

ASHBOURNE NETWORK OPERATOR APPLICATION ANOA-ASHBv1

ASHBOURNE - MOSS VALE INTERIM WASTEWATER TREATMENT SYSTEM



Exclusive Partner of

For Earth, For Life


True Water

True Water provide sustainable sewage and wastewater treatment infrastructure. Our expertise is applied to deliver capital, operational, and environmental benefit to all stakeholders.

True Water's "whole of life" focus results in reliable, versatile, and efficient infrastructure and improved wastewater management within regional and urban landscapes.

Vision

To deliver sewage and wastewater treatment infrastructure that best addresses the interests of current and future generations.

Mission

People. Water. Environment.

Through comprehensive management of wastewater True Water aims to protect the natural environment, safeguard public health, and improve quality of life.

Values

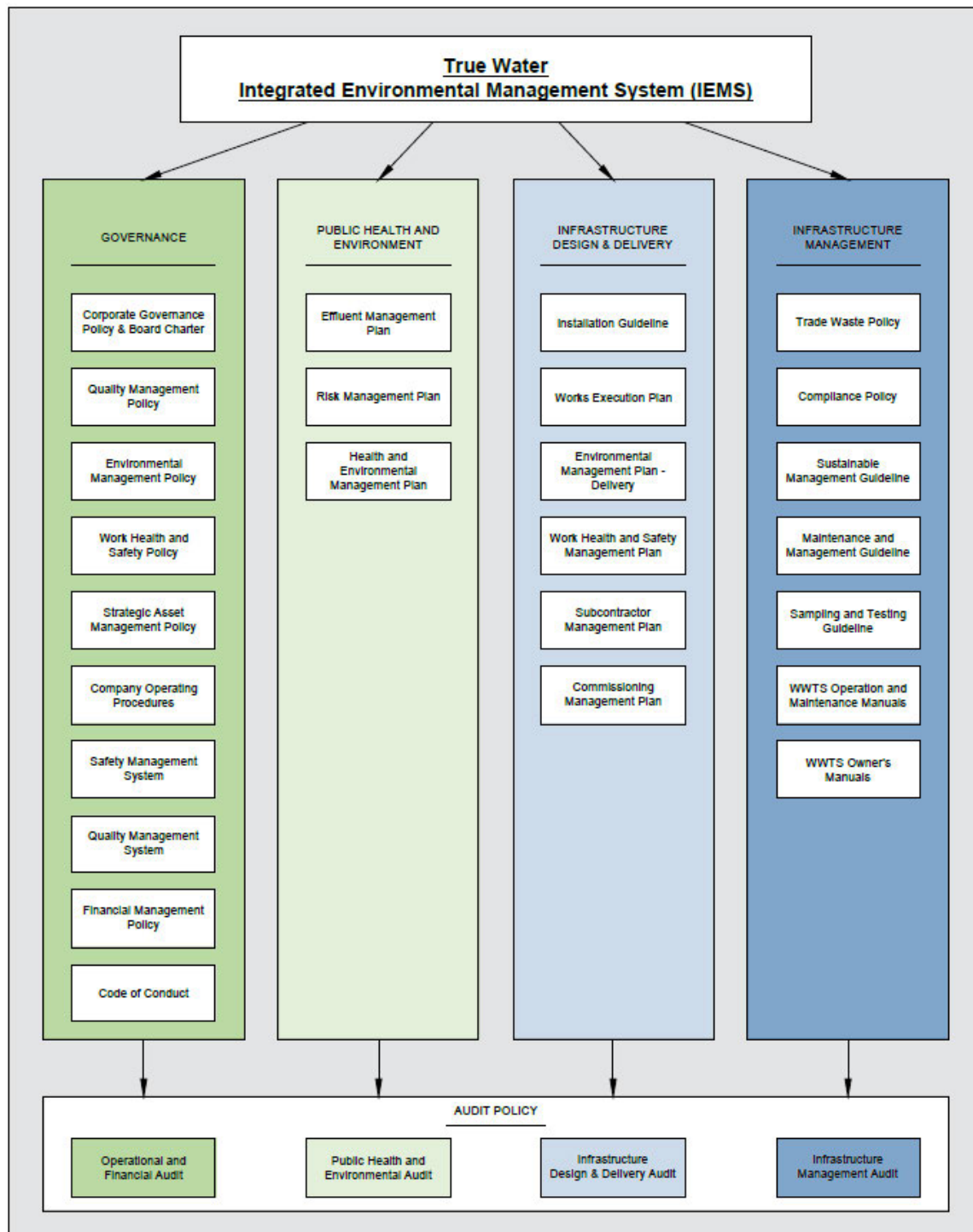
- Satisfy the needs of all stakeholders
- Maintain social and environmental awareness
- Serve future generations
- Enhance and drive innovation
- Be open and transparent



Integrated Environmental Management System (IEMS)

Sewage and water infrastructure requires the implementation of detailed planning, delivery, management, and auditing processes. For infrastructure delivery and operation to be successful it must satisfy stakeholder objectives and provide operational security throughout infrastructure life cycle. Protection of public health and the environment is paramount and neutral or beneficial impact must be secured.

True Water's Integrated Environmental Management System (IEMS) directs and informs all activities throughout the infrastructures lifecycle. The IEMS is a conclusive quality management process specifically designed to deliver stakeholder objectives, secure compliance, and protect public health and the environment. The IEMS includes management plans, polices, and guidelines:



APPLICANT CAPACITY – ASHBOURNE IWWTS (APC)

Site Address:

32 Lovelle Street and 141 Yarrawa Road, Moss Vale, NSW 2571

Lot 3 DP706194 and Lot 12 DP8660366

Prepared By:

True Water

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Document Control

Version History

Date	Version:	Revision Description	Approved By:
26.09.22	APC-ASHBv1	Draft	James Mahoney
24.10.22	APC-ASHBv1	Final Draft	Dale James

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1 Interim Wastewater Scheme Description

Ashbourne is a master planned residential development located on the southern edge of the township of Moss Vale in the Southern Highlands of NSW. The greenfield site is not currently serviced by the municipal sewerage network. Until the capacity of the Moss Vale Sewage Treatment Plant is increased, the local water utility (*Wingecarribee Shire Council (WSC)*) cannot provide permanent sewer service to the site.

To facilitate project commencement the developer, Prime Moss Vale Pty Ltd consulted with WSC. It was agreed an Interim Wastewater Treatment Scheme (IWTS) dispersing effluent wholly onsite would be a suitable interim wastewater servicing solution to service Stage 1 of the development (178 Lots). The IWTS is expected to operate for a maximum period of three years.

As part of the interim servicing strategy, municipal infrastructure will be delivered by Prime Moss Vale Pty Ltd, including; the reticulated sewer main, the catchments' sewer pump station, and new sewer rising main connecting the pump station to the existing municipal reticulated network. As the municipal network is at capacity, wastewater will be pumped from the pump station to the Interim Wastewater Treatment Plant (IWTP) and Effluent Dispersal System (EDS). Once the Moss Vale Sewage Treatment Plant is upgraded, wastewater will be redirected to the new rising main and to the municipal network, and the IWTS will be decommissioned.

Local government approvals have been acquired for the reticulated sewerage network, the sewage pump station including emergency storage, as well as the IWTS. Additionally, the IWTS requires a Network Operators Licence under the WIC Act. The licensed Independent Water Utility (IWU) will be True Water DTR Pty Ltd.

Executive Summary

Site Address	141 Yarrawa Road & 32 Lovelle Street, Moss Vale NSW 2571
Lot and Plan	Lot 3 DP 706194 and Lot 12 DP 866036
Local Government Authority	Wingecarribee Shire Council (WSC)
Owners/Developer	Prime Moss Vale Pty Ltd (PMV)
Contact Point	[REDACTED]
Contact Number	[REDACTED]
Block Size	Approximately 125.7 hectares
Boundaries	Yarrawa Road, Lovelle Street, Moss Vale Golf Course and other urban and rural land zoned lots.
Potable Water Supply	Wingecarribee Reservoir and Bundanoon Reservoir
Municipal Sewer Connection	Moss Vale STP at capacity and being upgraded, municipal connection expected 2026.
Network Operator Licensee (IWU)	True Water DTR Pty Ltd
Expected Interim Period	3 years
Influent Volume	Average Dry Weather Flow (ADWF) = 76,896Litres/day Peak Dry Weather Flow (PDWF) = 112,140Litres/day
Effluent Standard	Class B
Wet Weather Storage Volume	4.1 Megalitres (<i>greater than 10 days @ 5 x ADWF</i>)
Effluent Dispersal System	Spray Irrigation (9.68ha) – <i>Conditional DA acquired</i>
Effluent Irrigation Rate	<1mm/m ² /day

The Site

The site consists of separate and adjoining allotments comprising a total area of 125.7 hectares. The legal description of the site is Lot 3 in DP 706194 (No 32 Lovelle Street) and Lot 12 in DP 866036 (No 141 Yarrowa Road). The site is bordered by Yarrowa Road, Lovelle Street, Moss Vale Golf Course and other urban and rural land zoned lots. Currently the site is pastoral land, with a dwelling on each of the existing lots.

There is sufficient unconstrained land for sustainable site-specific wastewater management which achieves required offsets to environmental features and property boundaries, as required by legislation and guidelines.

Interim Scheme Purpose

The purpose of the Interim Scheme is to provide a sewer service to the site until the capacity of the Moss Vale Sewage Treatment Plant is increased, and permanent discharge to the municipal network is available.

Interim Scheme Timeline

Commencement of the Interim Scheme will coincide with the occupation of the first new dwelling and is expected to be late 2024. Completion of the Moss Vale Sewage Treatment Plant permanent upgrade is expected in mid to late 2025. Considering progress to date, it is likely municipal service will not be available until a later date. Therefore, to address uncertainty and ensure the Interim Scheme is suitably funded, financial planning allows for a five-year interim period, (December 2029).

Interim Scheme Summary

The Interim Scheme is an effluent dispersal scheme.

All wastewater will be captured within the WSC approved reticulated sewerage network and conveyed to the ultimate sewage pump station. The ultimate sewage pump station shall be utilised to regulate flows and concentrations. Wastewater will be transferred via a rising main to the Interim Wastewater Treatment Plant (IWTP) for treatment. Treated effluent will be dispersed via spray irrigation at a rate of less than 1mm/m²/day within the nominated and DA approved Effluent Dispersal Area (EDA).

The Interim Scheme is not a recycled water scheme and is not an effluent reuse scheme. Treated effluent dispersal will have no secondary use, and there will be no crop irrigation or agricultural use. The purpose is solely effluent dispersal.

Interim Scheme Infrastructure

The Interim Scheme will service Stage 1 of the greenfield development and consist of seven infrastructure components.

- Municipal reticulated sewerage network,
- Municipal sewer pump station and emergency storage,
- Municipal sewer main connecting the sewer pump station and existing municipal network,
- Interim rising main from the ultimate sewer pump station to the IWTP,
- Interim Wastewater Treatment Plant (IWTP),
- Interim influent and effluent storages,
- Interim Effluent Dispersal System (EDS).

On completion of the interim period, ownership of the three municipal components will be transferred to the local water utility, and the four interim components will be decommissioned.

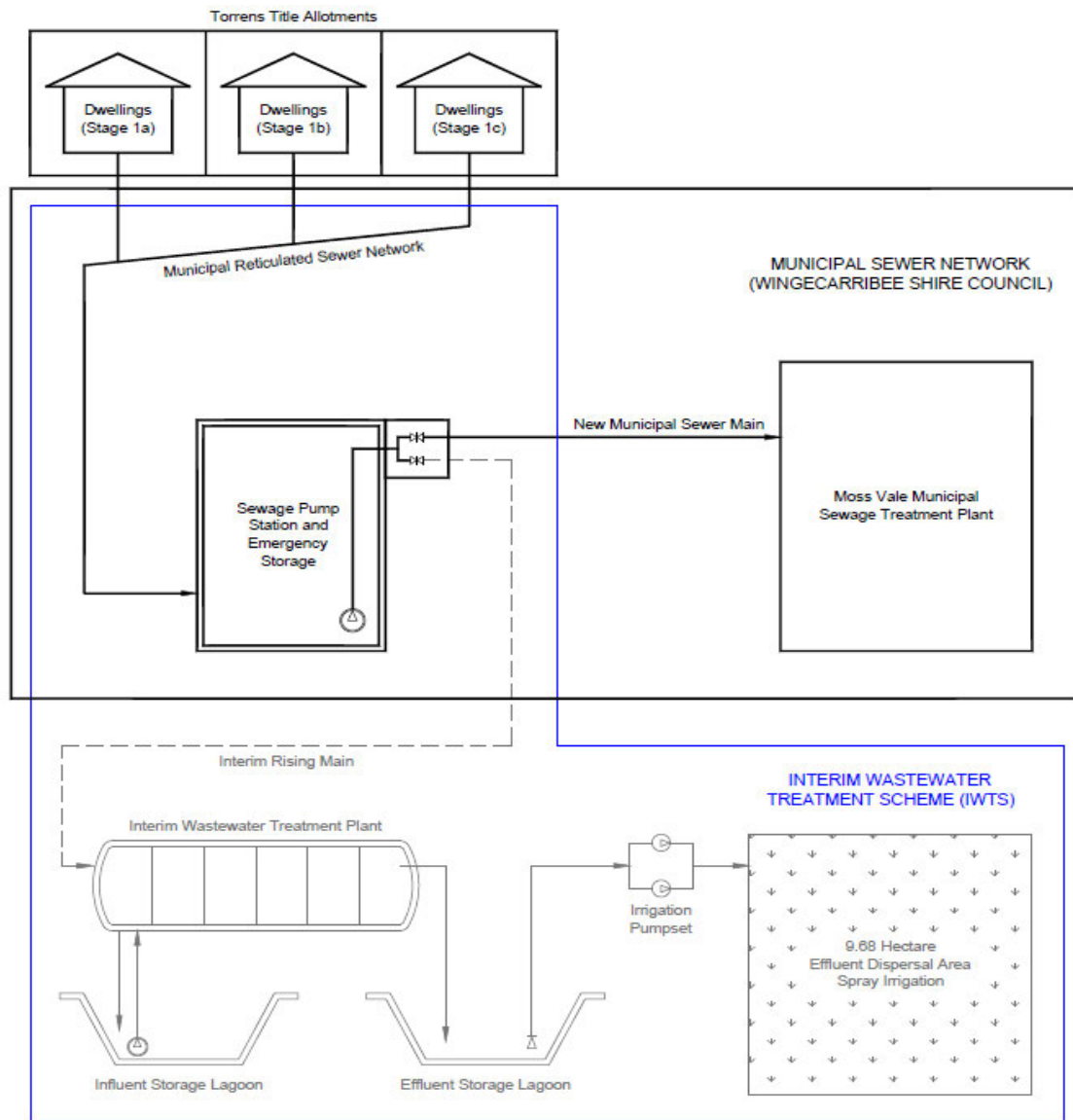


Figure 2.1 - Summary of Interim Infrastructure and future municipal network

Municipal Reticulated Sewerage Network

The approval, construction, testing, and commissioning of the reticulated sewerage network will follow established business as usual processes. Once the interim period is complete the reticulated sewerage network will be transferred to the Local Water Utility and form part of the municipal network. The DA Determination for the reticulated sewerage network to service stage one of the development has been acquired from WSC and is included within the submission.

Municipal Sewer Pump Station and Emergency Storage

The approval, construction, testing, and commissioning of the sewage pump station including emergency storage will follow established business as usual processes. Once the interim period is complete, the sewage pump station including emergency storage will be transferred to the Local Water Utility and form part of the municipal network. The sewage pump station including emergency storage is designed to service the entire lot yield of 1,073 lots and will be installed and commissioned prior to the release of Stage 1. The DA Determination approval for the ultimate sewage pump station including emergency storage has been granted by WSC and is included within the submission.

Municipal sewer main connecting the sewer pump station and existing municipal network,

The municipal sewer main connecting the sewer pump station to the existing municipal network will be installed, tested and transferred to the local water utility prior to the release of the Stage 1 lots. Connection of the sewer pump station to the existing municipal network provides a contingency failsafe and aids in mitigating risk.

Interim - rising main from the ultimate sewer pump station to the IWTP

The Rising main from the ultimate sewer pump station will be constructed, installed and marked as per municipal standards and relevant guidelines and codes.

Interim - Wastewater Treatment Plant (IWTP)

The IWTP will be a Kubota biological WWTP providing Class B treatment with a nominal treatment capacity of 110kL/day and a peak treatment capacity of 137.5kL/day. The IWTP will be installed below ground and include sealed gas tight lids. Below ground installation provides favourable amenity and limits visual impact, noise, and odour. Air emissions shall be filtered through carbon filtration to prevent odour. The IWTP will be designed and constructed to provide a minimum 30-year operational life. The location of the IWTP will be as per the DA determination. The DA Determination for the reticulated sewerage network to service stage one of the development has been granted by WSC and is included within the submission.

Interim - Influent and Effluent Storage,

To ensure extreme wet weather events are suitably managed influent and effluent storage will provide 4.1Megalitres of storage, which is greater than 10 days peak wet weather flow storage.

Interim - Effluent Dispersal System

The Setion 68 approved effluent dispersal system is a 9.68 hectare spray irrigation system located to achieve suitable buffers and offsets to environmental features and property boundaries as required by legislation, guidelines, and codes. [REDACTED]

[REDACTED] An extremely conservative approach to effluent dispersal will be employed. Treated effluent will be dispersed via spray irrigation at a rate of less than 1mm/m²/day within the nominated effluent dispersal area.

Independent Water Utility Funding

[REDACTED]

Independent Water Utility Operation

A network operators licence ensures IWU operation and management of the temporary wastewater infrastructure is in accordance with legislative and regulatory requirements. Operation and management will be in accordance with the IWU's Integrated Environmental Management System and Strategic Asset Management Policy.

The IWU applicant is certified under ISO standards; 9001:2015, 14001:2015, and 45001:2018 for the *“Provision of wastewater and sewage treatment technologies to Australia and the Pacific. Services include consultancy, delivery, project management, engineering, asset management (servicing and maintenance) and operation (remote monitoring and response).”*

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2 Introduction

Ashbourne Network Operator Application (ANOA) has been developed to inform and support the IPART Network Operator Licence assessment process for the Ashbourne Interim Wastewater Scheme (AIWS).

The ANOA describes elements the True Water Integrated Environmental Management System (IEMS) as they pertain to application requirements for Organisational, Financial and Technical capacity. The IEMS manages and mitigates risks arising from the management and operation of wastewater infrastructure.

2.1 Submission Documents

The following schedule lists documents provided as part of the complete submission package.

A. APPLICANT CAPACITY

- A.1. Ashbourne Network Operator Application (this Document)
- A.2. True Water - Position Descriptions
- A.3. True Water - Key Personnel CVs
- A.4. True Water - References
- A.5. True Water - Case Study Wellcamp Airport
- A.6. True Water - Case Study Chinderah Service Station
- A.7. Ashbourne IWU - Area of Operations Shapefile
- A.8. Ashbourne IWU - Area of Operations
- A.9. Ashbourne IWU - Infrastructure Design – Complete
- A.10. Ashbourne IWU - MEDLI Report (Water balance)
- A.11. Ashbourne IWU - Infrastructure Schedule

B. IEMS DOCUMENTS

- B.1. Effluent Management Plan
- B.2. Risk Management Plan
- B.3. Strategic Asset Management Policy

C. APPROVALS

- C.1. Development Application
 - C.1.1. Ashbourne DA - Notice of Determination 1022
 - C.1.2. Ashbourne DA - Notice of Determination 0622
 - C.1.3. Sewer & Water Design Certificate
 - C.1.4. Compliance Tables
 - C.1.5. Ashbourne Stage 1 DA Plans - Orio
 - C.1.6. Ashbourne Stage 1 CC Plans - Orio
- C.2. Sewer Reticulation – Section 68 Submission
 - C.2.1. S68 Application

- C.2.2. S68 Description of Works
- C.2.3. Sewer Reticulation Network - Drawing Set
- C.2.4. Flow Schedule Full
- C.2.5. Flow Schedule Stage 1
- C.2.6. Ultimate Sewer Pump Well - Drawing Set
- C.2.7. Ultimate Sewer Pump Well - Electrical
- C.3. Interim WWTP Development Approval
 - C.3.1. IWWTP DA Application
 - C.3.2. IWWTP DA Approval
 - C.3.3. IWWTP Approved Plans
 - C.3.4. IWWTP Statement of Enviro Effects - Premise
 - C.3.5. IWWTP Land Capability Assessment - SEEC
 - C.3.6. IWWTP RFI Response - SEEC

D. GENERAL DOCUMENTS

- D.1. Master Plan
- D.2. Statement of Environmental Effects – Urbis 2019
- D.3. Statement of Environmental Effects – Premise 2020
- D.4. Environmental Site Assessment – Harvest Scientific Services 2020
- D.5. Visual Impact Assessment - Ethos Urban 2020
- D.6. Geotechnical Investigation 1 - Douglas Partners 2020
- D.7. Geotechnical Investigation 2 - Douglas Partners 2020
- D.8. Historical Assessment & Statement of Heritage Impacts – Biosis 2019
- D.9. Bushfire Risk Assessment Report – Australian Bushfire Solutions 2019
- D.10. Flora & Fauna Assessment – Ecoplaning 2018

2.2 IPART Application Index

PART	ITEM	SEE SECTION:
A	Applicant corporation information	
A3(a)	Contact details for key personnel	Section 3.2.3
A3(b)	Corporate structure/organisational chart(s)	Section 3.2
A3(c)	Resumes/CVs/experience and role descriptions for Directors/CEO	Section 3.4
A3(d)	Referees for relevant projects	Section 3.2.3
A5.1(a)	Organisational experience – Network operator	Section 3.5
A5.1(b)	Resumes/CVs for key personnel – Network Operator	Section 3.4
A6	Organisational chart/ownership	Section 3.3
A7	Disqualified Corporations check table	Section 3.2.4
A8	Insurances – CoCs and policy schedules and wording	Section 3.9
B	Financial capacity	
B1	Financial capacity	Section 4
B2	Financial viability	Section 4
B3	Contextual information	Section 4
B4	Pricing information	Not Applicable
B6	Other information	Section 1 & Section 3
C	Network operator's licence – technical capacity	
C1	Scheme description	Section 1 & Section 5.1
C2	Existing activities	Not applicable Greenfield site - no existing activity
C3	Area of operations	Section 5.8
C4	Interconnections	Section 5

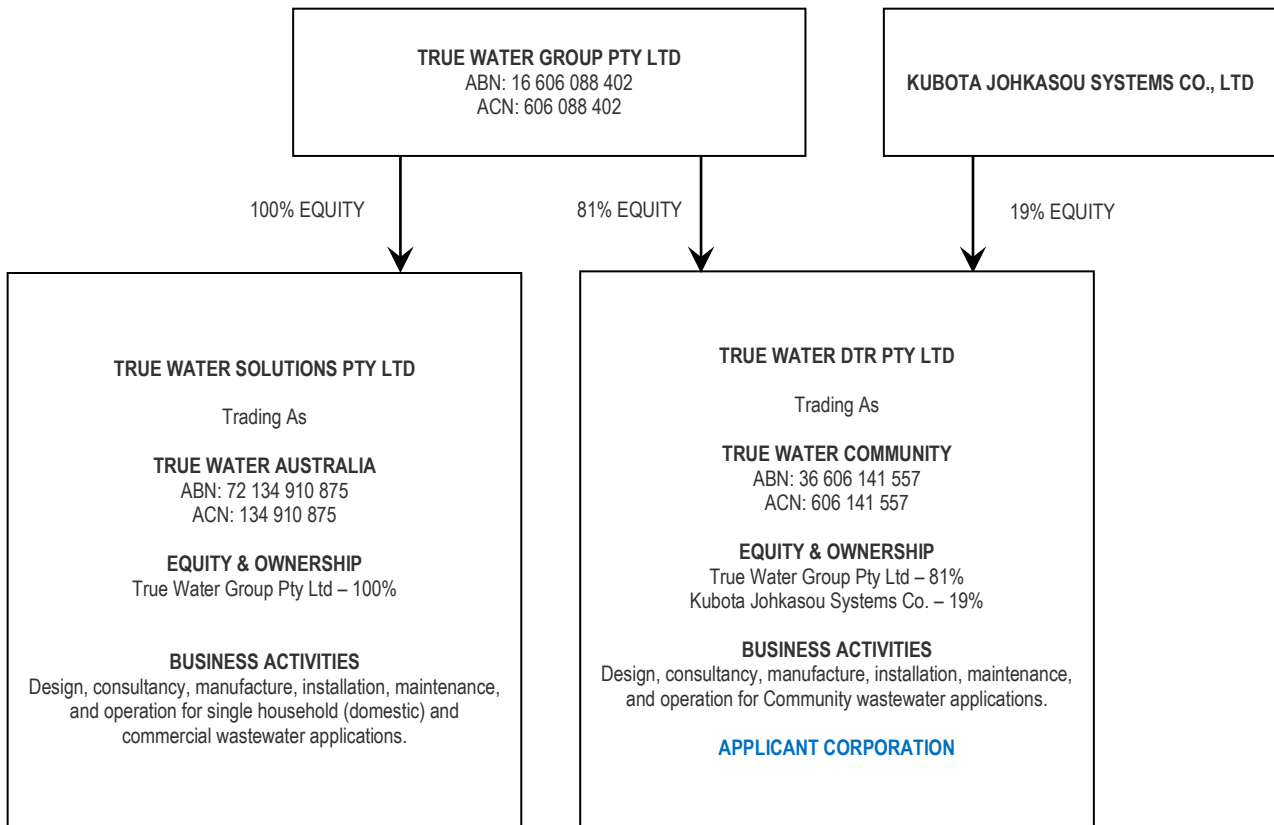
PART	ITEM	SEE SECTION:
C5	End uses	Effluent dispersal scheme only (Spray Irrigation to vacant land) No end use for effluent
C6	Water Balance	Section 5.5
C7	Volume details for services supplied	Section 1 & Section 5.3
C8	Preliminary risk assessment	Section 5.10
C10	Management systems and processes – sewerage	Section 4.14
C11	Contingency Plans	Section 5.14
C12	Regulatory approvals	Section 5.7
C13	Development consents and determinations	Section 5
C14	Environmental impact assessments	See Attachments

3 Organisational Capacity

3.1 Directors Declaration

A statutory declaration is provided in [REDACTED]

3.2 Corporate Structure



3.2.1 True Water

True Water is an ISO accredited specialist wastewater technology company. For over a decade True Water has provided specialised consultancy and design, manufacture, installation, and long-term operation for wastewater infrastructure throughout Australia and the Pacific.

True Water is certified under ISO standards; 9001:2015, 14001:2015, and 45001:2018 for the “*Provision of wastewater and sewage treatment technologies to Australia and the Pacific. Services include consultancy, delivery, project management, engineering, asset management (servicing and maintenance) and operation (remote monitoring and response).*”

True Water specialise in wastewater asset management and provide operation, management, monitoring and on call response for more than 120 sites throughout Australia and the Pacific. To date, our organisation has successfully acquired more than 2,000 government approvals for site-specific Wastewater Treatment Systems (WWTS's) and delivered more than 1,500 WWTS's throughout Australia and the Pacific. True Water's WWTS's have a combined treatment capacity of approximately 5,400,000 Litres per day.

True Water provides resilient wastewater infrastructure to our clients, integrating simple management tools to help maintain the assets. Our team manages and operates wastewater infrastructure assets across more than 50 commercial wastewater treatment systems through Australia and the Pacific.

Asset Management is performed through a cloud based operational platform. This platform manages resource allocation, communications, scheduling and planning of preventative, predictive and reactive maintenance, and the primary asset register.

Asset management services provided by True Water include 24hour remote monitoring, support and response, minimising or mitigating infrastructure outages.

Effective monitoring is critical in delivering operational security and continuity of service. The TELEmi network provides remote monitoring and alerts for system status and daily operation. This allows the True Water team to know the status of the infrastructure from anywhere, at any time.

3.2.2 Kubota

Kubota's ISO accredited treatment plants are compact, modular, and easy to install in any location. This modular approach allows Kubota systems to be easily scaled to meet demand, reducing large upfront capital expense. Their plants use microorganisms to treat sewage, providing powerful sewage treatment performance.

Kubota's long-standing company history and international performance, combined with the quality and longevity of their products makes them the ideal choice for high performance wastewater treatment infrastructure.

Central to Kubota's success is their focus on research and development and the continued endeavour to advance and improve their products. Their treatment systems represent the most advanced technology available in the world today, satisfying rigorous quality benchmarks and manufacturing standards. Kubota guarantee the quality, performance, and longevity of their systems.

3.2.3 Director Details

Director details are provided within the table below. Insolvency index search results for each director are provided [REDACTED]

Name:	James Anthony Mahoney
Phone:	
Email:	
Address:	
Date of Birth:	
Directors ID:	
Director ID Issue Date:	
Director ID Status:	Active

Name:	Daniel John Mahoney
Phone:	
Email:	
Address:	
Date of Birth:	
Directors ID:	

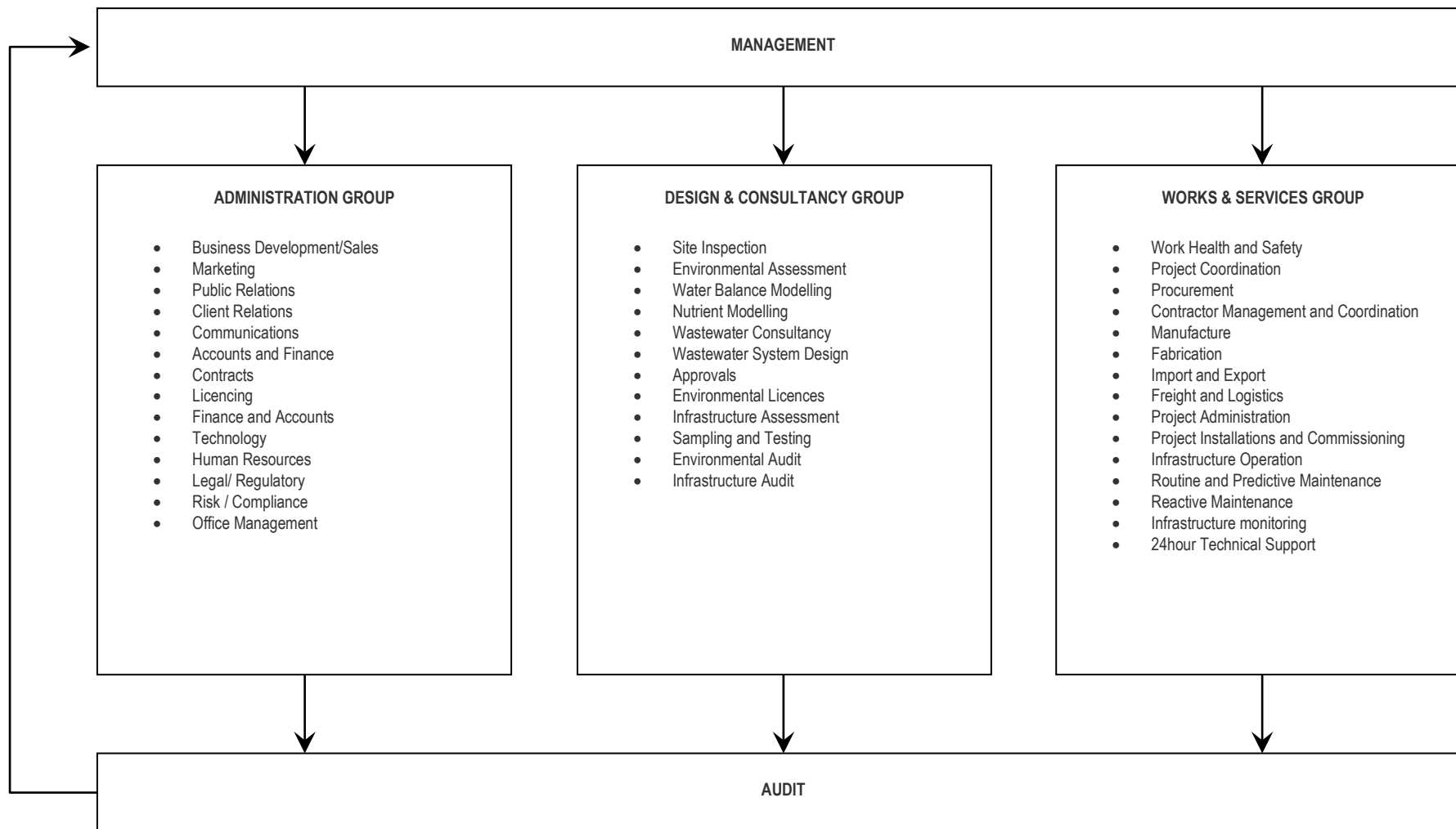
Director ID Issue Date:	
Director ID Status:	Active

Name:	Dale Patrick James
Phone:	
Email:	dale@truewater.com.au
Address:	
Date of Birth:	
Directors ID:	
Director ID Issue Date:	
Director ID Status:	Active

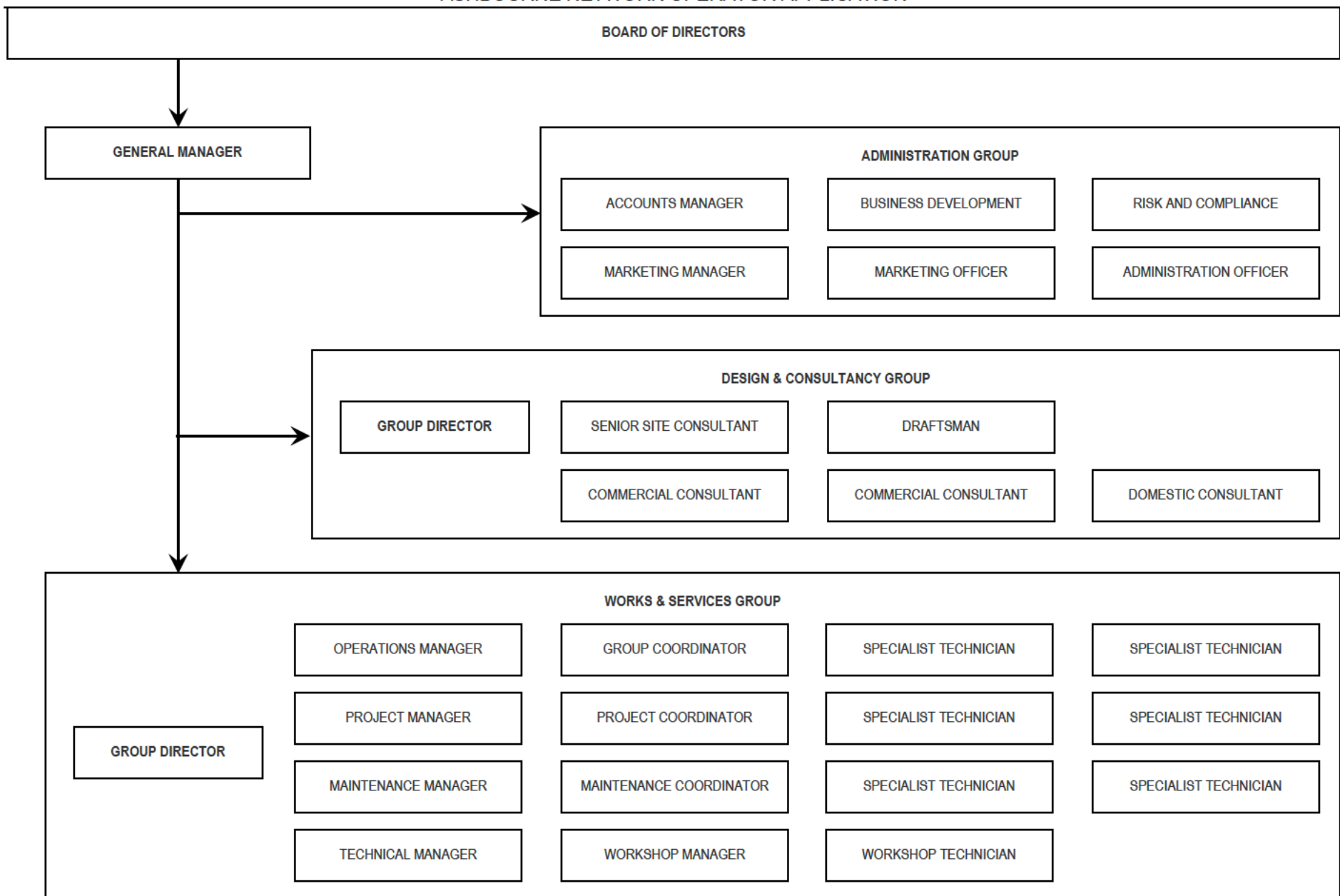
3.2.4 Disqualified Corporation Check

Company Name ABN / ACN	Individual Names	WIC Act (disqualified / not disqualified)	ASIC banned & disqualified (disqualified / not disqualified)	D&B Public record inquiry (adverse information)
Applicant Corporation				
True Water DTR Pty Ltd 606 141 557	James Mahoney (Director)	Not disqualified	N/A	N/A
	Daniel Mahoney (Director)	Not disqualified	N/A	N/A
	Dale James (Director)	Not disqualified	N/A	N/A
Relevant Relate Entities				
True Water Group Pty Ltd 606 088 402	James Mahoney (Director)	Not disqualified	N/A	N/A
	Daniel Mahoney (Director)	Not disqualified	N/A	N/A
	Dale James (Director)	Not disqualified	N/A	N/A
True Water Solutions Pty Ltd 134 910 875	James Mahoney (Director)	Not disqualified	N/A	N/A
	Daniel Mahoney (Director)	Not disqualified	N/A	N/A
	Dale James (Director)	Not disqualified	N/A	N/A

3.3 Organisational Structure



ASHBOURNE NETWORK OPERATOR APPLICATION



3.4 Key Positions

The key positions for the network operator as summarised below.

POSITION:	General Manager
HELD BY:	Dale James
QUALIFICATIONS & EXPERIENCE:	• 8+yr experience in sewage and wastewater industry • 10+yr experience property development and project management • Bachelor of Business • Master of Accounting
ATTACHMENTS:	A.2. True Water - Position Descriptions - General Manager PD A.3. True Water - Key Personnel CVs - Dale James CV 2022

POSITION:	Design & Consultancy Group Director
HELD BY:	James Mahoney
QUALIFICATIONS & EXPERIENCE:	• 30yr experience in sewage and wastewater industry • 20+yr experience in business and project management, • Licenced Contractor Plumber, Drainer & Gas fitter • Diploma of Irrigation
ATTACHMENTS:	A.2. True Water - Position Descriptions - D&C Director PD A.3. True Water - Key Personnel CVs - James Mahoney CV 2022

POSITION:	Works & Services Group Director
HELD BY:	Daniel Mahoney
QUALIFICATIONS & EXPERIENCE:	• 13+yr experience in sewage and wastewater industry • 8+yr experience with Australian Army and RAAF • Mechanical Engineer, Fitter & Turner
ATTACHMENTS:	A.2. True Water - Position Descriptions - W&S Director PD A.3. True Water - Key Personnel CVs - Daniel Mahoney CV 2022

POSITION:	Operations Manager
HELD BY:	Mitchell Pippin
QUALIFICATIONS & EXPERIENCE:	• 5+yr experience in sewage and wastewater industry • 8+yr experience management (Australian Navy) • Cert IV Engineering • Cert III Diesel Fitter • Diploma WHS • Cert IV Leadership Management • Mining Supervisor S123
ATTACHMENTS:	A.2. True Water - Position Descriptions - Operations Manager PD A.3. True Water - Key Personnel CVs - Mitchell Pippin CV 2022

POSITION:	Maintenance Manager
HELD BY:	Dale Farley
QUALIFICATIONS & EXPERIENCE:	• 5+yr experience in sewage and wastewater industry • 12+yr experience in Australian Navy • Diploma Engineering • Cert IV – Fluid Power Engineering • Cert III – Maintenance Fitter
ATTACHMENTS:	A.2. True Water - Position Descriptions - Maintenance Manager PD A.3. True Water - Key Personnel CVs - Dale Farley CV 2022

POSITION:	Commercial Consultant / Risk & Compliance
HELD BY:	Raphaella Janoni
QUALIFICATIONS & EXPERIENCE:	• 9+yr experience in sewage and wastewater industry • Bachelor of Environmental Engineering • Advanced Diploma of Leadership and Management • Diploma of Project Management • Degree: Technologist in Environmental Management
ATTACHMENTS:	A.2. True Water - Position Descriptions - Commercial Consultant PD A.2. True Water - Position Descriptions - Risk & Compliance PD A.3. True Water - Key Personnel CVs - Raphaella Janoni CV 2022

3.5 Organisation Experience

GLENCORE COAL ASSETS AUSTRALIA – VARIOUS LOCATIONS

Asset Management Partners since 2016



NEW SOUTH WALES SITES

- United Wambo – 60kL/day
- Ulan Surface – 20kL/day

QUEENSLAND SITES

- Rolleston Mine A – 10kL/day
- Rolleston Mine B – 100kL/day
- Oaky Creek – 100kL/day
- Hail Creek – 400kL/day

MANAGEMENT CHALLENGES

- Consistent high quality effluent treatment required to address all environmental constraints and meet variance in flow volumes and wastewater concentrations
- Comprehensive onsite safety and compliance requirements must be met in order to deliver regular operation and maintenance services
- System design, delivery and operation must meet with individual mine site requirements and specifications

MAINTENANCE SOLUTIONS

- Quarterly servicing of WWTS components by accredited service technicians to meet warranty requirements and government regulations
- WWTP is robust and operates with minimal intervention, no requirement for daily operation, daily maintenance, or chemical dosing
- True Water technicians completed site specific training and inductions, and adhere to all onsite safety and compliance requirements

True Water delivered a system that provides a higher level of treatment, meeting the environmental standards and ensuring long-term compliance.

Since delivering the new treatment system, True Water have continued to provide valuable support and advice in the day-to-day management of the infrastructure. From scheduled maintenance of the STP, water sampling and lab testing / analysis, to 24hr support and ongoing education of onsite staff.

Kevin Parry – Engineering Project Manager, Ulan Open Cut - A Glencore managed company

**ULAN
COAL**
—
GLENCORE

WELLCAMP AIRPORT AND BUSINESS PARK – TOOWOOMBA, QLD

500kL Kubota MBBR WWTP (Stage 3)



ABOUT THE SITE

- Australia's largest privately owned international airport and a state-of-the-art business park development
- The capacity of the airport continues to expand with commercial passenger and freight services
- The business park has also seen immense growth including multiple large workshops & factories, a major milk processing plant and plans for a new RSPCA depot.

KEY CHALLENGES

- Site designed to be developed in stages according to demand
- High concentrations of contaminants in the wastewater due to high volume of transiting guests
- Major transport infrastructure requiring uninterrupted operation
- Highly variable flows based on seasonal fluctuations
- Solution required to provide whole of life cost benefits

INFRASTRUCTURE SOLUTION

- Stage 1 infrastructure was installed and specially designed to facilitate simplistic expansion for increasing hydraulic demand
- System designed to allow for continued operation during expansion Stages
- Components prefabricated in a controlled workshop environment to minimise time on site and ensure quality
- Wastewater is consistently treated to the required levels

We needed the world's most reliable, high quality sewage solution for the Brisbane West Wellcamp Airport and Wellcamp Business Park. True Water Australia was chosen after discussions with each of the leading providers in Australia.

We made this decision as True Water displayed many of the traits that made Wagner's successful, namely innovation, attention to detail, focus on quality, dedication and customer service. Wagner's is extremely happy with the quality and performance of True Water Australia's works and the Kubota STP.

Denis Wagner – Director, Wagner Corporation



AMPOL SERVICE CENTRE – CHINDERAH, NSW

80kL Kubota MBBR WWTP



ABOUT THE SITE

- Northbound Caltex Service Centre at Chinderah servicing the Pacific Highway
- Kubota K-HC-T MBBR Advanced Wastewater Treatment plants
- Flood prone and size restrictive site required a specialised engineered effluent disposal area and a treatment system that can survive being submerged
- Designed for staged delivery of infrastructure to expand the infrastructure capacity in line

MANAGEMENT CHALLENGES

- High strength wastewater flow includes capture from Truck Stop amenities, public amenities and five food outlets
- Fluctuating flows during peak holiday seasons must be managed with Predictive Maintenance to limit costly reactive pump outs
- Introduction of foreign objects and high strength chemicals must be monitored to reduce impact on treatment chain

MAINTENANCE SOLUTIONS

- Quarterly servicing of the Kubota systems by accredited service technicians to meet warranty requirements
- Quarterly inspection and servicing of all supporting infrastructure: effluent disposal area, pumps, aerators, EQ chambers etc.
- Monthly influent and effluent testing to meet licencing requirements
- Real time monitoring with TELEmi® system supports Predictive Maintenance

Since opening the Service Centre, True Water have provided a range of services which have helped in the general operation of the site. From maintenance of the STP, lab testing and analysis of water, ongoing advice and education to commercial tenants and 24-hour support, True Water have addressed every need.

At each stage, True Water have exceeded expectations and standards. Their involvement has provided Scott PDI with confidence that our treatment plant will operate to a high level well into the future"

Bernadette Hook – Property Manager, Scott PDI

SCOTT PDI
PROPERTY DEVELOPMENT INVESTMENT



IGAM BARRACKS AND COMMUNITY – LAE, PAPUA NEW GUINEA

250kL Kubota K-HC-R WWTP



ABOUT THE SITE

- Foreign Aid Community Infrastructure to provide vital services to the Lae community via Australian Aid Investment.
- Collaboration between Australian and PNG Governments
- Local trade and workforce engagement with a focus in skill development and ongoing education
- Project located in foreign country requiring export management

KEY CHALLENGES

- Existing failed STP undersized and only treating to a poor level
- Required guaranteed continuity of operation in a remote location
- Simple operation and training of local workforce for maintenance
- Harsh tropical climate, wet and corrosive conditions
- Remote location requires high level organisation and planning to limit time on site

THE SOLUTION

- Pre manufacture and delivery of Kubota Advanced Treatment Plant and Control Room
- True Water technicians supervised installation by local workforce and provided training in the day-to-day maintenance
- Installation completed within 4-week window
- Below ground installation for community safety and protection from environmental hazards

“True Water’s innovation, attention to detail, focus on quality, dedication and customer service are above reproach I am extremely happy with the quality and professionalism displayed by the company and its employees.”

Throughout the project True Water’s dedication and customer service was outstanding. They diligently supported the requirements of the Army, in their ongoing maintenance and dependable, reactive and programmed service regime.”

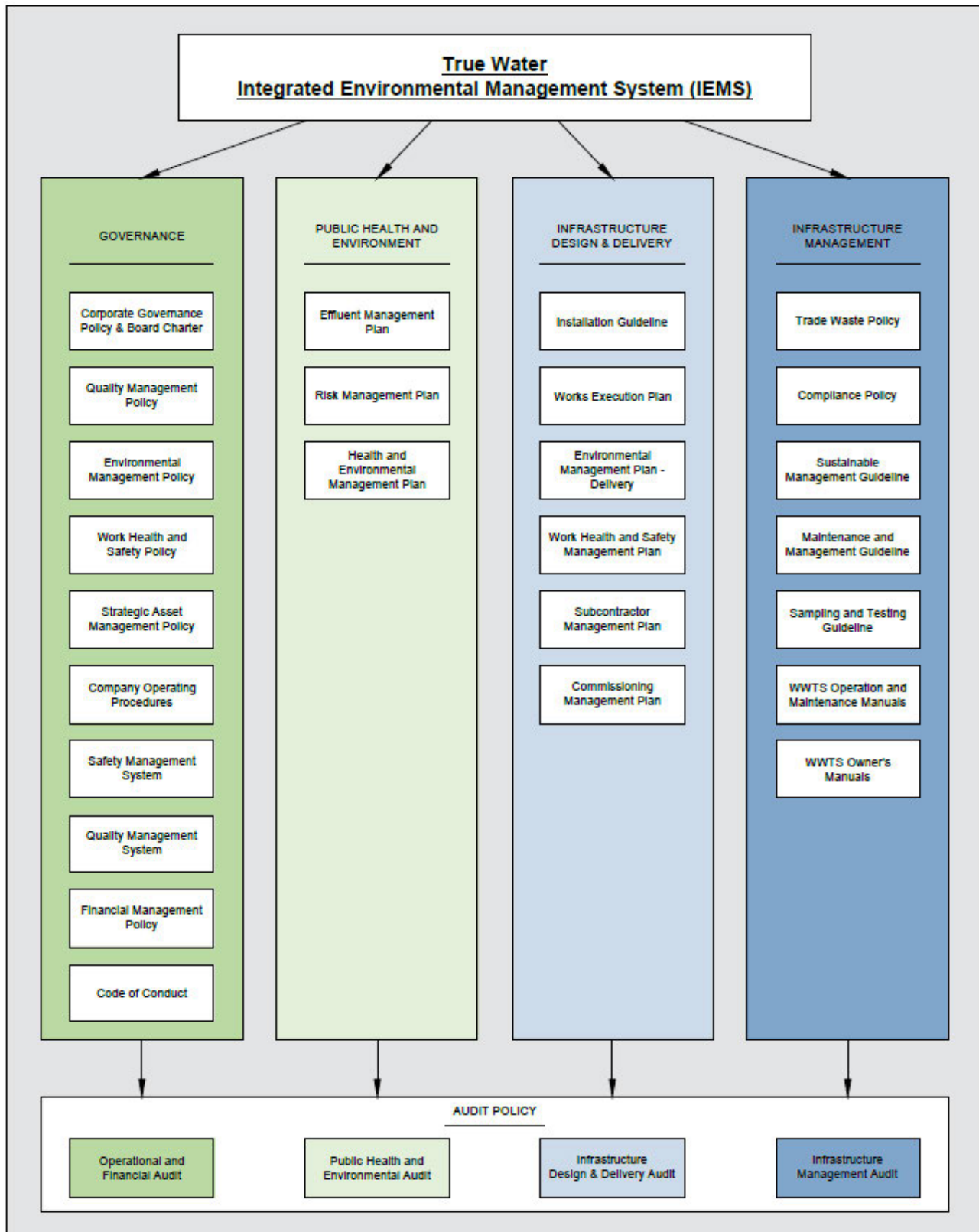
Brett Mathews – Supervisor of Engineering Services, Igam Barracks PNG
Warrant Officer Class Two, Australian Department of Defence



Australian Government
AusAID

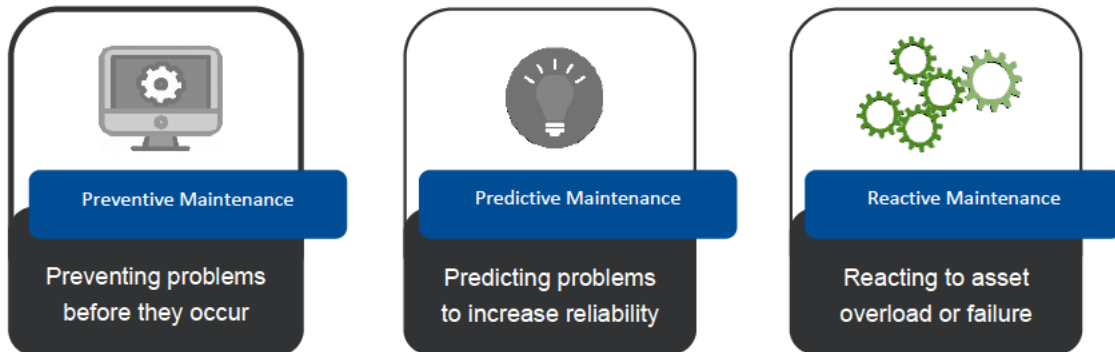
3.6 Integrated Environmental Management System (IEMS)

The IEMS is the overarching framework that guides and directs all aspects of the company's operation. The IEMS structure includes five key elements: governance, public health & environment, infrastructure design & delivery, infrastructure management, and audit. Adherence to the IEMS ensures the company's mission to protect people, water, and the environment is integrated into daily activities.



3.7 Asset Management Strategy

True Water works with our clients to provide a framework for whole-of-life asset and infrastructure management for their wastewater treatment systems. Our strategy is to provide comprehensive Preventative and Predictive maintenance to minimise the need for Reactive maintenance.



3.7.1 Preventive Maintenance

Preventive maintenance is routine, systematic, and planned asset maintenance, which reduces equipment failure, cuts costs, and maximizes efficiency over time. Maintenance is completed at a specific frequency to ensure equipment is reviewed and tested at equal intervals. For example, servicing the Kubota WWTP every three months. The schedule is driven by licencing requirements, government regulations and data collected from monitoring performance.

Factors that are considered for planning preventative maintenance include:

- **Manufacture Company Recommendations:** To follow suggested instructions and timelines
- **Legal Requirements:** To comply with government-imposed policies and regulations
- **Environmental Requirements:** To avoid environmental hazards

3.7.2 Predictive Maintenance

Predictive maintenance utilises monitoring data, sampling data and industry data to automate and predict maintenance needs. Data is assessed to develop effective maintenance schedules and correct issues before they become equipment failures.

TELEmi remote monitoring of hydraulic flows and equipment status allows for intuitive decision making to ensure equipment and components are kept in best working condition. Flow data can help predict high flow events, triggering predictive maintenance tasks to avoid overloading the system and the need for expensive reactive management.

Regular sample testing of influent and effluent allows for in depth knowledge of the condition in which the plant is being operated and how the internal biological system is functioning. As a result, site specific adjustments can be made, tailoring the wastewater plant to each indicial application and location.

3.7.3 Reactive Maintenance

Reactive maintenance is sometimes necessary. True Water provides 24/7 support to its asset management partners via phone consultation and in person when required. Reactive or corrective maintenance is usually more costly and time consuming.

3.8 International Organization for Standardization (ISO)

True Water has been assessed and certified by an independent third party for the following international standards:

- ISO 9001:2015 – Quality Management Systems (QMS)
- ISO 14001:2015 – Environmental Management Systems (EMS)
- ISO 45001:2018 – Occupational Health and Safety (OH&S) Management Systems



The scope of the certifications covers the following activities:

“Provision of wastewater and sewage treatment technologies to Australia and the Pacific. Services include consultancy, delivery, project management, engineering, asset management (servicing and maintenance) and operation (remote monitoring and response).”

True Water’s IEMS provides the framework and structure required to achieve the *International Organization for Standardization* certification.

The internal audits are a mandatory requirement of ISO and are conducted internally. Internal audits are intended to determine to what extent Management Systems are:

- Properly implemented and maintained,
- Achieving its objectives,
- Conforming to management requirements,
- Complying with statutory requirements,
- Meeting stakeholder’s contractual requirements,
- Conforming to a recognized standard,
- Continually being improved.

ISO Certificate are attached to this document.

3.9 Insurances

Third party assessment of insurance coverage has been completed [REDACTED] The Insurance Report Assessment, including all current insurances and corresponding PDS’ are provided in [REDACTED]

A summary of insurances held is provided in the following tables.

Insurance Type:	General Liability
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

Insurance Type:	Professional Indemnity
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

Insurance Type:	Workers Compensation Insurance
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

Insurance Type:	Annual Contract Works Insurance
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

Insurance Type:	Business Insurance
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	

Policy Details:	
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Insurance Type:	Corporate Travel
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

Insurance Type:	Motor Fleet
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

Insurance Type:	Marine Transit
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

Insurance Type:	General Property
Insurer:	
Policy Name:	
Policy Number:	
Policy Period:	
Policy Details:	

4 Financial Capacity

As the interim wastewater scheme is a temporary measure, [REDACTED]
[REDACTED]

There will be no charges, levies, or fees to the property owner pertaining to the delivery or operation of the IWU.
[REDACTED]
[REDACTED]

4.1 Directors Insolvency Index

Each director was searched through the Australian Financial Security Authority Insolvency index. Search reports are provided as [REDACTED]

4.2 Company Documents

ASIC Extracts and current credit risk reports within the following *Attachments*:

[REDACTED]
[REDACTED]
[REDACTED]

4.3 Financial Statements

Financial statements for the past three years are provided within [REDACTED]
[REDACTED]

4.4 Accountant Reference

A reference, provided by the Company accounting firm, [REDACTED]
[REDACTED]

4.5 Bank Reference

A reference, provided by the nominated banking institution, [REDACTED]
[REDACTED]

4.6 Contracts and Funding

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

4.7 Operational Security

4.7.1 Warranties

Statutory warranties as required for all components forming part of the IWTS. The Kubota treatment plant will include a 5year manufactures warranty, and all electrical components will be covered by a minimum 2year warranty coverage from the manufacture.

4.7.2 Performance Guarantee

[REDACTED]

4.7.3 Defects Liability Period

24months industry standard defect liability will be required from all suppliers and contractors involved in the delivery of wastewater infrastructure for the Ashbourne IWU.

4.8 Contextual Considerations

As the scheme is a temporary measure there is a significant reduction in operational risk. Further, the municipal rising main connecting the network to the municipal system provides a critical contingency strategy to ensure the continuity of end user supply.

In assessing the scheme from a risk adverse position True Water has provided a [REDACTED] which demonstrates the scheme viability both as an interim operation and as an ongoing operation with the introduction of a retail suppliers licence at the fifth year of operation. This is an additional contingency measure, should WSC fail to complete the upgrade to the Moss Vale Sewage Treatment Plant within the interim period.

5 Technical Capacity

Ashbourne is a master planned residential development located on the southern edge of the Moss Vale township in the Southern Highlands of NSW. The greenfield site is not currently serviced by the municipal sewerage network. Until the capacity of the Moss Vale Sewage Treatment Plant is increased, the local water utility, Wingecarribee Shire Council (WSC), cannot provide permanent sewer service to the site.

To facilitate project commencement the developer, Prime Moss Vale (PMV) consulted with WSC. It was agreed an Interim Wastewater Treatment Scheme (IWTS) dispersing effluent wholly onsite would be a suitable interim sewage servicing solution to service Stage 1 of the development (178 Lots). The interim period will be a maximum of three years.

As part of the interim servicing strategy municipal infrastructure will be delivered by PMV, including the reticulated sewer main, the catchments' sewer pump station, and the sewer rising main connecting the pump station to the existing municipal reticulation network. As the municipal network is at capacity, wastewater will be pumped from the pump station to the Interim Wastewater Treatment Scheme. Once the Moss Vale Sewage Treatment Plant is upgraded, wastewater will be from the pump station to the municipal network and the IWTS will be decommissioned.

5.1 Scheme Purpose

The purpose of the interim wastewater scheme is to provide a sewer service to the site until the capacity of the Moss Vale Sewage Treatment Plant is increased and permanent discharge to the municipal network is available.

5.2 Scheme Timeline

Commencement of the interim wastewater scheme will coincide with the occupation of the first dwelling and is expected to be late 2024. Completion of the Moss Vale Sewage Treatment Plant permanent upgrade is expected in mid to late 2025. Considering progress to date it is likely municipal service will not be available until a later date. Therefore, to address uncertainty and ensure the interim scheme is suitably funded financial planning allows for a five-year interim period or until December 2029.

5.3 Scheme Description

The interim wastewater scheme will service Stage 1 of the greenfield development and consist of seven infrastructure components:

- Municipal sewer reticulation network,
- Municipal sewer pump station and emergency storage,
- Municipal sewer main connecting the sewer pump station and existing municipal network,
- Interim rising main from the ultimate sewer pump station to the IWTS,
- Interim Wastewater Treatment Plant (IWTP),
- Interim influent and effluent storages,
- Interim effluent dispersal system (EDS).

5.3.1 Municipal Sewer Reticulation Network

The approval, construction, testing, and commissioning of the sewer reticulation network will follow established business as usual (BAU) processes. Once the interim period is complete the sewer reticulation network will be transfer to the Local Water Utility and form part of the municipal network.

5.3.2 Municipal Sewer Pump Station and Emergency Storage

The approval, construction, testing, and commissioning of the sewage pump station including emergency storage will follow established business as usual (BAU) processes. Once the interim period is complete the sewage pump station including emergency storage will be transferred to the Local Water Utility and form part of the municipal network.

The sewage pump station including emergency storage is designed to service the entire lot yield of 1,073 lots and will be installed and commissioned prior to the release of Stage 1.

5.3.3 Municipal Sewer main connecting the sewer pump station and existing municipal network,

The municipal sewer main connecting the sewer pump station to the existing municipal network will be installed, tested and transferred to the local water utility prior to the release of the Stage 1 lots. Connection of the sewer pump station to the existing municipal network provides a contingency failsafe and aids in mitigating risk.

5.3.4 Rising main from the ultimate sewer pump station to the IWTP,

The Rising main from the ultimate sewer pump station will be constructed, installed and marked as per municipal standards and relevant guidelines and codes.

5.3.5 Interim Wastewater Treatment Plant (IWTP)

The IWTP will be a Kubota biological WWTP providing Class B treatment with a nominal treatment capacity of 110kL/day and a peak treatment capacity of 137.5kL/day. The IWTP will be installed below ground and include sealed gas tight lids. Below ground installation provides favourable amenity and limits visual impact, noise, and odour. Air emissions shall be filtered through carbon filtration to prevent odour. The IWTP will be designed and constructed to provide a minimum 30year operational life. The location of the IWTP will be as per the Section 68 approval.

5.3.6 Influent and Effluent Storage,

To ensure extreme wet weather event are suitably managed influent and effluent storage will provide 4.1Megalitres of storage, which is greater than 10days peak wet weather flow storage.

5.3.7 Effluent Dispersal System

The Section 68 approved effluent dispersal system is a 9.68hectare spray irrigation system located to achieve suitable buffers and offsets to environmental features and property boundaries as required by legislation, guidelines, and codes. An extremely conservative approach to effluent dispersal will be employed. The maximum dispersal rate will be less than 1mm/m²/day. Daily Water Balance Modelling utilising 50years of SILO weather data has been completed utilising MEDLI and is provided as [REDACTED]

5.4 **Infrastructure Lifecycle**

Commencement of the interim wastewater scheme will coincide with the occupation of the first dwelling and is expected to be late 2024. Completion of the Moss Vale Sewage Treatment Plant permanent upgrade is expected in mid to late 2025. Considering progress to date it is likely municipal service will not be available until a later date. Therefore, to address uncertainty and ensure the interim scheme is suitably funded financial planning allows for a five-year interim period or until December 2029.

5.5 Water Balance

See *Attachment A.10. MEDLI Report (Water Balance)*.

5.6 Waste Streams

See *Attachment B.1. Effluent Management Plan*.

5.7 Approvals

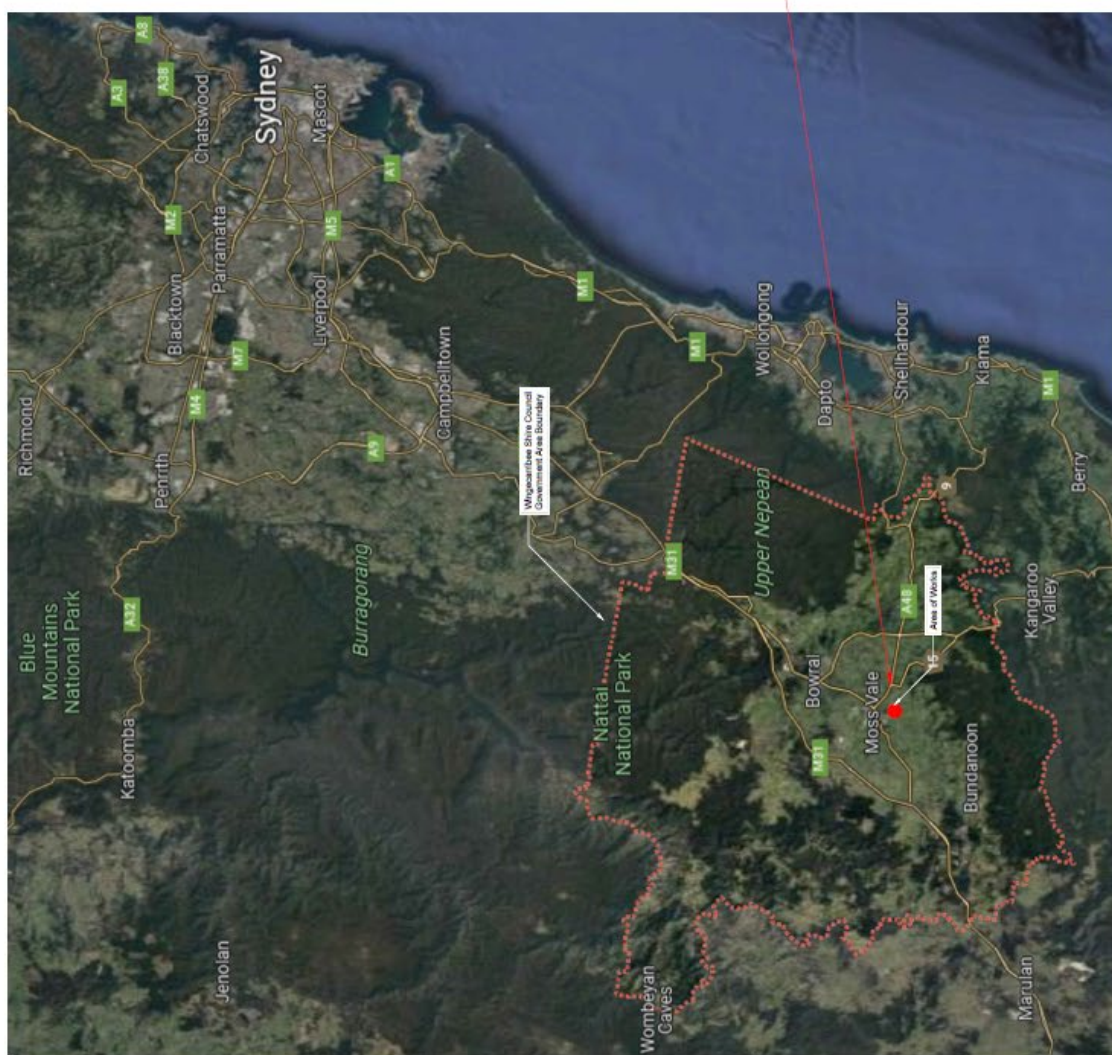
The Development Application, Section 68 approval for the sewer reticulation network and ultimate sewage pump station, including emergency storage, and approval for the IWTS has been acquired from WSC and is included within the submission.

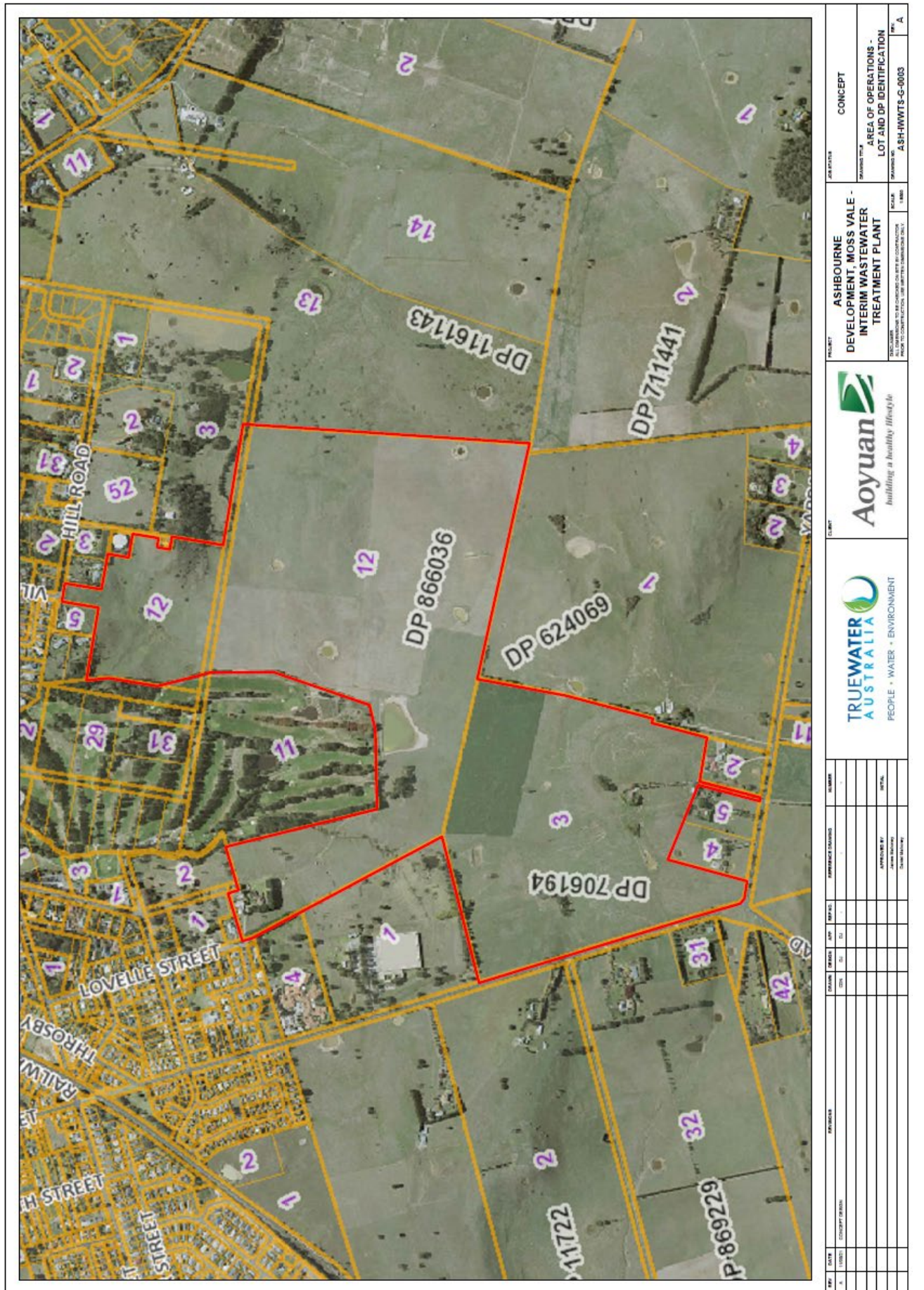
- *Attachment C.2. Development Application.*
- *Attachment C.3. Sewer Reticulation – Section 68 Submission.*
- *Attachment C.4. Interim WWTP Development Approval.*

5.8 Area of Operations

The site consists of two separate and adjoining allotments comprising a total area of 125.7 hectares. The legal description of the site is Lot 3 in DP 706194 (No 32 Lovelle Street) and Lot 12 in DP 8660366 (No 141 Yarrawa Road). The site is bordered by Yarrawarra Road, Lovelle Street, Moss Vale Golf Course and other urban and rural land zoned lots. The site is currently predominately pastoral land, with a dwelling on each of the existing lots.

There is sufficient unconstrained land for sustainable site-specific wastewater management which achieves required offsets to environmental features and property boundaries as required by legislation and guidelines.

[illegible]



5.9 Responsibilities

ACTIVITY / RESPONSIBILITY	PRIME MOSS VALE	TRUE WATER
Licenced Network Operator		X
Development Approvals and Consent	X	
Construction and commissioning - Sewer Reticulation Network	X	
Construction and commissioning - Sewer pump station and emergency storage	X	
Construction and commissioning - Rising main to municipal network	X	
Construction and commissioning - Interim rising main to IWTS	X	
Construction and commissioning - Interim Wastewater Treatment Plant		X
Construction and commissioning - Influent and effluent storage		X
Construction and commissioning - Effluent dispersal system		X
Funding of capital costs	X	
Operational Audit – IWU Infrastructure		X
IWU Asset management		X
IWU monitoring and reactive maintenance		X
IWU effluent testing and monitoring		X
IWU Compliance and reporting		X
IWU Audits (Required by WICA)		X
IWU documentation – updates and review		X
Funding of capital costs	X	

5.10 Interim IWU Risk Assessment

See *Attachment B.2.* for the *Ashbourne Risk Management Plan*.

5.11 Sewage Management Plan

See the *Ashbourne Risk Management Plan* and [REDACTED]

5.12 Infrastructure Delivery Plans

The Kubota WWTP is manufacture under ISO:14001 & ISO:9001 certification. All components including controller, pumps and blowers are manufactured to Kubota Corporations specifications by global manufactures to specifically satisfy the Kubota WWTP design. Mass production, standardisation, and uniformity provide surety of operation. Kubota therefore provide a strong warranty covering the entirety of the WWTP and a Performance Guarantee covering operation and performance.

True Water fabricate and assemble all additional componentry including controller, telemetry, airlines, transfer piping and pump sets prior to dispatch to site. Manufacture and assembly are completed adhering to strict quality assurance processes, minimising risks associated with onsite fabrication.

Due to manufacture and assembly prior to delivery, installation is completed quickly and efficiently. Wastewater infrastructure is installed below ground to eliminate visual impact and minimise temperature fluctuations.

Delivery and installation of the wastewater infrastructure is undertaken by True Water. This scope of works includes all safety, civil, construction and commissioning activities required for the installation providing a turnkey solution. True Water selects sub-contractors at the time of works to undertake key works during the delivery of infrastructure. This reduces business risk and allows True Water to focus specifically on delivery and management of compliant and reliable wastewater infrastructure.

The Infrastructure Design and Delivery pillar of the IEMS provides a framework for the successful delivery of wastewater infrastructure. Examples of the project specific management plans created under the IEMS are provides as follows:

5.13 Infrastructure Operating Plans

Operation and management will be in accordance with the IWU's *Integrated Environmental Management System* and *Strategic Asset Management Policy*.

The IWU applicant is certified under ISO standards; 9001:2015, 14001:2015, and 45001:2018 for the “Provision of wastewater and sewage treatment technologies to Australia and the Pacific. Services include consultancy, delivery, project management, engineering, asset management (servicing and maintenance) and operation (remote monitoring and response).”

To comply with the True Water IEMS and manufactures' requirements, all True Water wastewater infrastructure must be serviced and maintained by a True Water accredited technician. Accreditation includes onsite training and the study and assessment of core modules under the Kubota Johkasou Maintenance Accreditation course.

True Water staff operation under the True Water Maintenance and Management Guideline, to ensure quality and consistency in all True Water asset management operations. This achieved through the following objectives:

- Provide clear role responsibilities
- Provide clarity regarding operation processes and decision processes
- Provide current approved reference materials and documentation

5.14 Contingency Planning

The IEMS provides a framework for the successful delivery and long-term operation of wastewater infrastructure. This ensures risk assessment and contingency planning carries on throughout the infrastructure lifecycle. This begins with the documents under the IEMS Public Health and Environment pillar:

- Attachment B.1. Effluent Management Plan
- Attachment B.2. Risk Management Plan