is applying for accreditation and putting in place, -

Environmental Management system ISO 14001:2004

- Quality Management System ISO 9001:2008 AS/

- Safety Management System NZ 4801:2001

- Appendix 6.2.5 List of business Systems, (Table of Contents)

- Appendix 6.2.5(a) Pre commercial operation & retail audits, (Table of Contents)

- Appendix 5.1.7 Retail and Operation Systems, (Table of Contents)

7 Financial capacity

The response to the following questions will be used to assess the applicant corporation's financial capacity to undertake the activities for which you are seeking a license (Act s.10 (4) (a)).

Provide a response to the financial questions according to the following matrix:

	Question					
	7.1	**7.2**	**7.3**	**7.4**	**7.5**	**7.6**
Retail supply license only	✓	✓	✓			
Network operator license						
For infrastructure used for self-supply	✓	✓				
For infrastructure used to supply large retail customers	✓	✓	✓			
For infrastructure used to supply small retail customers with non-essential services	✓	✓	✓	✓	✓	
For infrastructure used to supply small retail customers with essential services[a]	✓	✓	✓	✓	✓	✓

[a] Applicant corporations who are providing essential services to small retail customers will be required to meet with our financial assessment team following submission of the application to discuss the information requirements for making the financial capacity assessment.

7.1 How will the applicant corporation finance the proposed activity?

7.1.1	Describe the mechanisms by which the applicant corporation's activities are financed or to be financed. **Provide evidence of any financial guarantees or commitment of financial support in Appendix 7.1.1.**

Evidence of financial support may include, but is not limited to; a letter from a financial institution (being a bank, credit union or the government) confirming indicative financing of the applicant corporation's activities, including:

- the nature of finance (e.g., bridging, long term, corporate debt, government funding)
- type and limit of the facility
- type and limit of any guarantee, and
- terms and conditions.

For more information on financial support from the parent company refer to,

- Appendix 7.4.2(a) Deed of Financial Guarantee & Indemnity(Commercial in Confidence)

7.2 Are there any events that could affect the applicant corporation's future financial capacity?

7.2.1	Are there any events or circumstances, that you are currently aware of, that could affect the applicant corporation's future financial capacity? If applicable, provide details of all such events relevant to the applicant corporation for the last 3 years from the date of this application.

Events and circumstances may include but are not limited to:

- Government or other investigation of the applicant corporation or related entities
- Contract terminated
- Factors which might impact on the applicant corporation such as significant litigation, business commitments, contingent liabilities, collections by debt collection agencies on behalf of creditors or liquidation proceedings
- Any outstanding tax liabilities
- Any other particulars which are likely to adversely affect the applicant corporation's capacity to undertake the services under the license (if granted).

NIL: New clean skin business

7.3 What is the projected financial performance of the proposed activities?

7.3.1	Summarise the projected cash flows (net EBITDA), including key financial modelling assumptions, such as capex, for the first 5 years of operation (at minimum). Provide the projected cash flows for a minimum of the next five (5) years of operation (including projected closing balance sheets and profit and loss statements), taking into account the licensing agreements, with details of all key financial modelling assumptions in **Appendix 7.3.1**.

If necessary, a longer period may be provided to demonstrate financial viability of the project.

Refer to Projected Cash Flow for the first 20 years.

For more information refer to,

- Appendix 7.3.1 Projected Cash Flows, Balance Sheets & P&Ls, (Commercial in Confidence)

7.3.2	Where the applicant corporation is seeking a network operator's licence, who is the owner of the infrastructure for which the applicant corporation is seeking a licence?

Northern Water Solutions Pty Ltd.

7.3.3	Where the applicant corporation is applying for a retail supplier's licence to supply water or provide sewerage service to residential households, provide an estimate of the cost per household per year to supply water and/or provide sewerage services (as is relevant). Who will pay the cost? What is the proposed price level and structure for the first five years of operation?

The response to this question will be used to determine whether there are any issues of public interest arising from the proposed scheme (Act s.10(4)(f)).

NWS charges the same rates as per the local Government Water Utility, in this case it is the Tweed Shire Council.

The charges and operational costs are detailed in Appendix 7.3.3 and have been used in the 0 to 20 year cash flow schedule in Appendix 7.3.1.

For more information on rates, charges and operating costs refer to,

- Appendix 7.3.3 List of fees, charges & costs, (Commercial in Confidence)

7.4 What is the applicant corporation's financial history?

7.4.1	Does the applicant corporation have a financial history? If not, explain why.

N/A

7.4.2	Where the applicant is a new corporation, supported by one or more parent entities, provide a copy of guarantee or cross deed of indemnity provided by the parent entity, and financial statements for the parent entity for the last 3 years in **Appendix 7.4.2**.

Please include any parent entity with more than 20 per cent of equity in the applicant corporation.

Northern Water Solutions Pty Ltd is a new corporation wholly owned by Leda Holdings Pty Ltd. For financial statements for Leda Holdings Pty Ltd for the last 3 years contact Mr.

For a copy of the draft Deed of Financial Capacity & Guarantee refer to,

- Appendix 7.4.2(a) Draft Deed of Financial Capacity & Indemnity, (Commercial in Confidence)

7.4.3	Where the applicant is, a new corporation financed through alternative arrangements (e.g., debt or equity), provide a letter from a financial institution. (e.g., bank, credit union or the government) certifying an existing or proposed line of credit or financial support, and a copy of guarantee or cross deed of indemnity provided by an entity such as a holding company or Director (provide financial statements demonstrating the financial viability of the guarantor) In **Appendix 7.4.3**.

Commercial in Confidence

7.4.4	Where the applicant is not a new corporation, summarize the performance of the applicant corporation over the past 3 years below. Provide copies of tax returns for the corporation for the last 3 years in **Appendix 7.4.4(a)**. Provide financial statements for the last 3 years in **Appendix 7.4.4(b)**. Where the latest annual financial statements are more than 3 months old, provide the latest available management reports showing: ▾ a trading statement ▾ a profit and loss statement, and ▾ a trial balance.

It is preferable that these financial statements are audited. It is recognized that not all corporations are required to have their annual financial statements audited. However, where you are required to lodge audited financial statements with the Australian Securities and Investments Commission (ASIC), provide copies of these statements. (Note: consolidated accounts for the parent organisation or group to which the applicant corporation belongs would not be considered acceptable)

N/A

7.4.5	If applicable, what is the applicant corporation's credit rating? Provide the applicant corporation's Credit rating memorandum (eg, Standard & Poor's, Moody's or Fitch), if available in **Appendix 7.4.5**.
N/A	
7.4.6	Provide details of the applicant corporation's debt/equity finance and any debt covenants on existing borrowings.
N/A	

7.5 Contacts

7.5.1	Does the applicant corporation have an accountant? If yes, what a re the accountant's contact details?
Commercial in Confidence	
7.5.2	Does the applicant corporation have an external auditor? If yes, what are the external auditor's contact details?
Commercial in Confidence	
7.5.3	If required, may we contact the accountant and/or external auditor registered taxation agent to clarify any information provided?
Yes	

7.6 Internal accounting records

7.6.1	Provide bank reconciliations, aged accounts receivable reports, and aged accounts payable reports in **Appendix 7.6.1** at the dates of: ▾ The latest management accounting reports (if applicable) and annual financial statements ▾ 30 September (most recent) ▾ 31 December (most recent) ▾ 31 March (most recent), and ▾ 30 June (most recent) for the applicant corporation.
N/A	
7.6.2	Provide an extract of the superannuation payable ledger in **Appendix 7.6.2** for: ▾ the 12 months ending on the date of the latest annual financial statements, and ▾ the period commencing on the date of the latest annual financial statements and ending on the date of the latest management accounting reports (if applicable) for the applicant corporation.
N/A	
7.6.3	Provide bank statements for the 3 months to the date of the latest management accounting reports (if applicable) or annual financial statements for the applicant corporation, whichever has been submitted with the application in **Appendix 7.6.3**.
N/A	

8 Statutory declaration and acknowledgement

To be completed by all applicants

8.1 Statutory declaration

Provide a statutory declaration from:

(a) the Chief Executive Officer and a director of the applicant corporation (each must complete a separate declaration); or

(b) the sole director and Chief Executive Officer of the applicant corporation; or

(c) such other person that IPART agrees may provide the statutory declaration/s;

to the effect that the information provided in the application is true and correct. For the purposes of Part 3 of this application form, the statutory declaration should also state that the applicant corporation is not a disqualified corporation and that no director or person concerned in the management of the applicant corporation is or would be a disqualified individual within the meaning of the WIC Act.

A statutory declaration must be signed by an authorised witness.

This is a list of NSW authorised witnesses:

- a justice of the peace;
- a solicitor or barrister with a current New South Wales or interstate practising certificate;
- a commissioner of the court for taking affidavits;
- a notary public; and
- a person by law authorised to administer an oath (eg, authorised witnesses in other jurisdictions).

I, do solemnly and sincerely declare that:

1. I am a director / the Chief Executive Officer / the sole director and Chief Executive Officer [delete as applicable] of the applicant (named in the application form accompanying this declaration);

2. the information provided in this application is true and correct to the best of my knowledge;

3. I am aware of the requirements under the *Water Industry Competition Act 2006* (NSW) (WIC Act) for the licence being applied for;

4. the applicant corporation is not a disqualified corporation within the meaning of the WIC Act;

5. no director or person concerned in the management of the applicant corporation is, or would be, a disqualified individual within the meaning of the WIC Act;

6. I have the authority to make this application on behalf of the applicant (named in the application form accompanying this declaration);

and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1900* (NSW).

Name of person making the declaration:
WILLIAM ROBERT ELL

Title of person making the application: DIRECTOR

Signature of person making the declaration:
WR Ell

Declared at *[place]*: surfers paradise

On *[date]*: 26 October 2016

In the presence of an authorised witness, who states:

I *[insert name of authorised witness]*
Sharney Edwards,

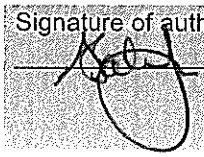
a *[insert qualification to be authorised witness]*
JP 79765,

certify the following matters concerning the making of this statutory declaration by the person who made it: *[* please cross out any text that does not apply]*

1. *I saw the face of the person or ~~*I did not see the face of the person~~ because the person was wearing a face covering, but I am satisfied that the person had a special justification for not removing the covering.

2. *I have known the person for at least 12 months or ~~*I have confirmed the person's identity using an identification document and the document I relied on was~~ [*describe identification document relied on*] _____.

Signature of authorised witness: _____ Date: 26/10/16



I, do solemnly and sincerely declare that:

1. I am a director / the Chief Executive Officer / the sole director and Chief Executive Officer [delete as applicable] of the applicant (named in the application form accompanying this declaration);
2. the information provided in this application is true and correct to the best of my knowledge;
3. I am aware of the requirements under the *Water Industry Competition Act 2006* (NSW) (WIC Act) for the licence being applied for;
4. the applicant corporation is not a disqualified corporation within the meaning of the WIC Act;
5. no director or person concerned in the management of the applicant corporation is, or would be, a disqualified individual within the meaning of the WIC Act;
6. I have the authority to make this application on behalf of the applicant (named in the application form accompanying this declaration);

and I make this solemn declaration conscientiously believing the same to be true and by virtue of the provisions of the *Oaths Act 1900* (NSW).

Name of person making the declaration:
WAYNE WILLIAMSON

Title of person making the application:
MR.

Signature of person making the declaration:
W. Will

Declared at
[place]: NOOSA HEADS, QUEENSLAND

On *[date]*: 24th October 2016

In the presence of an authorised witness, who states:

I *[insert name of authorised witness]*
PETER CHARLES BURBIDGE KUNG,

a *[insert qualification to be authorised witness]*
JP QUAL (QLD),

certify the following matters concerning the making of this statutory declaration by the person who made it: *[* please cross out any text that does not apply]*

1. *I saw the face of the person or ~~*I did not see the face of the person because the person was wearing a face covering, but I am satisfied that the person had a special justification for not removing the covering~~.

JUSTICE OF THE PEACE (QUALIFIED)
QUEENSLAND GOVERNMENT
Reg.No.: 108696
DEPT. OF JUSTICE & ATTORNEY-GENERAL

WW

2. *~~I have known the person for at least 12 months or *I have confirmed the person's identity using an identification document and the document I relied on was [*describe identification document relied on*~~] QLD DL 100 719147.

Signature of authorised witness: _____ Date: 24.10.16.

JUSTICE OF THE PEACE (QUALIFIED)
QUEENSLAND GOVERNMENT
Reg.No.: 105896
DEPT. OF JUSTICE & ATTORNEY-GENERAL

WW.

JUSTICE OF THE PEACE (QUALIFIED)
QUEENSLAND GOVERNMENT
Reg.No.: 105896
DEPT. OF JUSTICE & ATTORNEY-GENERAL

8.2 Acknowledgement

An acknowledgement should be provided by:

(a) company secretary and a director, or

(b) 2 directors, or

(c) in the case of a sole director, the sole director, or

(d) such other person that IPART agrees may provide the acknowledgement.

The applicant (named in the application form accompanying this acknowledgement) agrees to IPART furnishing a copy of the applicant's completed application form, including any confidential information contained in that application form, to:

- the Minister administering the *Water Industry Competition Act 2006* (NSW) (except Part 3)
- the Minister administering the *Public Health Act 1991* (NSW)
- the Minister administering Chapter 2 of the *Water Management Act 2000* (NSW)
- the Minister administering the *Environmental Planning and Assessment Act 1979* (NSW), and
- the Minister administering the *Protection of the Environment Operations Act 1997* (NSW),

in accordance with section 9(1) of the *Water Industry Competition Act 2006* (NSW) and clause 17 of the *Water Industry Competition (General) Regulation 2008* (NSW).

In the interest of expediting the processing of your application, would you please indicate below whether you agree to a copy of your completed application form (including any confidential information contained in that application form) being provided on a confidential basis directly to relevant departmental staff with responsibility to advise the Ministers named above on issues relating to the provision of water and sewerage services.

☑ I **agree** that a copy of my completed application form (including any confidential information contained in that application form) may be provided to relevant departmental staff as outlined above.

☐ I **do not agree** that a copy of my completed application form (including any confidential information contained in that application form) may be provided to relevant departmental staff as outlined above.

Name of person making the acknowledgement: WILLIAM ROBERT ELL

Title of person making the acknowledgement: DIRECTOR

[Director / ~~Company Secretary~~]

On *[date]*: 26 OCTOBER 2016

Signature of person making the acknowledgement:

_____

Name of person making the acknowledgement:

_____

Title of person making the acknowledgement:

_____

[Director / Company Secretary]

On *[date]*: _____

Signature of person making the acknowledgement:

_____

The applicant (named in the application form accompanying this acknowledgement) agrees to IPART furnishing a copy of the applicant's completed application form, including any confidential information contained in that application form, to:

- the Minister administering the *Water Industry Competition Act 2006* (NSW) (except Part 3)
- the Minister administering the *Public Health Act 1991* (NSW)
- the Minister administering Chapter 2 of the *Water Management Act 2000* (NSW)
- the Minister administering the *Environmental Planning and Assessment Act 1979* (NSW), and
- the Minister administering the *Protection of the Environment Operations Act 1997* (NSW),

in accordance with section 9(1) of the *Water Industry Competition Act 2006* (NSW) and clause 17 of the *Water Industry Competition (General) Regulation 2008* (NSW).

In the interest of expediting the processing of your application, would you please indicate below whether you agree to a copy of your completed application form (including any confidential information contained in that application form) being provided on a confidential basis directly to relevant departmental staff with responsibility to advise the Ministers named above on issues relating to the provision of water and sewerage services.

☑ I **agree** that a copy of my completed application form (including any confidential information contained in that application form) may be provided to relevant departmental staff as outlined above.

☐ I **do not agree** that a copy of my completed application form (including any confidential information contained in that application form) may be provided to relevant departmental staff as outlined above.

Name of person making the acknowledgement: ROBERT JOHN ELL

Title of person making the acknowledgement: DIRECTOR

[Director / ~~Company Secretary~~]

On *[date]*: 24 October 2016

Signature of person making the acknowledgement:

Name of person making the acknowledgement:

Title of person making the acknowledgement:

[Director / Company Secretary]

On *[date]*:

Signature of person making the acknowledgement:

_____

Attachment A: Summary of appendices

Applicant:	Northern Water Solutions Pty Ltd
Scheme name:	COBAKIESTATESCHEME
Date:	28th October 2016

Are the following supporting documents labelled and attached as appendices?

Item	Confirm complete
Part 3: general information	
• Copies of relevant insurance certificates (Appendix 3.3.1)	Yes
• Other regulatory approvals/licences (Appendix 3.5.1)	Yes
Part 4: network operator (if applicable	
For **drinking water** infrastructure	
• **A** process flow diagram from source to end use showing infrastructure that is existing or to be constructed, interconnections and customers and/or end users (Appendix 4.1.1)	Yes
• A map of the proposed infrastructure from source to end use showing interconnections and customers and/or end users (Appendix 4.1.3)	Yes
• Where relevant, a copy of any agreements and/or licences to access the source water (Appendix 4.1.6)	Yes
• A preliminary risk assessment for the scheme from source to end use (Appendix 4.1.9)	Yes
• Evidence of the applicant's capacity to implement the 12 elements of the Australian Drinking Water Guidelines Framework (Appendix 4.1.10)	Yes
• Evidence of the applicant's capacity to develop and implement an infrastructure operating plan (Appendix 4.1.12)	Yes
• Any environmental study and/or risk assessment (Appendix 4.1.13)	Yes
For **non-potable water** infrastructure	
• A process flow diagram from source to end use showing infrastructure that is existing or to be constructed, interconnections and customers and/or end users (Appendix 4.2.1)	Yes
• A map of the proposed infrastructure from source to end use showing interconnections and customers and/or end users (Appendix 4.2.3)	Yes

Item	Confirm complete
• Where relevant, a copy of any agreements and/or licences to access the source water (Appendix 4.2.6)	*N/A*
• A preliminary risk assessment for the scheme from source to end use (Appendix 4.2.10)	Yes
• Evidence of the applicant's capacity to implement the 12 elements of the Australian Guidelines for Water Recycling Framework (Appendix 4.2.11)	Yes
• Evidence of the applicant's capacity to develop and implement an infrastructure operating plan (Appendix 4.2.13)	Yes
• Any environmental study and/or risk assessment (Appendix 4.2.14)	Yes
For **sewerage infrastructure**	
• A process flow diagram from collection to disposal or reuse showing infrastructure that is existing or to be constructed, and interconnections (Appendix 4.3.1)	Yes
• A map of the proposed infrastructure from collection to disposal or reuse showing interconnections (Appendix 4.3.3)	Yes
• A summary report of any wastewater characterisation or catchment studies (Appendix 4.3.8)	Yes
• A preliminary risk assessment for the scheme from collection to disposal (Appendix 4.3.9)	Yes
• Evidence of the applicant's capacity to develop and implement an infrastructure operating plan (Appendix 4.3.10)	Yes
• Any environmental study and/or risk assessment (Appendix 4.3.12)	Yes
• Where relevant, a copy of a soil capability assessment (Appendix 4.3.13)	Yes
Pat 5: retail supplier (if applicable	
For the **supply of water**	
• Where relevant, a copy of any agreements and/or licences to access the source water (Appendix 5.1.2)	Yes
• A preliminary risk assessment for the retail activities related to the scheme (Appendix 5.1.5)	Yes
• Evidence of the applicant's capacity to develop and implement a retail supply management plan (Appendix 5.1.7)	YES
For the **provision of sewerage services**	
• A preliminary risk assessment for the retail activities related to the scheme (Appendix 5.2.4)	Yes

Item	Confirm complete
• Evidence of the applicant's capacity to develop and implement a retail supply management plan (Appendix 5.2.6)	Yes
Part 6: applicant experience and systems	
For a **network operator** (if applicable)	
• An organisational diagram (Appendix 6.1.1)	Yes
• Position descriptions for each of the key personnel positions (Appendix 6.1.3)	Yes
For a **retail supplier** (if applicable)	
• An organisational diagram (Appendix 6.2.1)	Yes
• Position descriptions for each of the key personnel positions (Appendix 6.2.3)	Yes
Part 7: financial capacity	
• Evidence of any financial guarantees or commitment of financial support (Appendix 7.1.1)	Yes
• Where relevant, projected cash flows for minimum 5 years and key financial modelling assumptions (Appendix 7.3.1)	Yes
• Where relevant, the guarantee or cross deed of indemnity provided by the parent entity, and financial statements for the parent entity for the last 3 years (Appendix 7.4.2)	Yes
• Where relevant, evidence of alternative funding arrangements such as a letter, guarantee or cross deed of indemnity provided by the guarantor (Appendix 7.4.3)	NIA
• Where relevant, tax return for the applicant for the last 3 years (Appendix 7.4.4(a))	NIA
• Where relevant, financial statements for the applicant for the last 3 years (Appendix 7.4.4(b))	NIA
• Where relevant, the applicant's credit rating memorandum (Appendix 7.4.5)	NIA
• Where relevant, bank reconciliations, aged accounts receivable reports, and aged accounts payable reports (Appendix 7.6.1)	NIA
• Where relevant, extracts of the superannuationpayable ledger (Appendix 7.6.2)	NIA
• Where relevant, bank statements for the 3 months to date or annual financial statements (Appendix 7.6.3)	NIA