

NOTICE OF MEETING



WATER, WASTE AND SEWER ADVISORY COMMITTEE MEETING

A Water, Waste and Sewer Advisory Committee Meeting of Byron Shire Council will be held as follows:

Venue	Conference Room, Station Street, Mullumbimby
Date	Thursday, 13 September 2018
Time	11.30am

A handwritten signature in black ink, appearing to read 'Phillip Holloway', is located below the meeting details.

Phillip Holloway
Director Infrastructure Services

CONFLICT OF INTERESTS

What is a “Conflict of Interests” - A conflict of interests can be of two types:

Pecuniary - an interest that a person has in a matter because of a reasonable likelihood or expectation of appreciable financial gain or loss to the person or another person with whom the person is associated.

Non-pecuniary – a private or personal interest that a Council official has that does not amount to a pecuniary interest as defined in the Local Government Act (eg. A friendship, membership of an association, society or trade union or involvement or interest in an activity and may include an interest of a financial nature).

Remoteness – a person does not have a pecuniary interest in a matter if the interest is so remote or insignificant that it could not reasonably be regarded as likely to influence any decision the person might make in relation to a matter or if the interest is of a kind specified in Section 448 of the Local Government Act.

Who has a Pecuniary Interest? - a person has a pecuniary interest in a matter if the pecuniary interest is the interest of the person, or another person with whom the person is associated (see below).

Relatives, Partners - a person is taken to have a pecuniary interest in a matter if:

- The person's spouse or de facto partner or a relative of the person has a pecuniary interest in the matter, or
- The person, or a nominee, partners or employer of the person, is a member of a company or other body that has a pecuniary interest in the matter.

N.B. “Relative”, in relation to a person means any of the following:

- (a) the parent, grandparent, brother, sister, uncle, aunt, nephew, niece, lineal descends or adopted child of the person or of the person's spouse;
- (b) the spouse or de facto partners of the person or of a person referred to in paragraph (a)

No Interest in the Matter - however, a person is not taken to have a pecuniary interest in a matter:

- If the person is unaware of the relevant pecuniary interest of the spouse, de facto partner, relative or company or other body, or
- Just because the person is a member of, or is employed by, the Council.
- Just because the person is a member of, or a delegate of the Council to, a company or other body that has a pecuniary interest in the matter provided that the person has no beneficial interest in any shares of the company or body.

Disclosure and participation in meetings

- A Councillor or a member of a Council Committee who has a pecuniary interest in any matter with which the Council is concerned and who is present at a meeting of the Council or Committee at which the matter is being considered must disclose the nature of the interest to the meeting as soon as practicable.
- The Councillor or member must not be present at, or in sight of, the meeting of the Council or Committee:
 - (a) at any time during which the matter is being considered or discussed by the Council or Committee, or
 - (b) at any time during which the Council or Committee is voting on any question in relation to the matter.

No Knowledge - a person does not breach this Clause if the person did not know and could not reasonably be expected to have known that the matter under consideration at the meeting was a matter in which he or she had a pecuniary interest.

Participation in Meetings Despite Pecuniary Interest (S 452 Act)

A Councillor is not prevented from taking part in the consideration or discussion of, or from voting on, any of the matters/questions detailed in Section 452 of the Local Government Act.

Non-pecuniary Interests - Must be disclosed in meetings.

There are a broad range of options available for managing conflicts & the option chosen will depend on an assessment of the circumstances of the matter, the nature of the interest and the significance of the issue being dealt with. Non-pecuniary conflicts of interests must be dealt with in at least one of the following ways:

- It may be appropriate that no action be taken where the potential for conflict is minimal. However, Councillors should consider providing an explanation of why they consider a conflict does not exist.
- Limit involvement if practical (eg. Participate in discussion but not in decision making or vice-versa). Care needs to be taken when exercising this option.
- Remove the source of the conflict (eg. Relinquishing or divesting the personal interest that creates the conflict)
- Have no involvement by absenting yourself from and not taking part in any debate or voting on the issue as if the provisions in S451 of the Local Government Act apply (particularly if you have a significant non-pecuniary interest)

RECORDING OF VOTING ON PLANNING MATTERS

Clause 375A of the Local Government Act 1993 – Recording of voting on planning matters

- (1) In this section, **planning decision** means a decision made in the exercise of a function of a council under the Environmental Planning and Assessment Act 1979:
 - (a) including a decision relating to a development application, an environmental planning instrument, a development control plan or a development contribution plan under that Act, but
 - (b) not including the making of an order under Division 2A of Part 6 of that Act.
- (2) The general manager is required to keep a register containing, for each planning decision made at a meeting of the council or a council committee, the names of the councillors who supported the decision and the names of any councillors who opposed (or are taken to have opposed) the decision.
- (3) For the purpose of maintaining the register, a division is required to be called whenever a motion for a planning decision is put at a meeting of the council or a council committee.
- (4) Each decision recorded in the register is to be described in the register or identified in a manner that enables the description to be obtained from another publicly available document, and is to include the information required by the regulations.
- (5) This section extends to a meeting that is closed to the public.

BYRON SHIRE COUNCIL
WATER, WASTE AND SEWER ADVISORY COMMITTEE MEETING

BUSINESS OF MEETING

1. APOLOGIES

2. DECLARATIONS OF INTEREST – PECUNIARY AND NON-PECUNIARY

3. ADOPTION OF MINUTES FROM PREVIOUS MEETINGS

3.1 Water, Waste and Sewer Advisory Committee Meeting held on 31 May 2018

4. STAFF REPORTS

Infrastructure Services

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4.3	Rous Regional Water Supply Agreement Liaison Committee Meeting 28 August 2018 Agenda and Business papers.....	34
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STAFF REPORTS - INFRASTRUCTURE SERVICES

Report No. 4.1 **Water Sensitive Urban Design Strategy**
Directorate: Infrastructure Services
Report Author: James Flockton, Drain and Flood Engineer
File No: I2018/956
Theme: Community Infrastructure
 Local Roads and Drainage

Summary:



At Council's meeting of 22 March 2018, Council resolved to develop a financially sustainable strategy to embed and mainstream Water Sensitive Urban Design (WSUD) into Council's planning instruments and policies.

This report provides an update on this project.

RECOMMENDATION:

That the committee note the report.

Attachments:

- 1 PDF of E2018/56771 Water Sensitive Urban Design WSUD Policy and Strategy Request for
25 Quotation, E2018/74360 , page 7  

Report

At Council's meeting of 22 March 2018, Council resolved Res 18-178:-

- 5 1. *That Council develop a financially sustainable strategy to embed and mainstream Water Sensitive Urban Design (WSUD) into Council's planning instruments and policies.*
- 10 2. *That formulation of the Strategy consider fundamental changes in various development area ratios to retain pervious areas instead of increasing catchment runoff.*
- 15 3. *That the changes made under this strategy on WSUD aim to:*
 - *reduce flood risk in urban areas*
 - *improve water quality in streams, waterbodies and groundwater*
 - *consume less of our water resources*
 - *reduce the cost of providing and maintaining water and sewer infrastructure*
 - *protect and restore aquatic and riparian ecosystems and habitats; and*
 - *protect the scenic, landscape and recreational values of streams and other waterbodies.*
- 20 4. *That the WSUD Strategy generates changes that:*
 - *promote and encourage WSUD in urban areas*
 - *provide guidance and support for businesses and residents to implement WSUD*
 - *give incentives for the implementation of WSUD in new and existing development*
- 25 5. *That progress on the WSUD Strategy be reported to each Water, Waste and Sewerage Advisory Committee and the Coastal Estuary Catchment Panel quarterly meeting, starting with their next meetings in June 2018.*
- 30 6. *That Council allocate \$25,000 in its 2018-19 budget for the development of a strategy.*

35 Councils adopted budget for financial year 2018/19 includes the above budget.

Staff have prepared a scope of works for this task which was sent out to five local consultants to price. The scope of works can be found at attachment 1.

40 Consultant BMT WBM have now been engaged to prepare a WSUD policy and strategy for Byron Shire. BMT WBM were engaged on the 30 August 2018, therefore, timelines were not available to provide a detailed report to the committee prior to Septembers meeting, however, BMT WBM will present to this meeting.

45 The purpose of this meeting is to introduce the committee to WSUD, discuss typical strategies used by other Council's, discuss a draft Policy Statement and enter into a group discussion that seeks to understand the committees desires and preferences for the draft strategy.

50 A draft strategy will follow at the next committee meeting for further discussion and fine tuning.

Due to the above short timelines it recommended that the committee make use of some online resources. An excellent resource for the committee to use prior to the meeting is

<http://hlw.org.au/initiatives/waterbydesign> and in particular

<http://hlw.org.au/initiatives/waterbydesign/water-sensitive-urban-design-wsud> whilst this

- 5 information covers the South East Queensland area rather than Northern NSW, it is an excellent resource that is relevant to our climate when compared to information more suited to Sydney and the climate of the majority of NSW.

Financial Implications

- 10 There are no financial implications at this stage. The contract cost is below the allocated budget.

Statutory and Policy Compliance Implications

- 15 There are no Statutory and Policy Compliance Implications at this time.



BSC ref: E2018/56771

REQUEST FOR QUOTATION

FROM: James Flockton **EMAIL:** James.flockton@byron.nsw.gov.au
POSITION: Flood and Drainage Engineer **TEL:** 02 6626 7158

Byron Shire Council invites you to submit a quotation for the supply of the following goods/services:

The Brief.

Introduction

At Council's 22 March 2018 meeting, Council adopted to develop a financially sustainable strategy to embed mainstream Water Sensitive Urban Design (WSUD) principals into Councils planning instruments and policies.

Background

Council currently has limited requirements for WSUD principles within planning documents, like DCP's. Council's internal infrastructure works has used some WSUD principals in the past, but this could be increased. The proposed strategy is to require increased use of WSUD principals.

Objectives of Consultancy

Formulation of a WSUD Policy and Strategy which considers fundamental changes in various development area ratios to retain pervious areas instead of increasing catchment runoff.

This strategies aim is to:

- reduce flood risk in urban areas
- improve water quality in streams, waterbodies and groundwater
- consume less of our water resources
- reduce the cost of providing and maintaining water and sewer infrastructure
- protect and restore aquatic and riparian ecosystems and habitats;
- protect the scenic, landscape and recreational values of streams and other waterbodies
- create minimal maintenance burden on Council's maintenance budget
- provide design guidance to developers and Council staff
- require a ratio of pervious and impervious surfaces for future development

The WSUD Strategy should generate changes that:

- promote and encourage WSUD in urban areas, green field and infill development
- provide guidance and support for businesses and residents to implement WSUD
- give incentives for the implementation of WSUD in new and existing development.

The final WSUD strategy will likely lead to amendments to Councils DCP in order to require future development to use WSUD principals.

Deliverables

One WSUD Policy, similar to other Council policies.

One WSUD Strategy document.

Stages

1. Inception meeting.
2. Initial Council document review, options investigation and draft Policy statement for stakeholder review.
3. Draft strategy for stakeholder review.
4. Final strategy for Council review and public exhibition.
5. Adoption.

Project Budget (Optional)

N/A

Delivery timeframe

9 Months from contract award. The strategy should be adopted in 9 months. The adoption process can take 3 months, including 4 weeks public exhibition.

Stakeholders

Progress on the WSUD Strategy is to be reported to each Water, Waste and Sewerage Advisory Committee and the Coastal Estuary Catchment Panel quarterly meeting. Consultants should allow attendance at two of each groups meetings.

Council to Provide

Any relevant council documents. This is expected to be minimal. Most relevant policies and standards are available on Council's website.

The Conditions of Contract that will apply are attached to this RFQ.

Should you wish to submit a quotation please complete the form on the next page and return with any supporting documentation via email to james.flockton@byron.nsw.gov.au by 2.00pm Monday 30th July 2018.

If you have any questions please don't hesitate to contact the person named above.

Thank you for your consideration.

QUOTATION RESPONSE FORM

Respondent Information	
Company Name	<i>[enter text]</i>
ABN	<i>[enter text]</i>
Postal Address	
Business Email Address	
Website	
Contact Name	
Contact Mobile Phone	
Contact Office Phone	
Contact Email Address	
Bid Statement	
<p><i>"I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a quotation for the same goods or services, and is in all respect fair and without collusion or fraud. I agree to abide by all conditions of this bid, and certify that I am authorised to sign this quotation on behalf of the company I represent."</i></p> <p>By lodging a Quotation, the Proponent confirms that:</p> <ul style="list-style-type: none"> (a) It does not gain any financial benefit from Australia's offshore detention centres; and (b) It does not have any involvement with the construction of the Carmichael mine or otherwise have any ties to the Adani Group. 	
Authorised Representative's Name	
Date	
Authorised Representative's Signature	
Quotation	
<p>1. Please submit a proposed program for carrying out the work, including the proposed hours of work and working days, and a Gantt chart or similar showing the major milestones and duration of the project.</p>	
<p><i>Provide answer here.</i></p>	

BYRON SHIRE COUNCIL

STAFF REPORTS - INFRASTRUCTURE SERVICES

4.1 - ATTACHMENT 1

2. Describe the proposed methodology and sequence of works to be performed under the contract.																																								
<i>Provide answer here</i>																																								
3. Provide details of all personnel who will be nominated to work on the project.																																								
<table border="1" style="width: 100%; border-collapse: collapse;"><thead><tr><th style="width: 20%;">Staff member name</th><th style="width: 20%;">Position held</th><th style="width: 20%;">Role on the project</th><th style="width: 30%;">Qualifications and experience</th><th style="width: 10%;">% of time on the project</th></tr></thead><tbody><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td><td> </td></tr></tbody></table>	Staff member name	Position held	Role on the project	Qualifications and experience	% of time on the project																																			
Staff member name	Position held	Role on the project	Qualifications and experience	% of time on the project																																				
4. Provide details of recent contracts (within the last two years) that demonstrate expertise application to the services required.																																								
<table border="1" style="width: 100%; border-collapse: collapse;"><tbody><tr><td style="width: 25%;">Company Name</td><td style="width: 25%;"> </td><td style="width: 25%;"> </td><td style="width: 25%;"> </td></tr><tr><td>Contact name, phone, email</td><td> </td><td> </td><td> </td></tr><tr><td>Description of services provided</td><td> </td><td> </td><td> </td></tr><tr><td>Contract value</td><td> </td><td> </td><td> </td></tr><tr><td>Date project completed</td><td> </td><td> </td><td> </td></tr></tbody></table>	Company Name				Contact name, phone, email				Description of services provided				Contract value				Date project completed																							
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5. Please attach the following documents to your quote: <ul style="list-style-type: none"><input type="checkbox"/> Certificate of Currency for Workers Compensation Insurance<input type="checkbox"/> Certificate of Currency for Public Liability Insurance - \$10,000,000<input type="checkbox"/> Professional Indemnity Insurance - \$5,000,000																																								
6. Please provide any further information that is applicable to the provision of the																																								

goods/services.

Provide answer here.

7. Please complete the pricing schedule below

Item Description	Hours Required	Hourly rate (\$/hr)	Amount (ex GST)	Amount (inc GST)
		Total of quotation:		

Note that prices must include all overheads, profit and other expenses that the successful proponent may incur in relation to the supply of the services.

Please describe any additional charges that apply:

Water Sensitive Urban Design Strategy



CONDITIONS OF CONTRACT

This **Contract** is made on [insert date]

Parties	
Between	Byron Shire Council ABN 14 472 131 473 of 70 – 90 Station Street MULLUMBIMBY NSW 2482 (Principal)
And	[insert Contractor's name] ABN [insert] of [insert address] (Contractor)

RECITALS

- A. The Principal issued a Request for Quotation in relation to the Requirements.
- B. The Contractor lodged the Quotation with the Principal.
- C. The Principal has accepted the Quotation.
- D. This document records the terms upon which the Requirements will be satisfied by the Contractor.

OPERATIVE PROVISIONS

1. DEFINITIONS AND INTERPRETATION

1.1. DEFINITIONS

In this Contract, unless contrary to or inconsistent with the context:

Background IP means in relation to a party all Intellectual Property rights owned by or licensed to that party at the Commencement Date of the Contract and which are necessary or desirable for the provision of the Services.

Business Day means a day which is not a Saturday, a Sunday, nor a public holiday in Sydney;

Commencement Date means the date specified in Item 2 of Schedule 1;

Communication Standard has the meaning given in clause 7.2(a);

Confidential Information means the terms of this Contract and all know-how, technical and financial information, Deliverables, and any other commercially valuable or sensitive information in whatever form, including customer lists, products or past, existing or future business operations, administration or strategic plans, trade secrets, technical knowledge, concepts, ideas, samples, devices, models and any

other materials or information of whatever description, which the Principal regards as confidential, proprietary or of a commercially sensitive nature that may be in the possession of the Principal's employees or management. The following are exceptions to such information:

- (a) Information which is lawfully in the public domain prior to disclosure by the Principal;
- (b) Information which enters the public domain otherwise than as a result of an unauthorised disclosure;
- (c) Information which is or becomes lawfully available to the Contractor from a third party who has the lawful power to disclose such information to the Contractor on a non-confidential basis; and
- (d) Information which is rightfully known by the Contractor (as shown by its written record) prior to the date of disclosure.

Contract means this agreement between the Principal and the Contractor, including Special Conditions (if any), annexures, exhibits, appendices, schedules and other documents incorporated by reference and forming part of this Contract;

Contractor's Representative means the person set out in Item 5 of Schedule 1 or any approved replacement notified to the Principal from time to time;

Deliverables means all deliverables which are to be provided to the Principal under the Contract, and are identified as "deliverables" in the Quotation Documents;

Early Settlement Discount means the early payment discount (if any) described in Item 9 of Schedule 1;

Financial Year means the period from 1 July to 30 June and, if the Commencement Date is later than 1 July, will include such lesser period from the Commencement Date to 30 June;

Goods and/or Services means the goods and/or services to be provided by the Contractor as described in the Quotation documents;

Initial Term has the meaning given in Item 3 of Schedule 1;

Intellectual Property means statutory and other proprietary rights in respect of copyright and neighbouring rights, all rights in relation to inventions, patents, know-how, plant varieties, registered and unregistered trademarks, registered and unregistered designs, circuit layouts, and rights to maintain the confidentiality of information, but does not include Moral Rights that are not transferable.

Moral Rights means any moral rights including the rights described in Article 6bis of the Berne Convention for Protection of Literary and Artistic Works 1886 (as amended and revised from time to time) being "droit moral" or other analogous rights arising under a statute (including the *Copyright Act 1968* (Cth) or any other law of the Commonwealth of Australia), that exist or that may come to exist, anywhere in the world.

Payment Claim has the meaning give in clause 5.4(a);

Personnel mean, in respect of a party, its officers, employees, agents and (in respect of the Contractor) approved subcontractors;

Principal's Representative means the person set out in item 5 of Schedule 1 (or such person's authorised delegate) or any other person so appointed by the Principal as notified to the Contractor from time to time;

Quotation has the meaning given in Item 1 of Schedule 1;

Quotation Documents mean the Request for Quotation, the Quotation and any other document incorporated by reference and forming part of those documents;

Quotation Price means the rate(s) or price(s) Quotationed by the Contractor in the Quotation to provide the Goods and/or Services; and

Renewal Term has the meaning given in Item 4 of Schedule 1;

Request for Quotation has the meaning give in Item 1 of Schedule 1;

Specifications mean the specifications in respect of the Goods and/or Services, as set out in the Quotation Documents;

Special Conditions mean those terms and conditions contained in Item 10 of Schedule 1 (if any) (which modify and take precedence over the terms in the body of this Contract);

Term means the Initial Term and any Renewal Term.

1.2. INTERPRETATION

Headings are for convenience only and do not affect interpretation. The following rules of interpretation apply unless the context requires otherwise:

- (a) The **singular** includes the plural and vice versa;
- (b) Where a **word** or **phrase** is defined, its other grammatical forms have a corresponding meaning;
- (c) A reference to a **party** includes the Principal and the Contractor and in each case includes the party's successors and permitted assigns;
- (d) A reference to a **person** includes a firm, a body corporate, an unincorporated association or an authority and vice versa;
- (e) A reference to this **Contract** includes any variation, novation, replacement, or supplement to any of them from time to time;
- (f) A reference to a **part, clause, exhibit, appendix** or **schedule** is a reference to a part of, clause of, exhibit, appendix or schedule to this Contract;
- (g) A reference to any **legislation** or to any provision of any legislation includes any modifications or re-enactment of it, any legislative provision substituted for it and any regulations and statutory instruments issued under it;
- (h) A reference to **conduct** includes any omissions, representation, statement or undertaking, whether or not in writing;
- (i) Specifying anything in this Contract with the words **including, includes** or **for example** or similar expressions does not limit what else might be included unless there is express wording to the contrary;
- (j) No **rule of construction** applies to the disadvantage of a party because that party was responsible for the preparation of a document; and
- (k) A reference to **any thing** (including any amount) is a reference to the whole or each part of it and a reference to a group of persons is a reference to any one or more of them.

2. TERM AND RENEWAL

- (a) This Contract commences on the Commencement Date and, subject to earlier termination by either Party under this Contract or at law, will remain in force for the Term.
- (b) The Principal may at its sole discretion renew this Contract for a Renewal Term by giving the Contractor written notice one month prior to the expiry of the then current term.

3. SPECIAL CONDITIONS

- (a) If this Contract contains any Special Conditions, the terms in the body of this Contract are modified by those Special Conditions.
- (b) In the event of any inconsistency between the Special Conditions and the terms in the body of this Contract, the provisions in the Special Conditions will prevail to the extent of any inconsistency.

4. GOODS AND/OR SERVICES

4.1. PROVISION OF GOODS AND/OR SERVICES

The Contractor must provide the Goods and/or Services to the Principal in accordance with this Contract.

4.2. DELIVERY

- (a) The Contractor must deliver the Goods and/or Services to the Principal at the place(s) specified in the Quotation Documents or as subsequently advised to the Contractor by the Principal in writing.
- (b) Risk in any Goods passes to the Principal upon physical delivery to the Principal (or its nominee). Property to the Goods passes to the Principal upon the earlier of physical delivery to the Principal (or its nominee) or payment for those Goods, unless payment is bona fide in dispute in which case property passes upon physical delivery to the Principal (or its nominee).

4.3. PERSONNEL AND RESOURCES

- (a) The Contractor will:
 - i. ensure its Personnel are suitably qualified to provide the Goods and/or Services;
 - ii. allocate sufficient Personnel and resources to the Goods and/or Services; and
 - iii. ensure its Personnel are aware of and comply with the Contractor's obligations under this Contract.
- (b) The Contractor will, at all times, be liable and responsible for the behaviour and actions of its Personnel.
- (c) If directed by the Principal, the Contractor will immediately remove from involvement in delivering the Goods and/or Services, any Personnel who, in the reasonable opinion of the Principal, should be removed by reason of his/her misconduct or inefficiency and replace such Personnel with a suitable replacement.

4.4. CO-OPERATION, INFORMATION AND ASSISTANCE

The Contractor will:

- (a) Cooperate with the Principal in all matters relating to the Goods and/or Services;
- (b) Not interfere with the Principal's activities or the activities of any other person at the place for delivery of the Goods and/or Services;
- (c) Provide all such reasonable information and assistance as the Principal requires in connection with any statutory, local Government, work, health and safety or any environment investigation or requirement in connection with the supply of the Goods and/or Services.

5. QUOTATION PRICE AND PAYMENT

5.1. QUOTATION PRICE

The Quotation Price must remain fixed for a minimum period of 12 months from the Commencement Date.

5.2. PAYMENT

The Principal will, subject to the terms and conditions of this Contract, pay to the Contractor the amounts due for payment from time to time in accordance with an accepted Payment Claim.

5.3. PAYMENT CLAIMS

- (a) The Contractor shall make a written claim for payment at the frequency specified in Item 10 of Schedule 1.

- (b) A Payment Claim must include details of the Goods and/or Services for which payment is claimed and any additional information the Principal may reasonably require from time to time for the purposes of assessing the Payment Claim.

5.4. ASSESSMENT OF PAYMENT CLAIMS

- (a) The Principal will assess a Payment Claim within 10 Business Days of receipt from the Contractor and notify the Contractor whether it accepts or rejects the Payment Claim.
- (b) The Principal may reject a Payment Claim which it reasonably considers is not in accordance with this Contract in which case it must notify the Contractor of any reasons for rejection of a Payment Claim and the action the Contractor must take to render the Payment Claim correctly.
- (c) If the Principal accepts a Payment Claim, it will pay in accordance with this Contract subject to the Early Settlement Discount (if applicable).

5.5. GOODS & SERVICES TAX

- (a) In this clause 5.6:
 - i. **GST** and **GST Act** have the meanings given in the *A New Tax System (Goods and Services) Act 1999 (Cth)* and
 - ii. the expressions **input tax credit**, **supply**, **tax invoice**, **recipient** and **taxable supply** have the meanings given to those expressions in the GST Act.
- (b) Unless otherwise expressly stated, all amounts stated to be payable in this Contract are exclusive of GST.
- (c) If GST is imposed on any supply made under or in accordance with this Contract, the recipient of the taxable supply must pay to the supplier an additional amount equal to the GST payable on or for the taxable supply. Payment of an additional amount will be made at the same time as payment for the taxable supply is required to be made in accordance with this Contract, subject to the provision of a tax invoice.
- (d) If this Contract requires a party to pay for, reimburse or contribute to any expense, loss, indemnity or outgoing (reimbursable expense) suffered or incurred by another party, the amount required to be paid, reimbursed or contributed by the first party will be the sum of:
 - i. The amount of the reimbursable expense less the input tax credits (if any) to which the other party is entitled in respect of the reimbursable expense; and
 - ii. If the other party's recovery from the first party is a taxable supply, any GST payable in respect of that supply.

6. REPORTING AND RECORDS

6.1. RECORDS

The Contractor will maintain complete and accurate records in relation to the Goods and/or Services provided to the Principal in accordance with good business practice and applicable laws and regulations.

6.2. REPORTS

- (a) The Contractor must submit reports at the frequency, and containing the information, as specified in Item 11 of Schedule 1.
- (b) Reports must be provided no later than the time specified in Item 11 of Schedule 1.

6.3. ADDITIONAL INFORMATION

Upon reasonable notice from time to time, the Principal may request that the Contractor supplement its reports by providing the Principal any other information relevant to the provision of the Goods and/or Services.

6.4. RIGHT OF INSPECTION

The Principal, or its duly authorised representatives, after giving reasonable notice, will have the right during business hours:

- (a) To inspect and take copies of the accounts and records of the Contractor relating to the Goods and/or Services; and
- (b) To enter upon the premises of the Contractor to inspect the circumstances of the supply of the Goods and/or Services.

6.5. GOVERNMENT INFORMATION (PUBLIC ACCESS) ACT 2009 (GIPA ACT)

- (a) In addition to the Contractor's reporting and record keeping obligations under this clause 6, the Contractor must, within 7 days of receiving a written request from the Principal, immediately provide from the records held or controlled by the Contractor:
 - i. Information that relates directly to the provision of the Goods and/or Services;
 - ii. Information collected by the Contractor from members of the public to whom it provides, or offers to provide, the Goods and/or Services; and
 - iii. Information received by the Contractor from the Principal to enable it to provide the Goods and/or Services.
- (b) For the purposes of sub-clause 6.5(a), the Contractor need not provide information:
 - i. That discloses or would tend to disclose the Contractor's financing arrangements, financial modelling, cost structure or profit margin;
 - ii. That the Contractor is prohibited from disclosing to the Principal by provision made by or under any Statute, whether of any State or Territory, or of the Commonwealth; or
 - iii. That, if disclosed to the Principal, could reasonably be expected to place the Contractor at a substantial commercial disadvantage in relation to the Principal whether at present or in the future.
- (c) Any failure by the Contractor to comply with any request by the Principal under this clause 6.5 will be considered a breach of an essential term of this Contract.
- (d) The Principal will take all reasonably practicable steps in accordance with section 54 of the GIPA Act to consult with the Contractor before providing any person with access to information relating to this Contract, in response to any access application under the GIPA Act, if it appears that:
 - i. The information:
 - a. Includes personal information about the Contractor or its employees; or
 - b. Concerns the Contractor's business, commercial, professional, or financial interests.
 - ii. The Contractor may reasonably be expected to have concerns about disclosure of the information; and
 - iii. Those concerns may reasonably be expected to be relevant to the question of whether there is a public interest consideration against disclosure of the information.
- (e) The Contractor will ensure that the Principal has access in accordance with this clause 6.5 to such information held or controlled by the Contractor's sub-contractors in respect of the Goods and/or Services.

7. COMMUNICATION STANDARD, REVIEW MEETINGS AND MONITORING AND EVALUATION

7.1. DESIGNATED REPRESENTATIVES

- (a) The Contractor and Principal must both nominate a person as their representative.
- (b) The Contractor must notify the Principal within 5 Business Days of any change to its representative. If the Principal, acting reasonably, objects to the Contractor's replacement representative, the Contractor must use its best endeavours to promptly find a replacement who is satisfactory to the Principal.

7.2. REVIEW MEETINGS

The Principal and the Contractor agree to meet at least at the frequency specified in Item 12 of Schedule 1 in order to discuss provision of the Goods and/or Services to the Principal and this Contract generally. The Principal's Representative and the Contractor's Representative must be present at all review meetings.

7.3. MONITORING AND EVALUATION

- (a) The Principal will monitor the Contractor's performance during the Term, considering:
 - i. Timeliness of provision of Goods and/or Services;
 - ii. Regular reporting;
 - iii. Compliance with any KPIs and Specifications;
 - iv. Inspections undertaken by the Principal; and
 - v. Communication protocols.
- (b) If the Contractor, in the Principal's reasonable opinion, is not performing in accordance with its obligations under this Contract, the Principal may notify the Contractor that it is unsatisfied with the Contractor's performance. Within 10 Business Days from the date of service of that notice, the Contractor's Representative and the Principal's Representative will meet and together:
 - i. Review the Contractor's performance against the requirements of this Contract; and
 - ii. Draft a plan of corrective action to enable the Contractor to rectify the areas of non-performance.
- (c) If:
 - i. The Contractor is unwilling or unable (without reasonable excuse) to meet with the Principal's Representative within 10 Business Days of the date of service of the notice referred to in subclause 7.3(b) above; or
 - ii. The Contractor's Representative and the Principal's Representative fail within 10 Business Days of the first date of meeting to agree upon a plan of corrective action to enable the Contractor to rectify the areas of non-performance; or
 - iii. The Contractor fails to undertake the agreed corrective action to the reasonable satisfaction of the Principal within 30 days of agreement on the plan or other such time as is specified in the plan;then the Principal may terminate the Contract with immediate effect by serving notice of termination on the Contractor.

8. CONFIDENTIALITY

8.1. PROTECTION OF CONFIDENTIAL INFORMATION

The Contractor must:

- (a) Take all reasonable steps to keep the Confidential Information confidential at all times;
- (b) Only use the Confidential Information to the extent necessary for compliance with this Contract; and
- (c) Only disclose the Confidential Information to those of its Personnel who need to know such information for the purposes of providing the Goods and/or Services. The Contractor must inform such Personnel of the confidential nature of the Confidential Information and ascertain that such Personnel agreed to strictly abide by the terms of this clause 8.1.

The Contractor acknowledges and agrees that it will be responsible for any breach of this clause 8.1 by any of its Personnel and any such breach shall be deemed to be a breach of this Contract by the Contractor.

8.2. DISCLOSURES REQUIRED BY LAW

The Contractor may disclose Confidential Information if legally compelled to do so by any judicial or administrative body having authority to compel such disclosure in connection with any action or investigation. The Contractor must take all reasonably available legal measures to avoid such disclosure

before doing so, and must notify the Principal as soon as practicable after such disclosure is sought or ordered, so that the Principal may seek an appropriate protective order or other remedy.

8.3. RETURN OF CONFIDENTIAL INFORMATION

The Contractor must deliver to the Principal or destroy, at the Principal's option, all documents and other materials in any medium in its possession or under its control which contain or refer to any Confidential Information on the earlier of demand by the Principal, expiry or termination of this Contract for any reason, or the time such documents and other materials are no longer required to provide the Goods and/or Services.

8.4. MEDIA RELEASES AND PUBLIC ANNOUNCEMENTS

The Contractor may not use the Principal's name in any press release, advertising or other promotional material without the prior written consent of the Principal.

9. PRIVACY

Each party will comply with the Australian Privacy Principles (APPs) under the *Privacy Act 1998* (Cth) and all applicable State legislation relating to the collection, holding, use and disclosure of personal information.

10. WARRANTIES

The Contractor warrants that:

- (a) It has the necessary skills, experience, qualifications, resources, capacity and know-how to provide the Goods and/or Services in accordance with this Contract;
- (b) Any Goods will be of acceptable quality and fit for any purpose specified in writing in the Quotation Documents; and
- (c) The Deliverables arise from the original work of the Contractor, and upon delivery or creation the Principal will obtain absolute and unencumbered legal and beneficial ownership of the Deliverables and all Intellectual Property rights in the Deliverables.

11. INDEMNITY

- (a) The Contractor releases and indemnifies the Principal, their employees, consultants and agents from and against all actions, claims, proceedings and demands (including those brought by third parties) which may be brought against it or them, whether on their own or jointly with the Contractor and whether at common law, under tort (including negligence), in equity, pursuant to statute or otherwise, in respect of any loss, death, injury, illness or damage (whether personal or property, and whether direct or consequential, including consequential loss) arising out of:
 - i. A breach of the Contractor's warranties or obligations contained in this Contract; or
 - ii. The death of or personal injury to persons or property damage arising out of or in connection with the Goods and/or Services; or
 - iii. The failure of any Personnel of the Contractor to use reasonable care in carrying out the Contractor's obligations under this Contract;
 - iv. The breach of Intellectual Property rights of any person arising out of or in connection with the Goods and/or Services.and from and against all damages, reasonable costs and expenses incurred in defending or settling any such claim, proceeding or demand.
- (b) The Contractor's liability under the indemnity in clause 11(a) will be reduced proportionately to the extent that any act or omission involving fault on the part of the Principal or its Personnel contributed to the relevant cost, liability, loss, damage or expense.

12. INSURANCE

12.1. EFFECT AND MAINTAIN INSURANCE

- (a) The Contractor must, at its cost, take out and maintain for the Term and, with respect to professional indemnity insurance, for 7 years thereafter, with an insurer authorised under the *Insurance Act 1973* (Cth) to carry on insurance business in Australia (**Authorised Insurer**) except for workers' compensation insurance where a license compliant with applicable law may apply, the following policies or insurance in relation to the Goods and/or Services provided:
- i. A comprehensive public and products liability policy to cover all sums which it may become legally liable to pay as compensation consequent upon:
 - a. Death or, or bodily injury (including disease or illness) to, any person; and
 - b. Loss of, or damage to, property; arising out of or in connection with the Goods and/or Services. The limit of liability provided by this policy for each and every event must be not less than the amount specified in Item 6 of Schedule 1;
 - ii. Workers compensation insurance for all employees, regardless of full, casual or part-time employment;
 - iii. Comprehensive or unlimited third party property insurance (as applicable) for registered vehicles, equipment and plant;
 - iv. Professional indemnity insurance; and
 - v. Other insurances on such terms as required by law or as reasonably required by the Principal;
- (b) The effecting of insurance does not limit the liabilities or obligations of the Contractor under this Contract.

12.2. GENERAL INSURANCE REQUIREMENTS

All insurances required under this clause 12:

- (a) (**exclusions**): must not contain any unusual condition, exclusion, endorsement or alteration not usually included in policies of the relevant class provided by Authorised Insurers to a reasonably and commercially prudent contractor in respect of goods and/or services the same as or similar to the Goods and/or Services, in light of all relevant circumstances, including the Contractor's obligations under this Contract, unless it is first approved in writing by the Principal;
- (b) (**named insured**): in the case of public liability insurance referred to in clause 12.1(a)i must name the Principal as named insured for its respective rights, interests and liabilities;
- (c) (**waiver and cross liability clause**): which name more than one insured must include a waiver and cross liability clause in which the insurer agrees:
 - i. To waive all rights of subrogation or action that it may have or acquire against all or any of the persons comprising the insured;
 - ii. That the term "insured" applies to each of the persons comprising the insured as if a separate policy of insurance had been issued to each of them (subject always to the overall sum insured not being increased as a result); and
 - iii. That any non-disclosure, breach of any duty or act or omission by one insured does not prejudice the right of any other insured to claim under any insurance;
- (d) (**prior notice**): in the case of public liability insurance referred to in clause 12.1(a)i must contain a term which requires the insurer to give the Principal 20 Business Days notice prior to:
 - i. The insurer giving the Contractor a notice of cancellation;
 - ii. The insurer cancelling the policy on the Contractor;
 - iii. The Contractor allowing the policy to expire; or
 - iv. The insurer giving either party any other notice in respect of the policy;

12.3. GENERAL INSURANCE OBLIGATIONS

The Contractor must

- (a) Not do or permit, or omit to do, anything which prejudices any insurance policy or recovery;
- (b) Rectify anything which might, if not rectified, prejudice any insurance policy or recovery;
- (c) Reinstate any insurance policy if it lapses
- (d) Not cancel, vary or allow any insurance to lapse without the prior written consent of the Principal;
- (e) Ensure that the insurance policy wordings are governed by and construed in accordance with the law in force in the relevant jurisdiction;
- (f) Immediately notify the Principal of any fact or circumstance or change in circumstances which may prejudice an insurance policy or recover;
- (g) Fully and promptly disclose every matter known to it, being a matter that:
 - i. It knows to be a matter relevant to the decision of the insurer whether to accept the risk and, if so, on what terms; or
 - ii. A reasonable person in the circumstances could be expected to know to be a matter so relevant,to too insurers (and any persons action on their behalf) relating to the insurance policies (whether held solely or jointly with others) in all respects, including where failure to do so would violate or invalidate the relevant policy;
- (h) Diligently pursue recovery of claims made under the insurance policies; and
- (i) Comply at all times with the terms of each insurance policy.

12.4. SUBCONTRACTORS TO EFFECT AND MAINTAIN INSURANCE

The Contractor must ensure that all subcontractors engaged in connection with this Contract, before commencing delivery under their respective, are either:

- (a) Covered by the insurances that the Contractor is required to maintain in accordance with this clause 12 or such other amounts and periods as the Principal may determine or which the Quotation Documents may require; or
- (b) Effect and maintain policies of insurance of the same types and for amounts and periods set out in this clause 12 or such other amounts and periods as the Principal (acting reasonably) may determine or which the Quotation Documents may require.

Nothing in this clause relieves the Contractor from its obligation to ensure that the Contractor's public liability and professional indemnity insurance indemnify the Contractor for liability arising from the conduct of its subcontractors.

12.5. EVIDENCE OF CURRENCY

Within 5 Business Days of a request from the Principal, the Contractor must provide written evidence satisfactory to the Principal that it is (or its subcontractors are) maintaining the insurances required by this clause 12.

12.6. POTENTIAL CLAIMS

If any event occurs which may give rise to a claim involving the Principal under any policy of insurance described in clause 12 then the Contractor must:

- (a) Notify the Principal as soon as is reasonably practicable but in any event within 5 Business Days of the occurrence of that event; and
- (b) Ensure that the Principal is kept fully informed of any subsequent actions and developments concerning the relevant claim.

12.7. FAILURE TO INSURE

Without limiting any other rights or entitlements the Principal may have, until such time as the Contractor complies with its obligations under this clause 12, the Principal may withhold any payment otherwise due to the Contractor under this Contract.

13. TERMINATION

13.1. TERMINATION BY PRINCIPAL

The Principal may terminate this Contract immediately by giving written notice to the Contractor if:

- (a) The Principal is entitled to terminate this Contract under clause 7.4(c) or clause 15(c); or
- (b) The Contractor is convicted of any offence which, in the opinion of the Principal, is relevant to the discharge of its obligations under this Contract.

13.2. TERMINATION FOR CAUSE

- (a) In addition to the Principal's rights under clause 13.1, the Principal may terminate this Contract immediately by giving written notice to the Contractor if the Contractor:
 - i. Fails to provide the services within the agreed timeframe and/or in accordance with the specifications;
 - ii. Fails to rectify any serious breaches within 30 days of receiving a notice in writing from Council's Representative which specifies the relevant breach;
 - iii. Assigns the rights under, or subcontracts the whole or part of the Contract without the written consent of Council;
 - iv. Becomes bankrupt, goes into liquidation, enters into an arrangement or composition with its creditors or if a receiver or manager is appointed in respect of the Contract.

13.3. EFFECT OF TERMINATION

- (a) Without limiting any other rights or entitlements the Principal may have, if the Principal terminates this Contract under clause 13.1 or clause 13.2:
 - i. Any losses that have been incurred by the Principal may be recoverable from the Contractor;
 - ii. The Principal may recover from the Contractor any sums paid for undelivered Goods and/or Services;
 - iii. The Principal may engage an alternative supplies to fulfil its immediate requirements; and
 - iv. The Principal will not be liable to pay compensation in any way for termination of this Contract.

13.4. SURVIVAL OF PROVISIONS

Expiry or termination of this Contract does not affect any right of a party that has accrued prior to the expiry or termination or the provisions of clauses 6.1 (Records), 6.4 (Right of Inspection), 6.5 (Government Information (Public Access) Act 2009 (GIPA Act), 8 (Confidentiality), 9 (Privacy), 10 (Warranties), 11 (Indemnity), 12 (Insurance), 16 (Dispute Resolution), and 17 (General).

14. WORK HEALTH & SAFETY AND ENVIRONMENT

- (a) The Contractor must comply with:
 - i. The *Work Health and Safety Act 2011* (NSW);
 - ii. The *Protection of the Environment Operations Act 1997* (NSW); and
 - iii. All other applicable Commonwealth, State or Territory statutory or regulatory requirements concerning the health and safety of its Personnel and the protection of the environment.
- (b) Without limiting any other provision of this Contract, the Contractor must:
 - i. Comply, and ensure that its Personnel comply, with all health and safety rules and regulations and environmental, security, quality and other directions or procedures applying at each

- location where the Goods and/or Services are provided. The Principal reserves the right to refuse or limit the Contractor's Personnel access to the Principal's premises;
- ii. Notify the Principal as soon as it becomes aware of any health and safety hazards or issues which arise in relation to the Goods and/or Services and provide related reports and statements as requested by the Principal; and
 - iii. Before the date on which the Goods and/or Services are to start, obtain and at all times maintain, all necessary licenses and consents.
- (c) The Principal is committed to the protection of the built and natural environment. The Contractor must effect adequate controls to ensure protection of the environment through the development of management plans, training of staff, and the provision of suitable emergency equipment and supplies. Information, such as contingency plans, relating to these controls need to be available for the Principal's review during the Term.

15. CONFLICT OF INTEREST

- (a) The Contractor warrants that, to the best of its knowledge, as at the Commencement Date, neither the Contractor nor any of its Personnel have, or are likely to have, a conflict of interest in the performance of the Contractor's obligations under this Contract.
- (b) The Contractor must during the Term:
 - i. Take all reasonable measures to ensure that it or its Personnel do not engage in any activity or obtain any interest which is in conflict with the Contractor's ability to provide the Goods and/or Services for the Principal in good faith and objectively; and
 - ii. Immediately give written notice to the Principal of any circumstances or relationships that will constitute a conflict or potential conflict of interest.
- (c) On receiving a notice from the Contractor under clause 16(b)ii or if it is shown that the Contractor failed to disclose as Part of its Quotation any conflict of interest or potential conflict of interest, the Principal may, at its absolute discretion, terminate this Contract immediately by giving written notice to the Contractor.

16. DISPUTE RESOLUTION**16.1. PARTIES TO USE ALTERNATIVE PROCESSES**

If a dispute arises out of or related to this Contract no party may commence court or arbitration proceedings (other than proceedings for urgent interlocutory relief) unless it has complied with this clause 16.

16.2. GOOD FAITH NEGOTIATION

A party claiming that a dispute has arisen under or in relation to this Contract, must give written notice to the other party specifying the nature of the dispute. On receipt of that notice by the other party the parties' representatives must endeavour in good faith to resolve the dispute expeditiously and failing agreement within 5 Business Days must use informal dispute resolution techniques such as mediation, expert evaluation or determination or similar techniques agreed to by them.

16.3. COMPULSORY PROCESSES

If the parties do not agree within 5 Business Days of receipt of the notice referred to in clause 16.2 as to the dispute resolution technique and procedures to be adopted, the timetable for all steps in those procedures, and the selection of compensation of the independent person required for such a technique, then the parties must mediate the dispute in accordance with the Mediation Rules of the Law Society of New South Wales and the President of the Law Society of New South Wales or the President's nominee will select the mediator and determine the mediator's remuneration.

17. GENERAL

17.1. ENTIRE AGREEMENT

This Contract contains the entire agreement between the relevant parties with respect to its subject matter. They set out the only conduct relied on by the relevant parties and supersede all earlier conduct by the relevant parties with respect to its subject matter. Any terms that may be subsequently presented by the Contractor to the Principal in respect of the supply of the Goods and/or Services (on an invoice or otherwise) do not form part of this Contract, unless specifically agreed by the parties in writing.

17.2. VARIATION

Any variation of this Contract must be in writing and signed by the parties thereto, unless this Contract expressly provides otherwise.

17.3. ASSIGNMENT

- (a) The Contractor's obligations under this Contract are personal and the Contractor must not assign any of its rights or obligations under this Contract without the Principal's prior written consent;
- (b) The Principal may assign its rights or obligations under this Contract provided it gives written notice to the Contractor as soon as practicable afterwards.

17.4. NO SUB-CONTRACTING

The Contractor must not sub-contract the performance of any of its obligations under this Contract unless permitted under Item 7 of Schedule 1 or the Principal has given its prior written consent.

17.5. NO PARTNERSHIP OR AGENCY

This Contract does not constitute any party the agent of the other or imply that the parties intend constituting a partnership, joint venture or other form of association in which any party may be liable for the acts or omissions of the other.

17.6. NOTICES

Any notice under this Contract may be served by hand delivery or by being forwarded by prepaid post to the attention of the representative of a party to the address set out in Item 5 of Schedule 1 of this Contract or to such other address as may be notified in writing by the party from time to time and in the case of service by post is deemed to have been received within four days after posting (7 days if sent to or from a place outside of Australia). Notices may be served by facsimile transmission or email and are valid if in fact received, as demonstrated by a valid transmission report or notification of delivery to the recipient's computer.

17.7. FURTHER ASSURANCES

Each party must take all steps, execute all documents and do everything reasonably required by the other party to give effect to the transactions contemplated by this Contract.

17.8. SEVERABILITY

If any provision of this Contract (or part of any provision) is found by a court or other authority of competent jurisdiction to be invalid, illegal or unenforceable, that provision of part-provision shall to the extent required, be deemed not to form part of this Contract, and the validity and enforceability of the other provisions of this Contract shall not be affected.

17.9. WAIVER

No delay or indulgence by a party in enforcing this Contract will prejudice or restrict the rights of that party, nor will a waiver of those rights operate as a waiver of a subsequent breach.

17.10. COSTS

Each party is to bear its own costs arising out of the negotiation, preparation, execution and (subject to other provisions of Contract) performance of this Contract.

17.11. COUNTERPARTS

This Contract may be executed in any number of counterparts. All counterparts taken together will be taken to constitute one agreement. An executed counterpart may be delivered by facsimile or other electronic means.

17.12. SIGNATORIES

The signatories to this Contract warrant that they have authority to enter into this Contract, respectively, on behalf of the party they are stated to represent.

17.13. GOVERNING LAW

This Contract is governed by the laws of New South Wales, and the parties submit to the non-exclusive jurisdiction of the courts of that State.

18. FORCE MAJEURE

18.1. For the purposes of the Contract, the term Force Majeure means:

- i. War and other hostilities (whether war be declared or not), invasion, terrorist activity, act of foreign enemies, mobilisation, requisition or embargo;
 - ii. Rebellion, revolution, insurrection, military or usurped power or civil war;
 - iii. Riot, commotion or disorder except where solely restricted to employees of the Contractor or its subcontractor;
 - iv. Earthquake, flood, fire or other natural physical disasters except to the extent that any such disaster is caused by, or its effects contributed to be, the party claiming the force majeure;
 - v. A general industrial dispute not limited to the employees of the Contractor or the employees of any of its subcontractors.
- If either party considers that any circumstances of Force Majeure has occurred which may substantially alter the performance of its obligation then he shall forthwith notify the other in writing to the effect giving full details of the circumstances giving rise to the Force Majeure event.
 - Neither party shall be considered to be in default of its obligations under the Contract to the extent that it can establish that the performance of such obligations is prevented by any circumstances of Force Majeure which arise after the Commencement Date of the Contract and which is not foreseeable at the Commencement Date of the Contract.
 - If the performance of the obligations of either Party under the Contract is so prevented by circumstances of Force Majeure and shall continue to be so prevented for a period of less than 30 days then during that period the contract shall be considered as suspended. Upon the ending of the Force Majeure event the contractual obligations of the Parties shall be reinstated with such reasonable modification to take account of the consequences of the Force Majeure event as agreed by the Parties. Notwithstanding such suspension, the Contractor shall use his best endeavours to assist Council in the performance of the Contract.
 - If the performance of such obligations of either Party under the Contract is so prevented by circumstances of Force Majeure and shall be so prevented for a period of 30 days or more then the

Contract may be terminated by mutual consent and, subject to clause 18(f) neither party shall be liable to the other as a result of such termination.

- If the Contract is so terminated then subject to the transfer to Council of the benefit referred to in 18(g), Council shall pay to the Contractor such reasonable sum as may be agreed between the Parties in respect of costs incurred and commitments already entered into by the Contractor at the date of the Force Majeure notice, less the amount of any payments already made to the Contractor at the date of the Force Majeure notice. If the amount of such advance payments made to the Contractor exceeds the sum due to the Contractor under this sub-clause then the Contractor shall repay the balance to Council.
- The Contractor shall transfer to Council the benefit of all work done by him or his subcontractors in the performance of the Contract up to the date of the Force Majeure notice.

19. INTELLECTUAL PROPERTY

19.1. BACKGROUND IP

- (a) Each party acknowledges that all Background IP remains the sole property of its owner and that it acquires no right, title, or interest in or to the Background IP of any other party by virtue of this Contract, other than as expressly set out in this Contract.
- (b) Each party grants to each other party (as required) a royalty-free, non-exclusive, non-transferable license during the term of this Contract to use the Background IP owned by it for the sole purpose of providing the Goods and/or Services.

19.2. DELIVERABLES

- (a) All Intellectual Property rights in the Deliverables vests in and is hereby assigned to the Principal upon its creation. Upon request, the Contractor must at its cost sign all documents (including assignment deeds) and do all things (including requiring its Personnel to sign documents) as may be necessary to vest, confirm, perfect and record ownership by the Principal in accordance with this clause 19.
- (b) The Contractor must promptly and fully disclose to the Principal all Intellectual Property rights in the Deliverables on completion of the Goods and/or Services or earlier termination of the Contract.
- (c) The Contractor grants to the Principal a royalty-free, non-exclusive, perpetual, irrevocable license to its Background IP to permit the Principal to use the Deliverables (including its right to sublicense) and to exercise the ownership rights conferred on the Principal by this clause 19.
- (d) The Contractor must not, whether directly or indirectly or through any third party, take any action or assist any other person to take any action which may challenge the validity or ownership of the Confidential Information or the Intellectual Property rights in the Deliverables.
- (e) The Contractor must on request by the Principal obtain from its relevant Personnel written, unconditional and irrevocable consents to any act or omission that would otherwise infringe any Moral Rights they may have in the Deliverables, other than the Moral Rights prohibiting false attribution of works. Copies of the consents must be provided to the Principal within 10 days of request.

BYRON SHIRE COUNCIL

STAFF REPORTS - INFRASTRUCTURE SERVICES

4.1 - ATTACHMENT 1

SCHEDULE 1 – CONTRACT DETAILS

Item 1	Quotation and Request for Quotation	Quotation dated [insert date] lodged by the Contractor in response to the [insert name of project] Request for Quotation, Quotation Number [insert].	
Item 2	Commencement Date	[The date on which this Contract is last signed] OR [insert specific date]	
Item 3	Initial Term	[insert]	
Item 4	Renewal Term	[insert details of any extension options]	
Item 5	Representatives	Contractor	Name: [insert] Position: [insert] Address: [insert] Email: [insert] Phone: [insert]
		Council	Name: [insert] Position: [insert] Address: 70 – 90 Station Street MULLUMBIMBY NSW 2482 Email: [insert] Phone: [insert]
Item 6	Insurance	Public liability insurance: \$20,000,000 Professional indemnity insurance: \$10,000,000	
Item 7	Sub-contracting	[insert details of any approved sub-contractors] OR [Not applicable]	
Item 8	Special Conditions	[insert details of any agreed special conditions <i>Note: include in separate schedule if not enough space</i>]	
Item 9	Early Settlement Discount	[insert details of any agreed early settlement discount here]	
Item 10	Frequency of Payment Claims	[insert details of agreed frequency of payment claims here]	
Item 11	Reports Required	Refer to Annexure A	
Item 12	Frequency of Review Meetings	[insert details of agreed frequency of review meetings here]	

BYRON SHIRE COUNCIL

STAFF REPORTS - INFRASTRUCTURE SERVICES

4.1 - ATTACHMENT 1

Executed as an Agreement

Signed for an on behalf of

Byron Shire Council

ABN 14 472 131 473

[insert Contractor's name]

ABN [insert]

Authorised Signatory

Name (printed)

Position

Date

Authorised Signatory

Name (printed)

Position

Date

ATTACHMENT 1 – THE BRIEF

[insert the brief here]

ATTACHMENT 2 – QUOTATION

[insert the Consultant's quotation here]

Report No. 4.2 **Telecommunications Installations on Reservoirs**
Directorate: Infrastructure Services
Report Author: Peter Rees, Manager Utilities
File No: I2018/1159
5 **Theme:** Infrastructure Services
 Water Supplies

Summary:

10 Following an annual review of Council's Drinking Water Management Plan with NSW Health, it was agreed NSW Health would fund a consultant to assist Council to develop project plans and negotiate with the Telecommunications companies to allow sufficient access to the water reservoirs to permit replacement of the roofs.

15 The colocation of telecommunication equipment on reservoirs is presenting problems for local Utilities across Australia to properly operate and maintain critical infrastructure associated with the supply of drinking water.

20 NSW Health has identified Byron Shire as a potential case study to develop solutions to this widespread issue.

RECOMMENDATION:

That the Committee note the report.

Report

Following an annual review of Council's Drinking Water Management Plan with NSW Health, it was agreed NSW Health would fund a consultant to assist Council to develop project plans and negotiate with the Telecommunications companies to allow sufficient access to the water reservoirs to permit replacement of the roofs.

The colocation of telecommunication equipment on reservoirs is presenting problems for local Utilities across Australia to properly operate and maintain critical infrastructure associated with the supply of drinking water.

NSW Health has identified Byron Shire as a potential case study to develop solutions to this widespread issue.

Accordingly, Aqualift Project Delivery Pty Ltd (Aqualift) has been engaged by NSW Health to assist Byron Shire Council to facilitate and advance the project for the temporary removal; power down or permanent relocation of telecommunications equipment from the Paterson and Wategos Water Supply Reservoirs in Byron Bay to enable the replacement of the existing roof structures.

The structural integrity of the supporting roof frames and roof drainage systems have become compromised partially due to the presence of a large amount of ancillary telecommunications equipment which has been installed at both reservoir sites including walkways, cable trays, coaxial cables, etc.

The current situation is making it extremely difficult for Council to adequately undertake normal operational and maintenance activities at these water supply reservoir sites including roof inspections required to monitor and verify the integrity of the roof to prevent any contamination of the water supply and to also undertake repairs to the roof drainage systems to prevent contaminated water ingress to the reservoirs.

Following discussions with reservoir roof contractors, the only practical way to replace the current roofing structures and drainage systems will require all the existing telecommunications equipment to be either relocated or powered down while the existing roofs are removed and the new roofs together with supporting frames are installed. This is due to both physical constraints imposed by the location of the existing equipment and danger of radiation exposure to workers while undertaking these roofing works.

It is necessary to negotiate with the various telecommunication service providers as a group to allow them to undertake concurrent work to their existing installations at each reservoir site to allow this critical project to proceed.

Before commencing negotiations with the telcos, Council needs to have a preferred option for the existing structures. These are:

Option 1

Construction of a permanent tower separate to the reservoirs to which the existing equipment could be relocated. This is the preferred option of NSW Health and the Water Directorate and is certainly Council's preferred option for all new reservoirs without existing installations. The Paterson Street and Wategos reservoir sites are very constrained and previous discussions with a telco indicated they would require a tower approximately 6 metres higher than the existing reservoir heights.

Option 2

Construction of an ancillary self supporting structure/walkway located around the outside of the roof top perimeter of the existing reservoirs to accommodate the relocation of the existing telecommunications equipment and with no telecommunications equipment then being permitted to be installed upon the existing reservoir walls and/or roofs.

Option 3

Leave the telecommunication equipment located on the reservoir walls but relocate all cable trays and existing telco equipment off the roof. This would require telco agreement to power down their facilities concurrently to allow the roof replacement work to proceed. It is most likely the quickest option to implement both from a telecommunications and planning perspective.

Option 4

Construction of a temporary tower separate to the reservoirs to which the existing equipment could be relocated. This option has similar issues to Option 1.

For all options, to facilitate the project a suitably qualified consultant will need to be engaged to undertake and complete all activities related to the replacement of the existing roofs and drainage systems at these reservoir sites.

This consultancy engagement would include negotiations with the various telecommunication service providers to facilitate the design and replacement of the roofs and drainage systems; design of replacement roof structures incorporating alternative arrangements for all telecommunications equipment as required; contract documentation for roof replacement works, contract management of these works and re-negotiation of lease agreements with the telecommunication service providers.

At a meeting between NSW Health and Council's Executive Team a plan was developed where NSW Health and Council would jointly work on the project.

Financial Implications

Project budgets for the roof replacement of both the Wategos and Paterson St reservoirs have been included in the 2018-19 water capital programme.

Statutory and Policy Compliance Implications

Provision of safe drinking water for the public.

**Report No. 4.3 Rous Regional Water Supply Agreement Liaison Committee Meeting
28 August 2018 Agenda and Business papers**

Directorate: Infrastructure Services
Report Author: Peter Rees, Manager Utilities
File No: I2018/1298
Theme: Infrastructure Services
Water Supplies

Summary:

Rous County Council holds quarterly Water Supply Agreement Liaison Committee meetings at which technical representatives from each constituent Council attend to discuss various water issues. The business papers are presented to the WWSAC for information and to inform them of various critical issues being assessed by Rous and the constituent Councils.





In particular at this meeting, the status of the future water strategy groundwater investigations was presented by Rous.

It is intended the business papers for these meetings will be presented to the WWSAC for information each quarter.

RECOMMENDATION:

That Council note the report.

Attachments:

- 1 RRWSALC 28.08.2018 - Agenda and Business Papers, E2018/72813 , page 37  
- 2 RWSALC Mtg 28 August 2018 - Groundwater PPP.pdf, E2018/72812 , page 99  

Report

Rous Water and its Constituent Councils hold quarterly meetings where various issues are presented as business papers for discussion. The following papers were on the agenda last week with comments from Council staff.

Groundwater Investigation – refer attached powerpoint presentation E2018/72812. This has been provided for information only. The proving of bore water suitability is currently behind schedule and over budget. Current prices for drilling are inflated most likely due to the drought.

To date there have been some promising results particularly at Woodburn. Current programme is that if bores feasibility proves to be unacceptable for the long term water strategy, then in 2022 indirect potable reuse will be investigated. The Dunoon Dam option has not yet been closed off.

Water Loss Summary – Rous Water will partner each constituent Council (50/50) to prepare a Water Loss Management Plan (except Lismore who already has a WLMP in place).

Drinking Water Stations – Rous Water have identified portable drinking water stations as part of a demand management / plastic reduction education programme. Choose Tap is a broad, community-based initiative promoting tap water as the best hydration choice for the environment, people's health and their pocket.

The hydration stations and portable refill stations provide free drinking water to local community festivals, concerts and sporting events. They are provided free of charge and keep attendees healthy and hydrated. Refer link below for more information.

<https://www.yvw.com.au/help-advice/community-programs/sponsorships-and-partnerships/book-hydration-station>



They can ideally be used at festivals and events around the Shire. The cost is approximately \$3,500 each. It would be staff's recommendation that Council purchase 6 units.

Review of Developer Servicing Charges for Secondary Dwellings – No decision by RCC has been made. It will report to its Council the impact of this waiver policy.

5 Essentially the impacts are increased water demand on the system and a loss of revenue for development of future infrastructure.

It is noted Byron Shire Council has already considered this issue and resolved to:-

10 *“notify the public and seek submissions on the proposal to terminate the waiver of section 94 and section 64 contributions for secondary dwellings”.*

15 **Review of Possible Transfer of Rous County Council Water Assets and Retail Customers to the Constituent Council** – this was a project initiated by Byron Shire Council. There are significant areas in Byron Shire (Ewingsdale, Skinners Shoot and Bangalow in particular) where Rous Water supplies water to retail customers in competition with Byron Shire. It can be argued this is contrary to the original proclamation forming Rous as a bulk water supplier only.

20 Rous has indicated this is not a priority for their organisation or other constituent councils other than Byron Shire. Byron Shire Council staff considers the project should be progressed in a considered manner at least for Rous Water retail customers in Byron Shire.

Financial Implications

25 Nil













Statutory and Policy Compliance Implications

Provision of safe drinking water for the community.

Rous County Council Regional Water Supply Agreement Liaison Committee	
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DATE	Tuesday, 28 August 2018
VENUE	Training Room Rous County Council Depot Kyogle Street, South Lismore
LUNCH	12:00pm
MEETING	12:30pm – 3:30pm

AGENDA

No.	Item	
1.	a) Attendance and apologies	
	 b) Minutes of previous meeting (27 February 2018).....	1-3
	 c) Action List – outstanding action items.....	4-6
2.	 Groundwater investigation (Presentation)	
3.	 Water loss summary.....	7-8
4.	 Drinking water stations	9-10
5.	 Review of developer servicing charges – secondary dwellings.....	11-17
6.	Sub Committee update:	
	 i). Review of possible transfer of Rous County Council water assets and retail customers to the constituent council	18-53
	 ii). Regional Demand Management status.....	54-59
	 iii). Regional Drought Management status	
7.	Risk mitigation update:	
	 i). Rocky Creek Dam – New bulkhead construction	
	 ii). Emigrant Creek Dam Anchor Project	
8.	 Emergency communication protocol (standing item)	60-61
9.	Meeting close Call for next meeting agenda items	

**DRAFT Minutes of the Rous Regional Water Supply Agreement
Liaison Committee**

Rous County Council Depot

27 February 2018

Primary invitees

<input checked="" type="checkbox"/>	Bridget	Walker	BSC
<input type="checkbox"/>	Peter	Rees	BySC
<input type="checkbox"/>	Garon	Clough	LCC
<input checked="" type="checkbox"/>	Rod	Haig	LCC
<input checked="" type="checkbox"/>	Johan	Schoonwinkel	RVC
<input checked="" type="checkbox"/>	Samuel	Curran	RCC
<input type="checkbox"/>	Belinda	Fayle	RCC
<input checked="" type="checkbox"/>	Michael	McKenzie	RCC
<input type="checkbox"/>	Brenda	Ford	RCC
<input checked="" type="checkbox"/>	Kylie	Bott	RCC
<input checked="" type="checkbox"/>	Anthony	Acret	RCC
<input checked="" type="checkbox"/>	Andrew	Logan	RCC

Secondary invitees

<input type="checkbox"/>	John	Truman	BSC
<input checked="" type="checkbox"/>	Dean	Baulch	BySC
<input type="checkbox"/>	Andrew	Swan	BSC
<input type="checkbox"/>	Phil	Holloway	BySC
<input type="checkbox"/>	Angela	Jones	RVC
<input type="checkbox"/>	Aidan	Macqueen	RVC
<input type="checkbox"/>	Andrew	Leach	RVC
<input type="checkbox"/>	David	Timms	RVC

1. Meeting Commencement

a) Attendance and apologies

- Attendance as listed above.

b) Minutes of previous meeting

- Minutes of previous meeting were accepted.

c) Action list – outstanding action items

- The action list was received and noted.
- Action updates were spoken to.
- Water loss reporting - water loss reports that remain outstanding were requested.

2. Meeting dates

RESOLVED that the proposed meetings dates for 2018 be 27 February, 22 May, 28 August and 27 November.

3. Groundwater investigation (verbal)

- A general update on the progress of this project has been provided. Circulation of the Woodburn concept WTP report and groundwater testing will be circulated once completed.

2

4. Water loss summary

RESOLVED that the Committee receive and note the report.

5. Sub Committee update**i). Review of possible transfer of Rous County Council water assets and retail customers to the constituent council**

RESOLVED that:

- 1). The Committee receive and note the report.
- 2). Feedback is requested to be received no later than 20 March 2018.
- 3). Consider the process for adoption of the plan with your councils.

ii). Regional Demand Management Working Group

RESOLVED to progress the new draft Regional Demand Management Plan for implementation at the beginning of the 2018/19 financial year, it is recommended that the following actions be undertaken:

- 1). Commit to the schedule of important dates and timeframes.
- 2). Consider the process for adoption of the plan with your councils.

iii). Regional Drought Management Working Group

RESOLVED that:

- 1). Constituent Councils to follow up letter issued to its General Manager by Rous County Council (RCC) on 12 December 2017 to enable RCC to proceed with production of signs.
- 2). Constituent councils to individually discuss with compliance team about which water restriction measures are enforceable and provide feedback to RCC by 27 March 2018.
- 3). RCC to contact other councils and determine what they have done in terms of enforcement and provide feedback to the working group by 27 March 2018.

6. Risk mitigation update (verbal)**i). Rocky Creek Dam – New bulkhead construction**

- A general update on the progress of this project has been provided.

ii). Emigrant Creek Dam Anchor Project

- A general update on the progress of this project has been provided.

7. Rous recruitment update (verbal)

An announcement concerning the General Manager for Rous County Council was made.

8. Emergency communication protocol

No changes.

9. Meeting Closed

- 14:25pm.
- Agenda items were called for and are due two weeks prior to next meeting.
- RCC advised that the format of the RWSAL Committee business papers has now changed to encompass reports on matters where the constituent council's formal input is required. Verbal reports and presentations will be included for matters for information.
- Matters requiring clarification, or further information requests, can be referred to Michael McKenzie via email.

4

Rous County Council Regional Water Supply Agreement Liaison Committee
Action List - updated 23 August 2018

Demand Management				
Action	Responsible Agency	Responsible Person	Due Date	Status
An update on the progression of the development of the new draft Regional Demand Management Plan was provided. In progressing the plan for implementation at the beginning of the 2018/19 financial year, it was recommended that the constituent councils commit to the schedule of important dates and timeframes and consider the process for adoption of the plan	RCC	A. Acret and K. Bott	27 June 2018.	The Regional Demand Management Plan was adopted by Rous County Council (RCC) in its June 2018 council meeting. A letter was sent out from RCC on 26 June 2018 to the General Manager of each of the constituent councils requesting adoption/endorsement.
Future Water Strategy – Groundwater Study				
Action	Responsible Agency	Responsible Person	Due Date	Status
Rous County Council to circulate working papers as they become available.	RCC	M. McKenzie	TBC.	Draft Woodburn working paper to be circulate at the December Meeting.
Catchment Management				
Action	Responsible Agency	Responsible Person	Due Date	Status
Rous County Council to consult with each council to develop 2018-19 action list.	RW	A. Acret	TBC.	
Water Loss Reporting				
Action	Responsible Agency	Responsible Person	Due Date	Status
Water Loss Reporting 1. Provide quarterly reports ASAP. 2. Rous County Council to provide summary report after all quarterly reports are received.	BaSC	A. Swan	4 weeks after quarter.	Report received
	BySC	P. Rees		Report received
	LCC	R. Haig		Report received
	RVC	A. Leach		Report received
	RCC	M. McKenzie		Report received

RCC Regional Water Supply Agreement Liaison Committee

Meeting 28 August 2018

5

Water Loss Reporting				
Action	Responsible Agency	Responsible Person	Due Date	Status
Rous County Council to provide summary report.	RCC	M. McKenzie	Each committee meeting.	Summary report was provided. Based on analysis from Hydrosphere Consulting in preparing the new draft Regional Demand Management Plan, the current level of non-revenue water in the region was 17% of total water supplied (2430ML/a).
Rocky Creek Dam Tunnel Upgrade				
Action	Responsible Agency	Responsible Person	Due Date	Status
Status report on the Rocky Creek Dam Tunnel Upgrade	RCC	M. McKenzie	Next meeting.	Verbal report at each meeting.
Drought Management Strategy				
Action	Responsible Agency	Responsible Person	Due Date	Status
Constituent Councils to follow up letter issued to its General Manager by Rous County Council (RCC) on 12 December 2017 to enable RCC to proceed with production of signs. Constituent councils to individually discuss with compliance team about which water restriction measures are enforceable and provide feedback to RCC by 27 March 2018. RCC to contact other councils and determine what they have done in terms of enforcement and provide feedback to the working group by 27 March 2018.	RCC	A. Acret and K. Bott	27 June 2018.	Several follow up emails have been sent by RCC to the constituent councils requesting a response to the letter issued on 12 December 2017 to enable RCC to proceed with production of signs. Information on which water restriction measures are enforceable have been received from the councils and collated by RCC. The collated information has been distributed amongst the Drought Management Working Group.
Developer servicing charges for granny flats				
Action	Responsible Agency	Responsible Person	Due Date	Status
Review of Developer servicing charges for granny flats	RCC	M. McKenzie	27 June 2018.	Overdue – request for data from the CC has been made with most data now received. Analysis has not yet commenced.

RCC Regional Water Supply Agreement Liaison Committee

Meeting 28 August 2018

6

Possible transfer	Action	Responsible Agency	Responsible Person	Due Date	Status
	Review of possible transfer of Rous County Council water assets and retail customers to the constituent Council	RCC	M. McKenzie	TBC.	Item for discussion on the agenda.

Meeting 28 August 2018

RCC Regional Water Supply Agreement Liaison Committee

Water loss summary

2311/16

Recommendation

That the Committee receive and note the report.

Purpose

This report is intended to provide the status of water loss actions identified in the Regional Demand Management Plan (RDMP) for the first quarter of July-September 2018.

Information

Water Balance Reporting

Based on analysis from Hydrosphere Consulting, the level of non-revenue water in the region at the time of preparing the new RDMP was 17% of total water supplied (2430ML/a).

Standardised reporting of water balance data will be developed (as per the methodology identified in the RDMP) by Rous County Council (RCC) in consultation with the constituent councils by 30 September 2018. When completed, RCC will request all councils to report on water balance data using the standardised reporting and procedure developed for all supply zones identified.

Water Loss Management Plans

In line with the new RDMP, the Water Loss Management Plans (WLMPs) for Ballina Shire Council, Byron Shire Council, Richmond Valley Council and RCC are included as an action to be prepared in this financial year. RCC has committed to co-fund 50% of each of the plans for Ballina Shire Council, Byron Shire Council and Richmond Valley Council up to a value of \$10,000 per plan.

RCC have also identified that a short summary document will be helpful in outlining the outcomes of the individual WLMPs. RCC will fully fund the preparation of this summary document which will include an overview of the Ballina Shire Council, Byron Shire Council, Richmond Valley Council, Lismore City Council and RCC WLMPs, current level of water losses, actions, targets (including individual contribution to the regional targets in the RDMP) and a summary of capital and operating budgets.

To receive value for money and consistency, a brief was written to engage a consultant to undertake the preparation of all WLMPs and the short summary document through a regional buy. After receiving feedback from the constituent councils on the draft brief, RCC is in the process of finalising. The following prospective consultants will be asked to quote on the briefs at the beginning of September 2018:

1. Detection Services, Stuart Stapley, www.detectionservices.com.au
2. Water Loss Management, Ian Maggs

The aim is for:

- Selection of a consultant by the end of September 2018.
- The preparation of WLMPs to commence from October 2018 (Quarter 2) as per the action in the RDMP.

8

Conclusion

The status of water loss actions identified in the RDMP for the first July-September 2018 quarter has been provided.

ACTIONS

Water Balance Reporting

RCC to develop standardised reporting of water balance data by 30 September 2018.

All councils to report to RCC on water balance data in October 2018 using standardised reporting and procedure developed for all supply zones identified. This may evolve over time in line with the WLMPs.

Water Loss Management Plans

Please advise RCC by the end of August 2018:

- if there are additional consultants you would like to quote on the WLMP brief.
- if you would like to be involved in the selection process of a consultant (during September 2018.)

Drinking water stations

2311/16

Recommendation

That the constituent councils provide an indication as to whether drinking water stations have been considered or may be considered in the future for events to promote tap water and/or waste minimisation.

Purpose

To gauge interest in whether the constituent councils would consider investing in drinking water stations to be utilised at events to promote tap water and/or waste minimisation. If there is interest, the potential for collaboration and regional investment of the drinking water stations could be further explored through shared resourcing.

Information

At the request of its General Manager, Rous County Council (RCC) have undertaken some preliminary research into drinking water stations offered by Choose Tap.

Choose Tap is a broad, community-based initiative promoting tap water as the best hydration choice for the environment, people's health and their pocket. The hydration stations and portable refill stations (images below) provide free drinking water to local community festivals, concerts and sporting events. They are provided free of charge and keep attendees healthy and hydrated: <https://www.yvw.com.au/help-advice/community-programs/sponsorships-and-partnerships/book-hydration-station>

Two options for drinking water stations are:

1. Hydration stations sit on a robust trailer and cost approx. \$60,000. They are suitable for large scale events (2000+) and there is on-going expertise required in relation to plumbing and water quality to make sure that public health standards are adequately maintained (i.e. sanitation).
2. Portable refill stations are suitable for events with 500+ attendees with an approx. cost of \$3,500 each including freight and GST.



Portable refill stations offer flexibility being smaller units which are easier to move around and set up than a hydration station on a trailer. Most events in this region are not large scale events. Portable refill stations require less ongoing maintenance and associated costs than the hydration stations. Choose Tap can recommend a supplier and there are also other suppliers on the market which could be investigated further to ensure the investment is competitive.

RCC understands that Lismore City Council (LCC) is currently investigating portable drinking water stations to be utilised at events. LCC advised that a resolution was passed on 17 July 2018 for LCC to continue its leadership in waste and recycling. As such, LCC have looked at 'Meet Pat' portable water stations, which require a nearby tap to operate (<https://www.meetpat.com.au/portable/>). The stations would be utilised for town events and have an approximate cost of \$4,000.

10

Conclusion

Drinking water stations provide free drinking water to local community festivals, concerts and sporting events. They can be utilised to promote tap water and/or waste minimisation. Portable refill stations offer flexibility being smaller units which are easy to move around and set up. They would be suitable for most events in this region.

ACTIONS

RCC would like an indication as to whether the constituent councils would consider investing in drinking water stations. If there is interest, the potential for collaboration and regional investment of the drinking water stations could be further explored through shared resourcing.

Review of developer servicing charges - secondary dwellings

2311/16

Recommendation

That the report be received by the Committee noting the following key points and findings:

1. The average daily water use for properties with approved secondary dwellings is below the Water Directorate Section 64 Determinations of Equivalent Tenement Guidelines (WDET) for 1 ET (630L/day).
2. The average increase in water consumption for these properties over the review period is between 100-250L/day.
3. Secondary dwellings will increase demand on water supply networks
4. Design of new infrastructure for developments where there is a high likelihood of secondary dwellings being constructed should consider the extra water demand created by these dwelling.

Further, it is **recommended** that a working group is formed with members from the Constituent Councils and Rous County Council to develop and adopt a common methodology for waiving developer charges for secondary dwellings.

Purpose

To inform the Committee on the review of the effect of secondary dwellings on the consumption of water.

Information

In 2014 and 2015, the constituent councils and Rous Water implemented policies to waive developer contributions for secondary dwellings with varying methodologies. Rous Water tabled a report to the June 2016 Regional Water Supply Agreement Liaison Committee meeting advising of its Council resolutions in relation to developer contributions for secondary dwellings and putting forward the following recommendations which were adopted at the meeting.

1. A review of the effect of secondary dwellings on the consumption of water be undertaken to determine if the exemption of Section 64 Charges is appropriate.
2. The Committee determine a methodology for undertaking the review.
3. The constituent Councils provide data for the review to be undertaken.
4. Rous Water undertake the review.

Review methodology

Rous County Council (RCC) have undertaken a review of the effect of secondary dwellings on the consumption of water to determine if the exemption of Section 64 Charges (S64) is appropriate.

The review involved analysis of water consumption data from properties with secondary dwellings to determine the additional demand created by a secondary dwelling and if the water demand of the combined primary and secondary dwelling is above one equivalent tenement, as defined by NSW Water Directorate Equivalent Tenement (WDET) Guidelines as 630L/day/ET.

The reasoning behind this is that a single dwelling development will typically pay S64 charges of 1 ET giving them a theoretical entitlement to 630L/day. If the combined water usage of the primary and secondary dwelling is below this figure there is strong evidence to suggest waiving of S64 developer contributions is appropriate. However, it should be noted that this approach does not examine the water consumption of the ultimate development (e.g. all bedrooms occupied) but rather the water consumption of the current occupants.

12

Review of water consumption

To undertake the review, RCC requested the following data from the constituent councils:

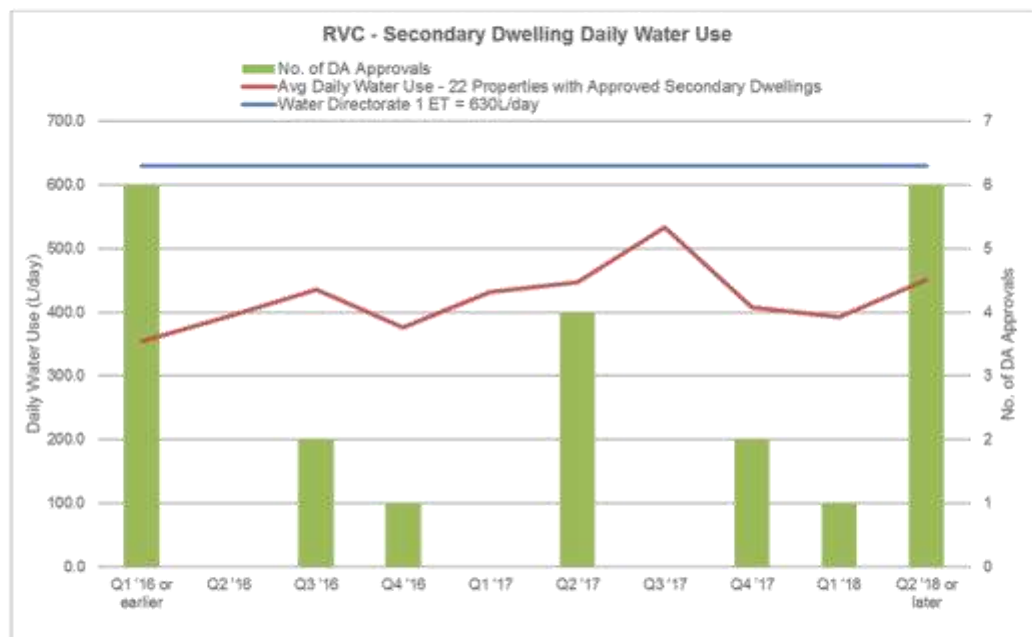
- Pre and post water consumption data for secondary dwelling developments that have been constructed in the last 2 or 3 years.
- Average daily water consumption for a random selection of properties **with** secondary dwellings and properties **without** secondary dwellings.

RCC had only received a small number of secondary dwelling developments and on review these were found to be the legalisation of existing secondary dwellings or formed part of a new development application inclusive of the primary dwelling. This data was not used in this review.

Richmond Valley Council (RVC) supplied data for 22 properties which had an approved secondary dwelling in the last few years. The chart below shows the average daily water use for the combined 22 properties over the period is below the WDET Guidelines for 1 ET of 630L/day. The chart also shows the number of secondary dwelling developments approved in each quarter. This may not necessarily reflect the number of secondary dwellings constructed.

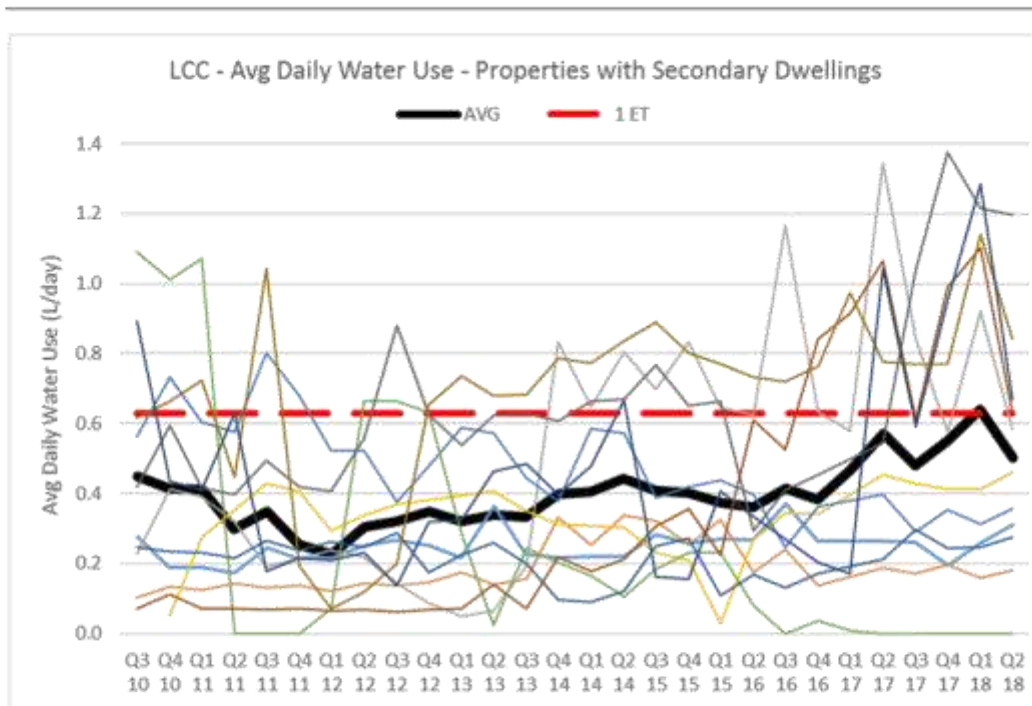
In general, most individual properties with a secondary dwelling did not have any noticeable change in water consumption excluding a very high water consumer whose water consumption increased from 1050L/day pre-development to 1300L/day post-development.

There is a very slight uptrend in average daily water consumption for the 22 properties over the period most likely attributed to the very high water consumer.



Lismore City Council (LCC) supplied data for 11 properties which had an approved secondary dwelling in the last few years. The chart below shows the average daily water use for the 11 properties over a period of seven years. The date of secondary dwelling DA approval or construction for each property is unknown. It is assumed that the secondary dwelling is constructed within the 7-year period shown. The chart also shows the average daily water use for the combined 11 properties over the period is below the WDET Guidelines for 1 ET of 630L/day.

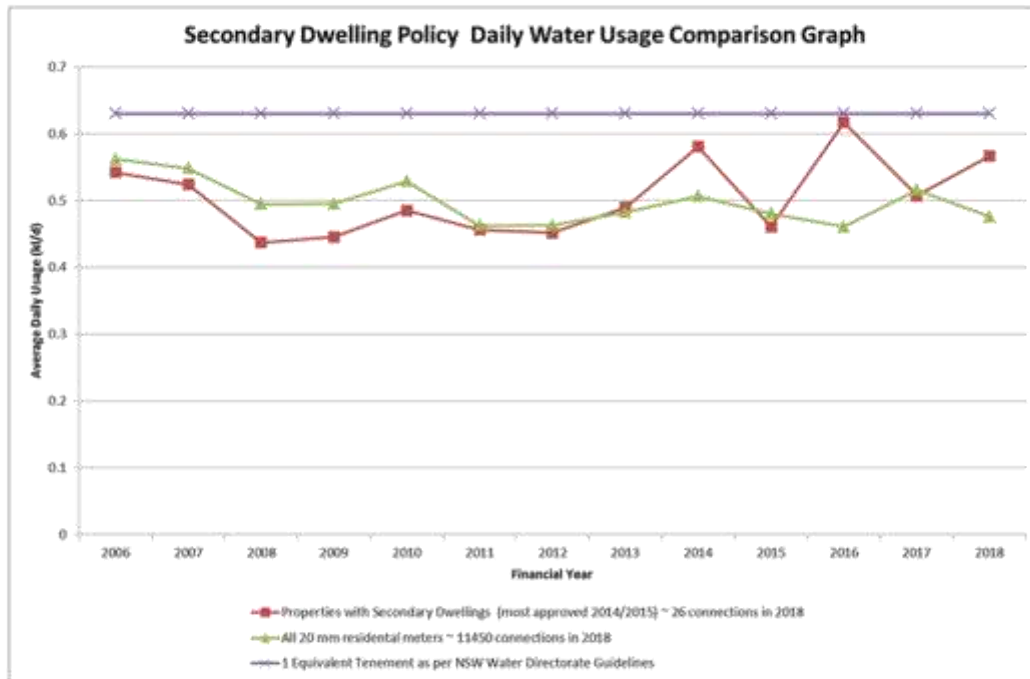
13



Approximately half of the properties showed a distinct increase in average daily water consumption over the period with a number now exceeding the WDET Guidelines for 1 ET of 630L/day.

There is a noticeable uptrend in average daily water consumption for the 11 properties over the period which exceeds the WDET Guidelines for 1 ET in Q1 2017/18.

Ballina Shire Council (BaSC) supplied a chart showing daily water consumption trends of 26 secondary dwellings approved in 2015/16 compared to all connections on the Ballina water reticulation.



No data was supplied from Byron Shire Council (BySC).

In summary, the average daily water consumption trends for 59 properties with approved secondary dwellings was reviewed with the following key findings:

- The average daily water use for these properties was below the WDET Guidelines for 1 ET which is 630L/day.
- The average increase in water consumption for these properties over the review period is between 100-250L/day. This is somewhat consistent with WDET Guidelines which suggest S64 charges of 0.4ET (252L/day) for a 1-bedroom secondary dwelling or 0.6ET (378L/day) for a 2-bedroom secondary dwelling.

It should be reiterated that analysing actual water consumption is not reflective of the water demand that would be derived from the ultimate development (i.e. all bedrooms at full occupancy).

It should also be noted that the data provided does not indicate the size of the secondary dwellings nor when the secondary dwelling was occupied.

Practical considerations

Different methodologies

The waiving of developer contributions for secondary dwellings was implemented by the constituent councils to support increasing the range and affordability of housing options, increasing the density of housing around established infrastructure, as well as providing opportunities for additional income, alternative retirement options and inter-generational care. RCC resolved to adopt the same methodology used by LCC and BaSC as detailed below.

15

All Secondary Dwellings as defined in the Lismore Local Environment Plan will be exempt from Section 64 and Section 94 charges where the secondary dwelling does not increase the number of overall bedrooms in the site to greater than five, the number of water closets to greater than three and the laundries to greater than two.

RCCs adoption of a policy for waiving developer charges for secondary dwellings was to support the constituent councils to achieve their objectives. This is consistent with previous practice in development assessment where RCC bulk water developer charges for properties supplied within a local council water reticulation area are determined by the local council and collected on our behalf.

It is understood that BySCs methodology for determining waiver of developer contributions for secondary dwellings is based only on bedrooms and a waiver is applied where the total number of bedrooms in the site is five or less. It is also noted in the BySC policy that any room that could be utilised as a bedroom is considered as a bedroom for the purposes of this assessment. RCC has also adopted this assessment methodology.

RVC sought to delete their developer charges for secondary dwellings.

There is inconsistency across the region in waiving developer charges for secondary dwellings. Due to the differences in methodologies across the region there is potential that some developments may receive a waiver for developer charges from their local Council but not from RCC.

Inclusion of toilets and laundries in assessment methodology

RCC staff have been referred developments for assessment of developer charges where the number of bedrooms is five or less however the number of toilets is greater than three due to the occupant of the house needing ready access to toilet facilities for medical reasons. Under RCC current policy, this development would not qualify for a waiver of developer contributions due to the number of toilets. There is potential here that this could give rise to a disability discrimination claim. RCCs governance team are currently reviewing.

Demand for water is driven by the occupants of the house and the maximum number of occupants in the house is limited by the number of bedrooms. The accepted practice is to consider the typical number of occupants in the house as the total number of bedrooms plus one. There is no real argument to suggest that increasing the number of toilets and laundries in the development will increase the water demand. Consideration should be given to removing the criteria regarding number of toilets and laundries.

With the removal of the toilet and laundry criteria from the waiver policy, there is a potential that a secondary dwelling development with multiple toilets and laundries (i.e. 5 beds, 5 toilets and 5 laundries) on the site could still qualify for a waiver of developer charges. A development of this nature given in the example is likely to generate more water demand as there is likely to be multiple separate occupants each doing their own cooking, laundry, etc. However, because this type of development is likely to be used as apartments or short-term accommodation it should be assessed as a multi-storey development, guest house or hostel and would not be assessed as a secondary dwelling.

Subsequent developments of the primary or secondary dwelling

The current methodologies used by the local councils for assessing developer charges for secondary dwellings would typically permit waiving of the charges where total bedrooms on the site is five or less (and in the case of RCC, Ballina and Lismore, also three or less toilets and two or less laundries).

16

Development applications for extensions including additional bedrooms, toilets or laundries to a primary dwelling would typically not generate any additional developer charges as the water and sewer demand is assumed to be covered by the one ET charge already levied on the development.

However, in the case of a development application for extension including additional bedrooms, toilets or laundries for a property with a primary and secondary dwelling, it is recommended the development is reassessed against the policy for waiving developer charges.

Water demand of secondary dwelling developments

Developer charges are levied on developers to recover part of the capital cost incurred in providing infrastructure to new development. The charges are based on an assessment of the water demand generated by the development and calculated per each council's developer servicing plan.

When considering water demand of a development, the ultimate demand should be considered. The ultimate demand should be considered as all available bedrooms occupied. For example, an eight-bedroom dwelling at full occupancy will house more occupants and generate more water demand than a two-bedroom dwelling, however, over a local government area the average dwelling size would be closer to three bedrooms and average water demand would be closer to that generated by a 3-bedroom dwelling. It is noted that one ET is typically applied to a single dwelling regardless of the number of bedrooms.

It is generally accepted that a freestanding single dwelling is one equivalent tenement as this will typically contain a family unit who would do combined cooking and laundry.

A secondary dwelling will typically accommodate a separate family unit who will do their own cooking and laundry placing additional demand on the water supply. It is noted that allowance for outdoor watering is included in the existing single residential lot which has already accounted for outdoor water usage in its developer charge of one ET.

Secondary dwellings will increase water demand on the network and should pay developer charges as applicable, albeit, an assessment of around 0.4 - 0.6ET is considered appropriate due to the development being on the same property as an existing dwelling.

Design of infrastructure for new development

This report has identified there is additional water demand generated by secondary dwellings potentially in the order of 100-250L/day.

It is noted that design of infrastructure to service new and future developments should meet peak hour demand or peak day demand. These peak demands are generally calculated on the number of metered connections in the area and using peak water demand and equivalent person/connection figures from the NR Development and Design Guidelines.

Secondary dwellings are constructed on the same parcel of land as the primary dwelling and are typically not separately metered so in effect they would not be captured in estimates of peak demand.

Not every existing parcel of land can accommodate a secondary dwelling due to parcel size and other restrictions so the impact of these developments not being captured in peak day estimates may be minor, however, if there is a significant amount of properties with secondary dwellings in a local area, the estimates of peak day demand may be underestimated.

Estimated financial impact

This report analysed data from 59 secondary dwellings. The BaSC February 2018 report identified 120 approved secondary dwellings in Ballina Shire (96 more than the 26 Ballina meters analysed in this report). Anecdotally, secondary dwellings approved in the BySC area is close to 500.

It is estimated there could be anywhere from 150 to 650 secondary dwellings approved in the combined LGAs of the Constituent Councils.

Assuming these secondary dwellings all received a waiver of developer charges, and assuming an average waiver for S64 and S96 charges is somewhere around \$20,000 per development (figure extrapolated from BaSC report), the financial impact could be anywhere from greater than \$10M.

It should be noted that any development that has its developer contributions waived reduces the available funds to provide infrastructure to new development. The shortfall in funds will need to be met by all other potable water users and future developers in the region.

Subsequent events

BySC considered a report at its February 2018 Ordinary Meeting. The report advised a review of the impact of the waiver on rents has found that the waiver has had no impact on the rate of increase of median rents for single bedroom dwellings. The report recommended to remove the waiver and charge contributions on secondary dwellings. BySC resolved to *"notify the public and seek submissions on the proposal to terminate the waiver of section 94 and section 64 contributions for secondary dwellings"*.

BaSC at its February 2018 Ordinary Meeting considered a report relating to the application of developer contributions for secondary dwellings following a four-year initial implementation. Council resolved to continue to waive developer contributions for secondary dwellings with no set expiry date.

BaSC also resolved that secondary dwellings that are attached to, or located within, the principal dwelling on the site and has been designed as a visually integrated addition (through use of a common wall and similar roof design) will continue to receive 100% waiver of developer contributions. Secondary dwellings that are detached from the principal dwelling on the site or is otherwise not visually integrated with the principal dwelling will now receive 50% waiver from 31 March 2018.

Conclusion

This report details the review of the effect of secondary dwellings on the consumption of water.

The water consumption of 59 properties with approved secondary dwellings from the LCC, BaSC and RVC areas were analysed in this review. It is concluded that a secondary dwelling will increase water demand by approximately 100-250L/day.

The average daily water use for the analysed properties with approved secondary dwellings was below the WDET Guidelines for 1 ET which is 630L/day however it is likely that not all approved secondary dwellings were constructed during the review period. Also, this analysis was performed on actual consumption and the developments may not be at full occupancy.

The development of a secondary dwelling on a property will increase the demand for water and developer charges are applicable. The decision to waive developer charges for this type of development should not be justified on the consumption of water but may be driven by other objectives including promotion of alternative and affordable housing options.

RCC is due to assess and report to its Council the impact of this waiver policy. RCC will be considering the removal of the toilet and laundry criteria.

Review of possible transfer of Rous County Council water assets and retail customers to the constituent council

2311/16

Recommendation

That the Committee receive and note the report.

Purpose

This report is intended to table the final report on review of the possible transfer of Rous County Council (RCC) water assets and retail customers to the constituent Councils. This report also provides an update on the next steps to be taken by RCC.

Information

The original scope of work identified key tasks for the study, which were:

1. Analysis of retail customer characteristics and supply points
2. Analysis of regulatory requirements and related obligations
3. Identification of project objectives and potential options
4. Confirmation of options for evaluation
5. Detailed options assessment and recommendations

At its November 2017 Council meeting, RCC senior staff held a workshop with councillors to discuss the progression of this project. Upon the conclusion of the workshop the following recommended processes had the consensus of the councillors' present:

- Detailed options assessment will include the recommended options as detailed in the report with a comparison against a base case being the status quo.
- Consultation with the delegates from the constituent councils to discuss options to be further investigated and determine the assessment methodology.
- Develop a preferred methodology for financial compensation for any transfer of assets/customers.
- Provide a report to Council to establish Council's position in relation to any possible transfer of RCC water assets and retail customers.
- Undertake RCC customer consultation.

RCC has sort feedback on the review the Investigation into Options for Transfer of Rous Retail Customers and Assets to Constituent Councils – Preliminary Information and Coarse Screening report. Those comments were incorporated into the preparation of the final stage of the brief.

The report provides a desktop investigation of the requirements for transfer of assets and customers from RCC to the relevant constituent council, including preliminary sizing and budget costing of major infrastructure. This report was not intended to detail all the required but have a starting point for further consultant with policy makers. Other considerations such as operational and customer management, staffing, funding, financial implications and customer involvement have not been investigated as part of this report.

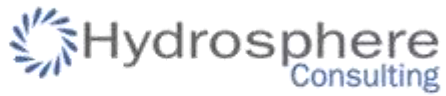
Conclusion

RCC has received the final report which contains preliminary assessment options and recommendations. The report now completes the original scope of works for this project.

ACTIONS

RCC senior staff will report the matter to Council to establish Rous' position. At this stage no timeframe has been set for this action.

Attachment: 'Final Investigation into Options for Transfer of Rous Retail Customers and Assets to Constituent Councils'.



Investigation into Options for Transfer of Rous Retail Customers and Assets to Constituent Councils

Preliminary Transfer Options for Shortlisted Areas

July 2018

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Suite 6, 26-54 River Street
PO Box 7059, BALLINA NSW 2478
www.hydrosphere.com.au

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PROJECT 17-027 – RCC RETAIL INFRASTRUCTURE/CUSTOMER TRANSFER

REV	DESCRIPTION	AUTHOR	REVIEW	APPROVAL	DATE
0	Draft for RCC review	R. Conroy	R. Campbell	M. Howland	21 June 2018
1	Updated with RCC comments	R. Campbell		R. Campbell	3 July 2018

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1. INTRODUCTION

Rous County Council (RCC) has engaged Hydrosphere Consulting to investigate potential options for transfer of RCC retail customers and assets to the respective council of each Local Government Area (LGA).

Currently the retail customers contained within the areas investigated as part of this study are supplied through connections to the RCC retail network. These retail connections allow people within these areas, both rural and residential, access to treated water rather than relying on tank water or local creeks. These existing RCC retail connections are directly linked to RCC trunk mains or via a reticulation main connected to the trunk system. A small number of connections would be categorised as a conventional reticulation system supplied from reticulation mains and reservoirs.

The first part of this investigation involved analysis of data on retail customers, consultation with RCC and the constituent councils (Ballina Shire Council – BaSC, Byron Shire Council – BySC, Lismore City Council – LCC and Richmond Valley Council – RVC) and identification and development of potential options for further investigation. The findings were presented in a report, *“Investigation into Options for Transfer of RCC Retail Customers and Assets to Constituent Councils”* (Hydrosphere Consulting, 2017).

This report provides a preliminary investigation of the requirements for transfer of assets and customers from RCC to the relevant constituent council, including preliminary sizing and budget costing of major infrastructure. Other considerations such as asset management, operational and customer management, staffing, funding, asset ownership, financial implications, compensation and customer involvement have not been investigated further as part of this report.

2. METHODOLOGY

The initial investigation (Hydrosphere Consulting, 2017) recommended further investigation of the following transfer options:

- Ewingsdale (BySC);
- Bangalow (including Binna Burra) (BySC);
- Eureka (BySC);
- Bexhill (LCC);
- Richmond Hill (LCC);
- Monaltrie (South Gundarimba) (LCC);
- Wyrallah (LCC);
- North Woodburn (LCC); and
- North Ballina (BaSC).

Due to engineering constraints (lack of suitable elevation for a supply reservoir), a conventional reticulation system is not considered feasible in Wyrallah. In addition there is no development/expansion planned for Wyrallah. Servicing Binna Burra from either LCC or BySC networks is not considered feasible due to the large lengths of main required and the dispersion of customers. Therefore these areas have not been considered further in this report. During the current investigation, an additional option, Skinners Shoot, was included due to the close proximity of this area to the current BySC reticulation network.

In some of the areas, two stages of infrastructure development have been recommended, as listed below:

1. Ewingsdale (BySC) - two stages;
2. Bangalow (BySC) - two stages;
3. Eureka (BySC);
4. Skinners Shoot (BySC);
5. Richmond Hill (LCC);
6. Monaltrie (LCC);

7. North Woodburn (LCC);
8. Bexhill (LCC) - two stages; and
9. North Ballina (BaSC) - two stages.

For each of these nine transfer options a review of the current supply configuration, peak demand requirements and infrastructure required to transfer these customers has been developed with input from RCC. The following information is provided in this report:

- The number of customers within each transfer option and associated stages;
- The peak demand requirements for each option;
- The assets and customers to be transferred;
- The infrastructure required to undertake the transfer option (preliminary concept only); and
- The costing of major infrastructure required (including trunk and reticulation mains, reservoirs, bulk meters and connections to mains or customer meters).

The transfer concepts presented in this report (refer Appendix A) are preliminary only. Detailed hydraulic analysis and asset design have not been undertaken and financial, geotechnical, environmental and social considerations have not been included in the analysis. In some cases, the transfer approach relies on adequate capacity within existing constituent council networks which has not been confirmed.

Estimated costs for the mains and reticulation were sourced from the NSW Office of Water *Reference Rates Manual* (NOW, 2014), indexed to current (2017/18) dollars and including survey, investigation, design and project management allowances and potential additional costs for rock excavation, construction difficulty and dewatering. Costs for other assets were based on current market estimates. A 20% contingency amount was also applied to all calculated costs for each transfer option to allow for uncertainty in the estimates (Appendix B).

3. CURRENT SUPPLY ARRANGEMENTS AND TRANSFER APPROACH

The following sections describe the current supply configuration, the proposed approach for the transfer of customers and assets as well as the budget cost for the works.

3.1 Ewingsdale

3.1.1 Current Configuration

The Ewingsdale urban residential area (Figure 1 - Area A) is a large group of customers with the potential for additional growth. Ewingsdale includes 229 RCC retail customers (Area A = 219 & Area B = 10). The customers within Area A are currently supplied by the RCC trunk main (Brunswick 300 mm) which is fed by the St Helena reservoir and a retail reticulation network. The customers within Area B are supplied via a direct connection to the RCC trunk main (Brunswick 300 mm).

3.1.2 Proposed Approach

The proposed transfer of Ewingsdale retail assets and customers involves two stages, connecting the customers and associated assets to a new reservoir supply from the south and connecting to the BySC network to provide additional capacity for future growth (Figure 1 and Appendix A).

Stage 1 – Supply from new reservoir

Stage 1 involves the construction of a new reservoir adjacent to St Helena reservoir to supply the Ewingsdale area. The new reservoir would be filled via the RCC trunk main (St Helena 525 mm) with a bulk meter installed at the intake. A new 200mm trunk main (adjacent to the existing RCC Brunswick 300 mm and 375 mm trunk mains) would supply the customers within Area A. There is an option of supplying additional outlying customers to the north (Area B) via the extension of the trunk main along Quarry Lane and the

connection of meters north of Ewingsdale. This is expected to be a significant cost per additional customer connected and has not been included in the cost estimates for this stage.

Stage 1 - Connection to existing BySC network

This stage involves the supply of customers in Area A from a new trunk main (150 mm) connected to the West Byron reticulation network which is supplied by the Coopers Shoot reservoirs. The new main would be connected to the BySC 150 mm main on Ewingsdale Road south of the Cavanbah Centre. The main would run east along Ewingsdale Road onto Mcgettigans Lane and connect to the two RCC reticulation networks located in Area A.

Table 1: Estimated cost - Ewingsdale

Stage	Cost (\$)
Stage 1	2,604,000
Stage 2	1,164,000
<i>Total</i>	<i>3,768,000</i>

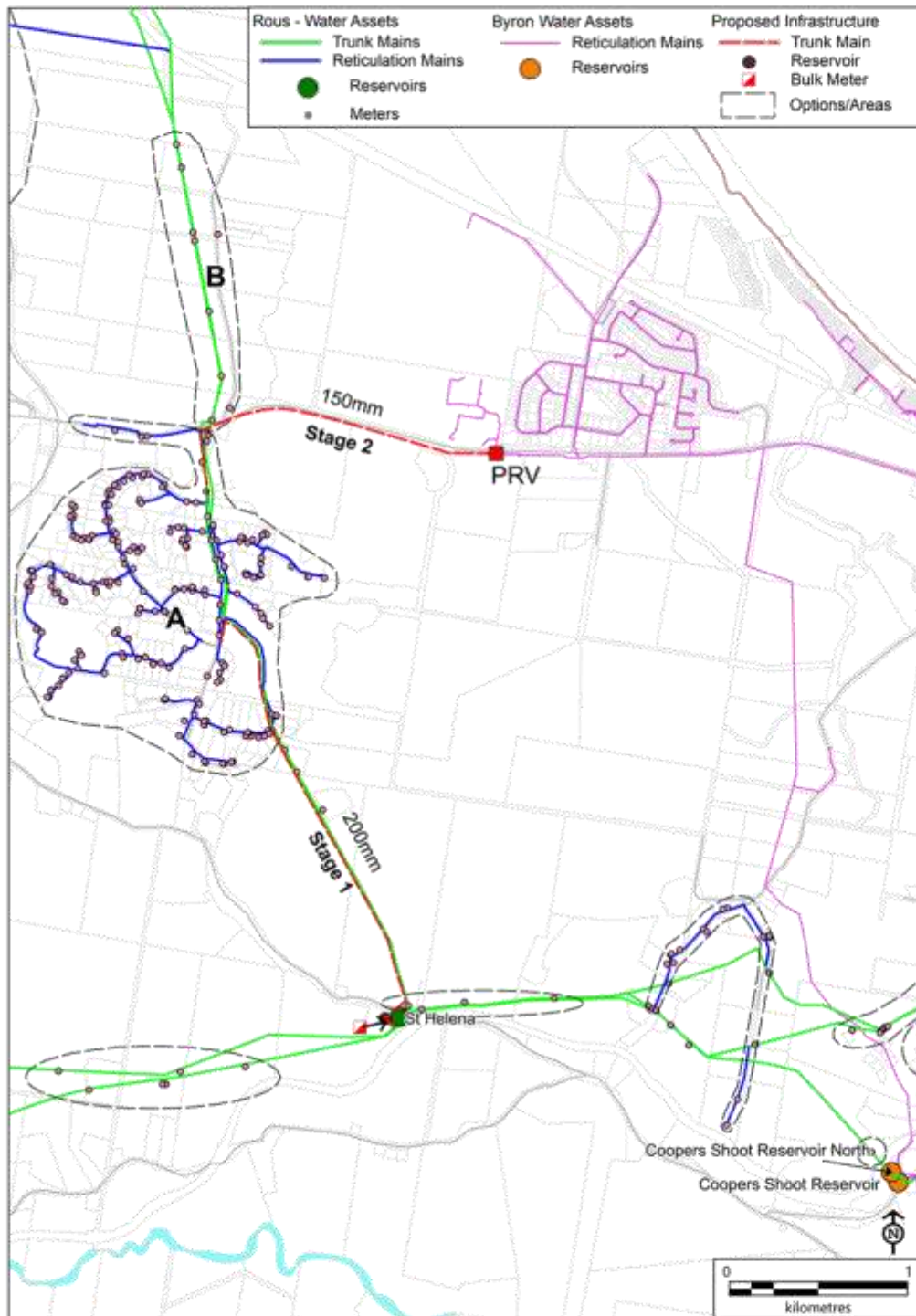


Figure 1: Current configuration and proposed transfer approach - Ewingsdale (Stages 1 and 2)

3.2 Bangalow

3.2.1 Current Configuration

The Bangalow village and industrial estate (Figure 2 - Areas A & B) contain retail customers in close proximity to an existing Byron Shire reservoir (Granuaille reservoir). These two areas contain 37 RCC retail customers (Area A = 5 & Area B = 32). The customers within Area A are currently supplied by the RCC Byron 300 mm trunk main and a retail reticulation network. The customers within Area B are supplied either via a direct connection to the RCC trunk main (Byron 300 mm) or via a RCC retail reticulation network (Dudgeons Lane, Bangalow industrial estate).

3.2.2 Proposed Approach

The proposed transfer of retail assets and customers from RCC to BySC for Bangalow area includes two stages (Figure 2 and Appendix A).

Stage 1 - Connection to existing BySC reservoir

Stage 1 involves the supply of the RCC retail customers in Area A from the BySC Granuaille reservoir (high pressure zone) involving a connection to the reservoir outlet.

Stage 2 – Industrial estate

RCC is planning a duplication of the Byron 300mm trunk main in 2025/26.

Stage 2 involves the transfer of the existing Byron 300mm trunk main, connected meters and industrial estate reticulation network (Area B) to supply from the Granuaille reservoir and disconnection from the RCC bulk supply network to the west. Stage 2 can be considered at the time of duplication of this main.

Table 2: Estimated cost - Bangalow

Stage	Cost (\$)
Stage 1	72,000
Stage 2	120,000
<i>Total</i>	<i>192,000</i>

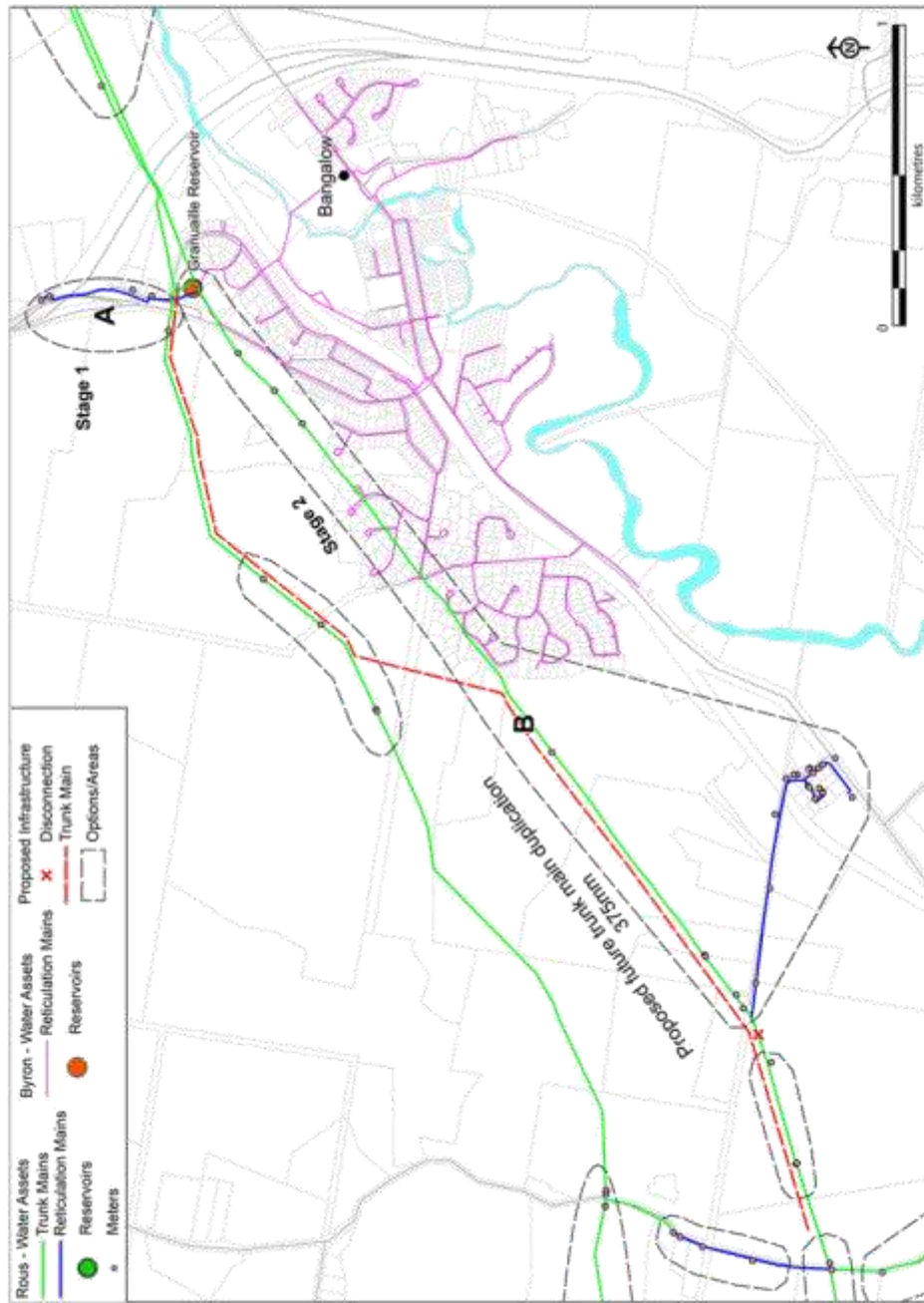


Figure 2: Current configuration and proposed transfer approach - Bangalow (Stages 1 and 2)

3.3 Eureka

3.3.1 Current Configuration

Eureka village is supplied by two retail reticulation networks (Figure 3 – Area A - Eureka Road & Area B - Bencluna Lane) and the Eureka reservoir which is filled by the RCC St Helena 300 mm trunk main. These two networks contain 26 customers (Area A = 19 & Area B = 7). For water quality reasons, the Eureka Reservoir has been isolated from the supply system however this can be reinstated.

The existing main supplying Area B will be replaced by a new 63 mm poly line in 2018/19.

3.3.2 Proposed Approach

The proposed transfer of retail assets and customers from RCC to BySC for Eureka (Figure 3 and Appendix A) involves the construction of a new 150mm supply main from the RCC St Helena 525 mm trunk main to the Eureka reservoir with the installation of a bulk meter at the inlet. The new main and Eureka reservoir will supply the Eureka Road (Area A) reticulation network which includes a high pressure zone to the north-east.

Bencluna Lane (Area B) reticulation network would be supplied from the Eureka reservoir and the new reticulation main.

Table 3: Estimated cost - Eureka

Stage	Cost (\$)
Total	644,000

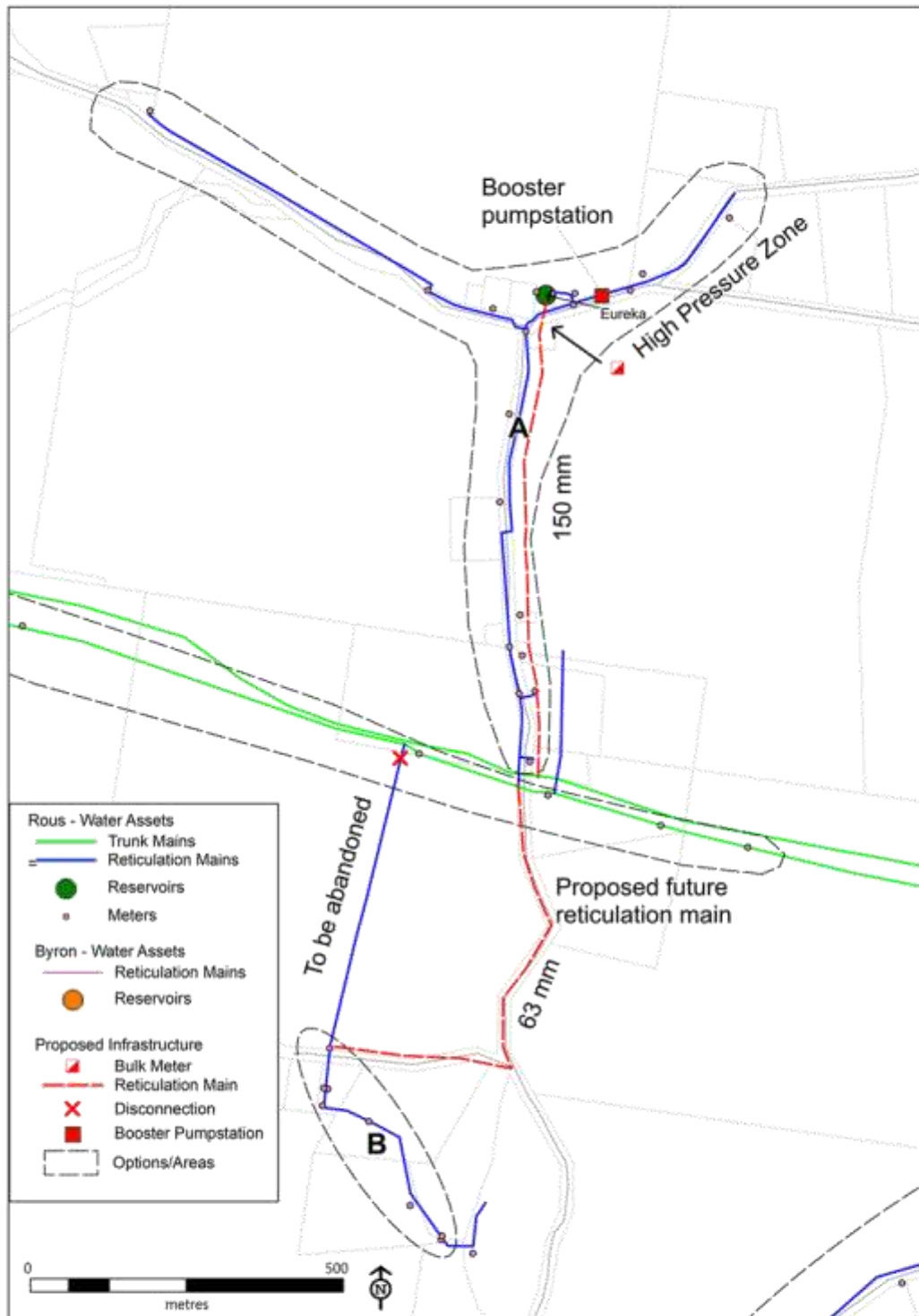


Figure 3: Current configuration and proposed transfer approach - Eureka (Stages 1 and 2)

3.4 Skinners Shoot

3.4.1 Current Configuration

Skinners Shoot (Figure 4 – Area A) includes a small group of RCC retail customers in close proximity to the BySC reticulation network. This area contains 24 customers currently supplied via two RCC reticulation networks fed by the RCC Byron 150 mm and Coopers Shoot 375 mm trunk mains or through direct connections to these trunk mains.

3.4.2 Proposed Approach

The proposed transfer of retail assets and customers from RCC to BySC for the Skinners Shoot area involves the supply of customers in Area A from the BySC 400 mm trunk main (Figure 4 and Appendix A) with extended reticulation mains along Skinners Shoot Road (150 mm) and along Yagers Lane (100 mm). Supply pressure and flow will need to be investigated further.

Table 4: Estimated cost - Skinners Shoot

Stage	Cost (\$)
Total	704,000

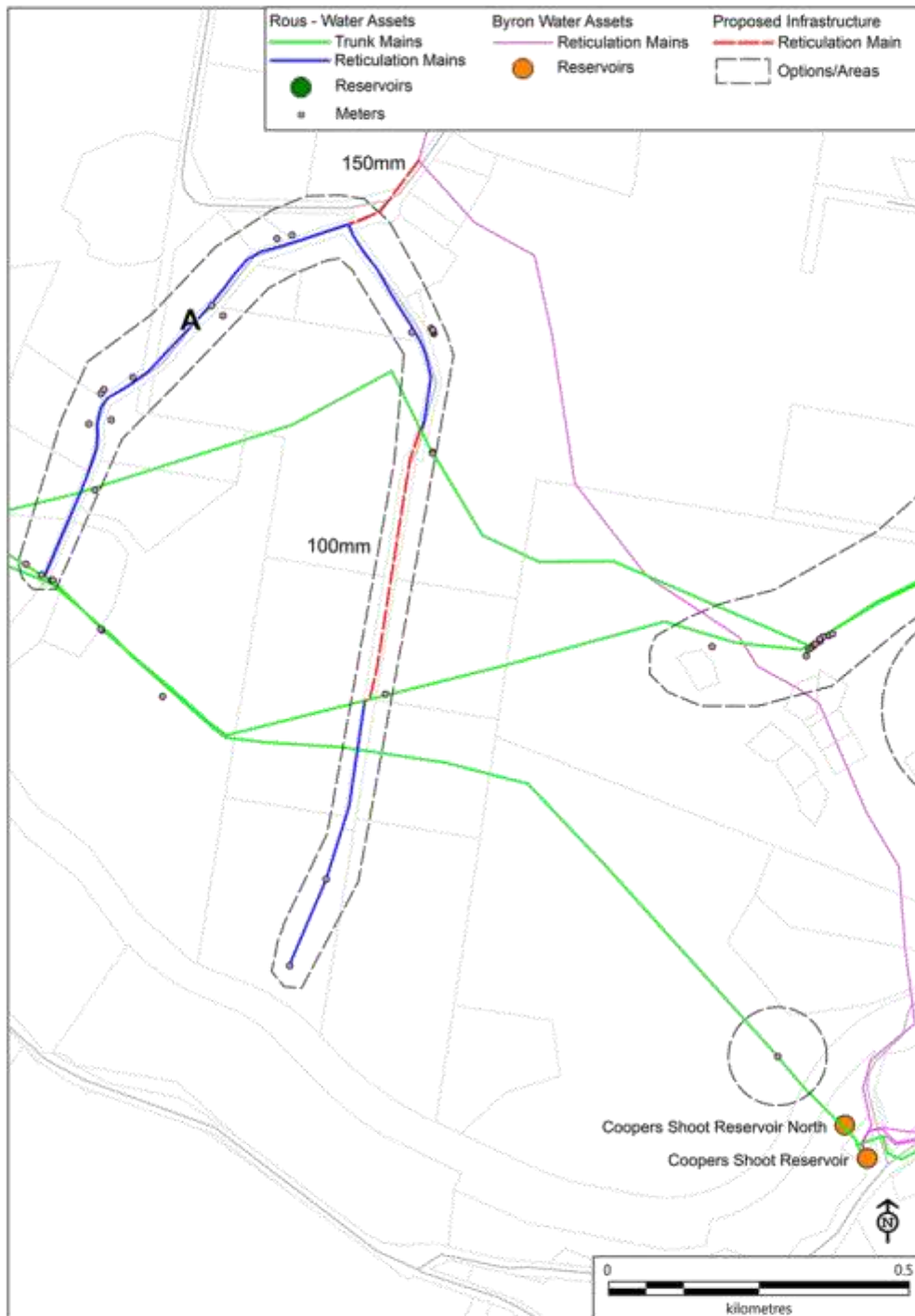


Figure 4: Current configuration and proposed transfer approach - Skidders Shoot

3.5 Richmond Hill

3.5.1 Current Configuration

Richmond Hill (Figure 5 – Area A) includes a large group of customers with potential for additional growth in the future. This area contains 319 customers currently supplied via the RCC retail mains supplied by the Pineapple Road reservoir.

3.5.2 Proposed Approach

The proposed transfer of retail assets and customers from RCC to LCC for the Richmond Hill area involves minimal additional infrastructure (Figure 5 and Appendix A). The village supply would be disconnected from the RCC bulk supply network at Boatharbour (Lismore 600 mm) with bulk supply from the Pineapple Road reservoir. A new bulk supply meter would be required at the inlet of the reservoir.

Table 5: Estimated cost – Richmond Hill

Stage	Cost (\$)
Total	144,000

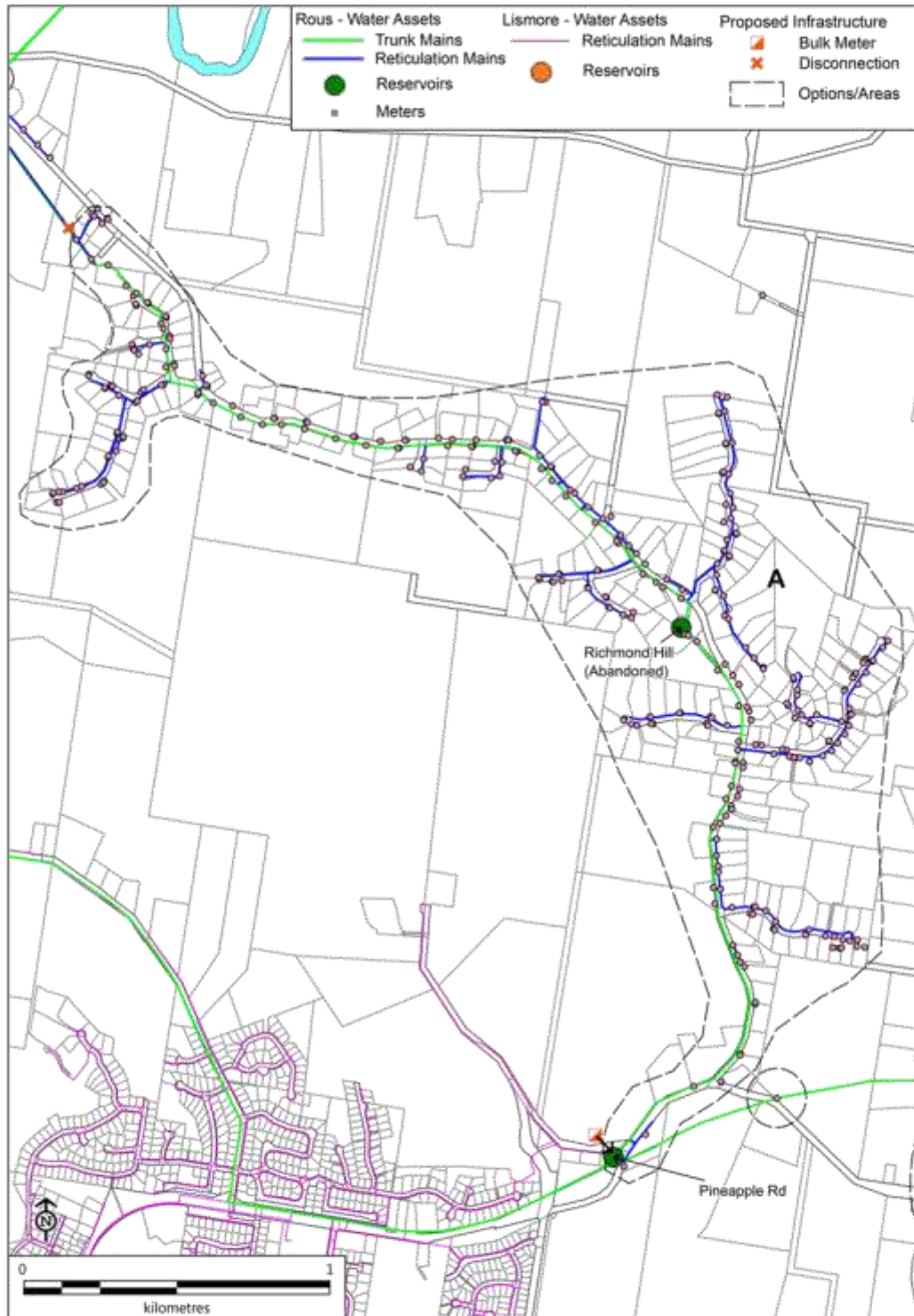


Figure 5: Current configuration and proposed transfer approach - Richmond Hill

3.6 Monaltrie

3.6.1 Current Configuration

The Monaltrie area (Figure 6 – Area A) contains 48 customers currently supplied via a reticulation main and the RCC Gundurimba reservoir supplied by the RCC Evans Head 375 mm trunk main. A new 100 mm main is being constructed by RCC along Monaltrie Road and Johnston Street to replace the current connection to the Coraki 225 mm main.

For water quality reasons, the Gundurimba Reservoir has been isolated from the supply system however this can be reinstated but does not supply customers at high elevation.

3.6.2 Proposed Approach

The proposed transfer of retail assets and customers from RCC to LCC involves the extension of Lismore Central reticulation network (uPVC 100 mm) along Wyrallah Road to connect to the new South Gundurimba reticulation main (Figure 6 and Appendix A) with supply from Gundurimba reservoir and a high pressure zone.

Table 6: Estimated cost - Monaltrie

Stage	Cost (\$)
Total	1,036,000

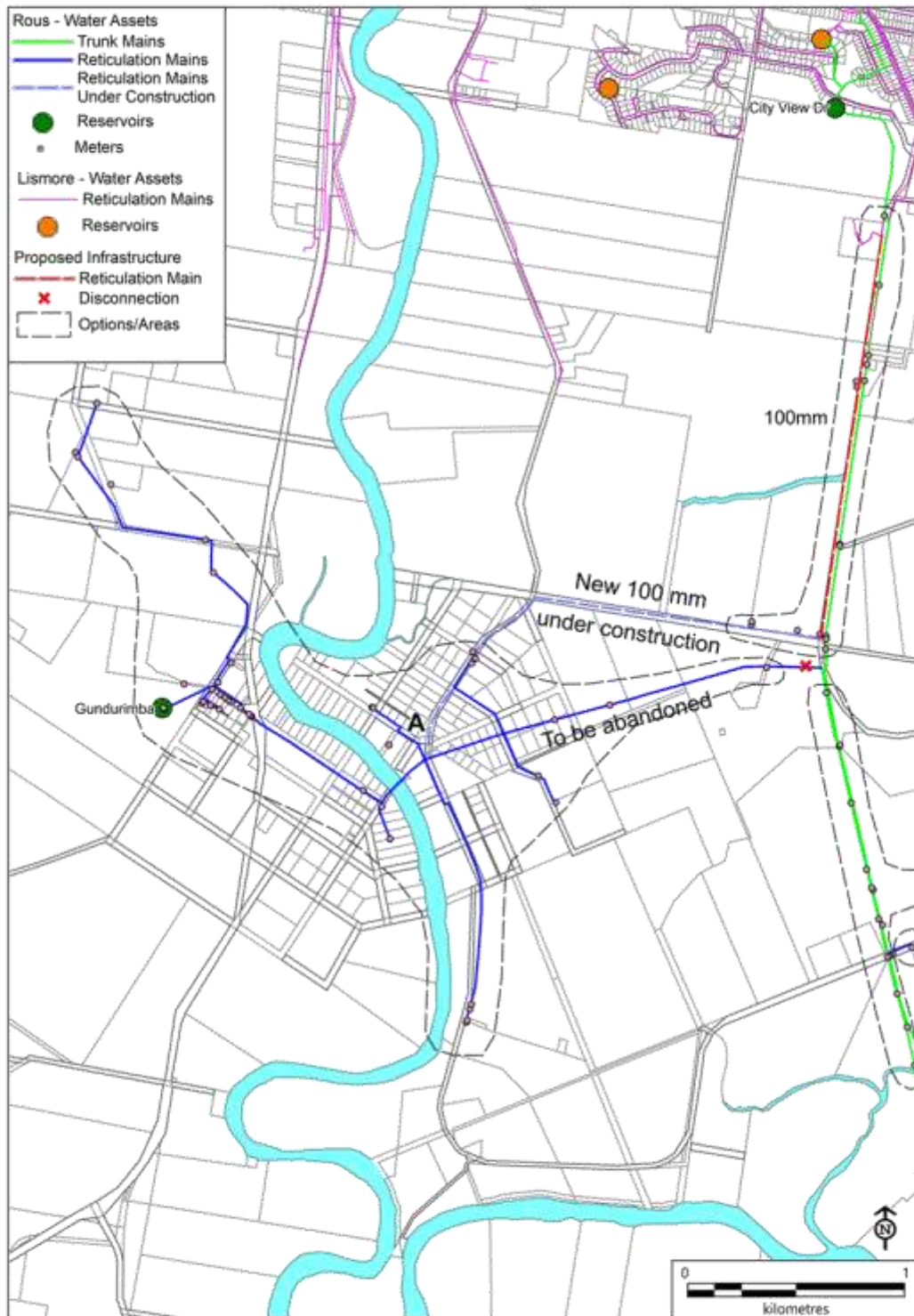


Figure 6: Current configuration and proposed transfer approach - Monaltrie

3.7 North Woodburn**3.7.1 Current Configuration**

The North Woodburn area (Figure 7 – Area A) contains a small RCC retail network that is supplied by the RCC Evans Head 375 mm trunk main via the LCC (North Woodburn) reticulation network. Area A contains 10 customers of which six are supplied through a master meter.

3.7.2 Proposed Approach

The transfer of retail assets and customers from RCC to LCC for the North Woodburn area involves transfer of the RCC 200 mm reticulation main and connected meters with no additional infrastructure required.

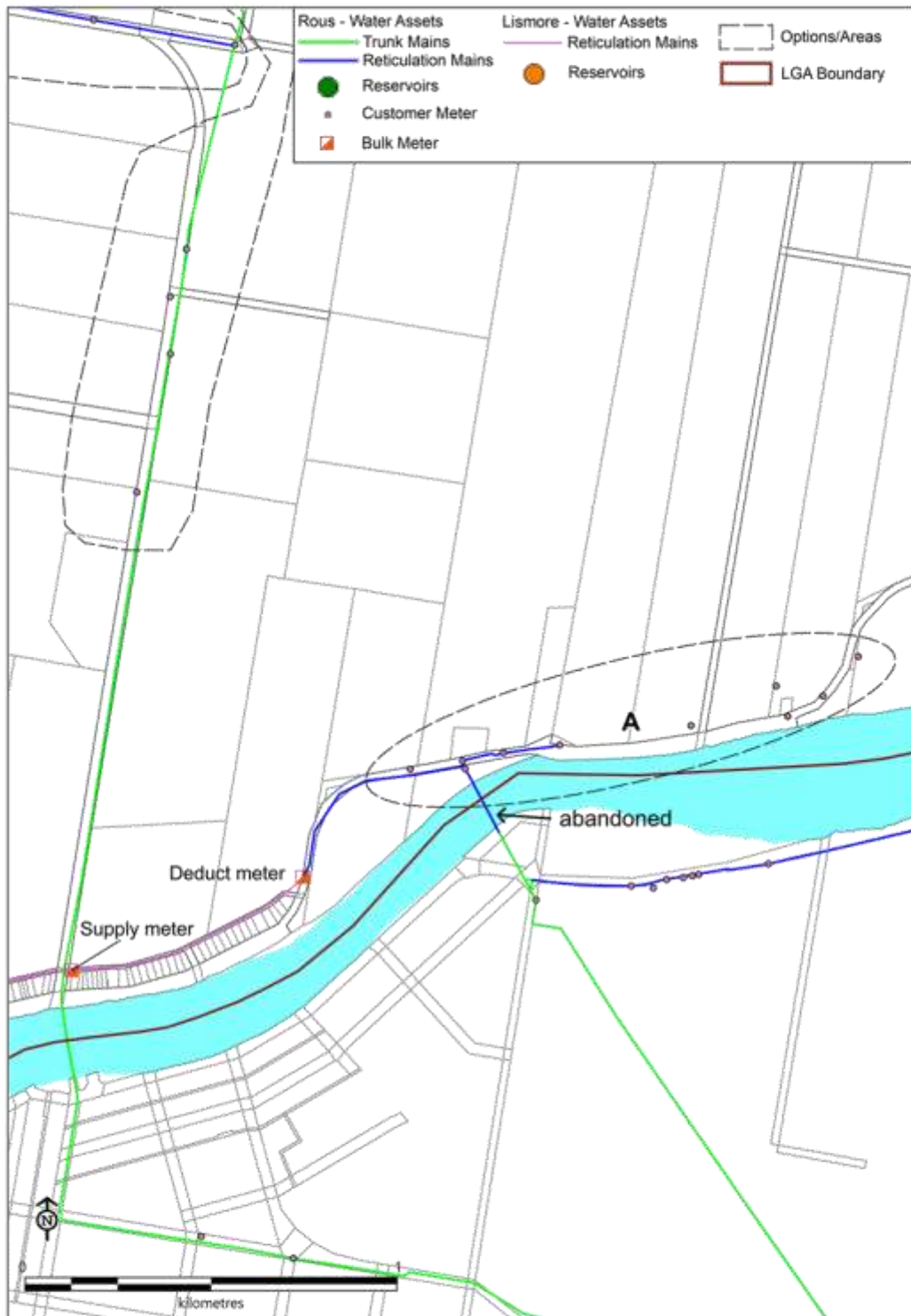


Figure 7: Current configuration and proposed transfer approach – North Woodburn

3.8 Bexhill

3.8.1 Current Configuration

Bexhill (Figure 8 – Area A, B & potential new development) includes a large group of customers with the potential for additional growth in the future. This area contains 187 (Area A = 114, B = 13 with 60 new customers assumed as part of a proposed development) current and future customers. The Area A and B reticulation networks are currently supplied via the RCC Lismore 600 trunk main. The RCC Bexhill tanks have been abandoned and RCC is currently installing new reticulation mains to bypass this area and improve reliability to customers east of Bexhill village.

3.8.2 Proposed Approach

A concept for an urban reticulated supply was developed by Ardill Payne (2014) with consideration for servicing the proposed development. The size of the proposed development has been reduced since that time. The proposed transfer of retail assets and customers from RCC to LCC involves two stages based on the preferred concept developed by Ardill Payne (2014) as shown in Figure 8 and Appendix A.

Stage 1 – Transfer of Bexhill Township

The first stage involves the supply of customers in Area A from a new reservoir to the west of the township with a 200 mm main supplied from the Lismore 600 mm trunk main. An additional main (100 mm) would supply the proposed new development to the east of the Bexhill township.

Stage 2 – Transfer of Cosy Camp reticulation

This stage involves the supply of the retail customers to the north of Bexhill (Area B - Cosy Camp) from the Bexhill reticulation network with a short section of main (50 mm) along Bangalow Road connecting the two networks.

Table 7: Estimated cost - Bexhill

Stage	Cost (\$)
Stage 1	2,566,000
Stage 2	204,000
<i>Total</i>	<i>2,770,000</i>

40

RETAIL CUSTOMER TRANSFER OPTIONS

ROUS COUNTY COUNCIL

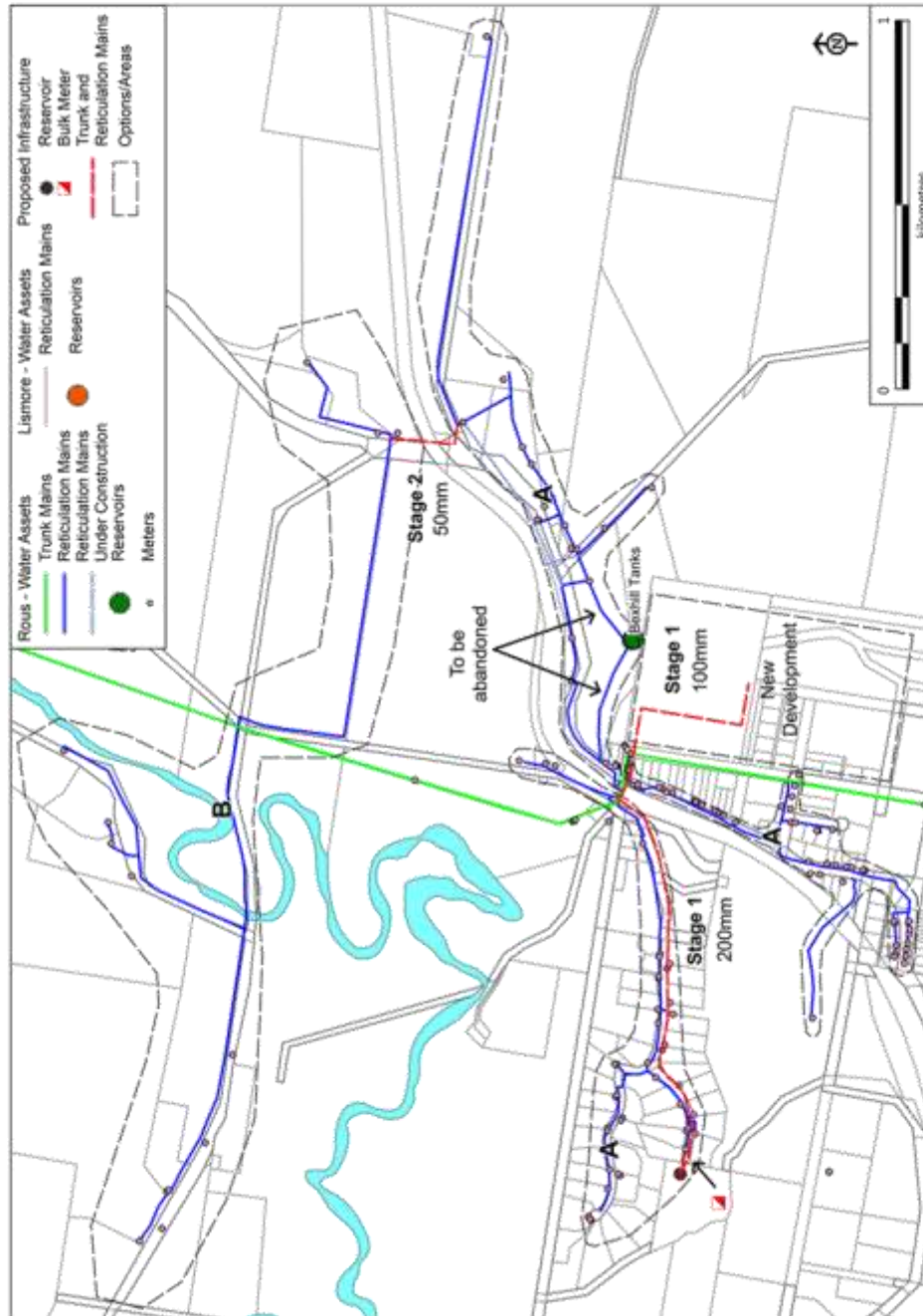


Figure 8: Current configuration and proposed transfer approach - Bexhill

3.9 North Ballina

3.9.1 Current Configuration

The North Ballina retail areas (Figure 9) include 53 customers (Area A = 34, B = 2, C = 15 & D = 2). Customers within Area A are supplied by a RCC reticulation network (Summerhill Crescent) supplied from the RCC Ballina 375 mm trunk main. Area B and C customers are supplied via direct connection to the Ballina 375 mm main and Area D customers are supplied by reticulation main along Tamarind Drive connected to the RCC Ballina 300 mm trunk main

3.9.2 Proposed Approach

RCC and BaSC have previously discussed the potential transfer of water supply assets and retail customers considered as part of BaSC's Pressure Reduction Zones program in 2014 (GeoLINK, 2014). The assets considered included the mains, valves and hydrants at Ross Lane and Cumbalum (south of the Ballina Heights reservoir). The proposed transfer of retail assets and customers from RCC to BaSC for the North Ballina area encompasses two stages, similar to the 2014 proposal (Figure 9 and Appendix A).

Stage 1 – Transfer of Summerhill Crescent network

This stage involves the supply of Area A (Summerhill Crescent) from the Ballina Heights reticulation network with a new connecting main (100 mm) along Deadmans Creek Road.

Stage 2 – Transfer of North Ballina area

All RCC assets south of the BaSC Ballina Heights reservoir would be supplied from the Ballina Heights Reservoir and the Ballina 375 mm main with a short section of connecting main. The supply configuration for customers in Areas C and D would remain the same.

Table 8: Estimated cost - North Ballina

Stage	Cost (\$)
Stage 1	310,000
Stage 2	397,000
<i>Total</i>	<i>707,000</i>

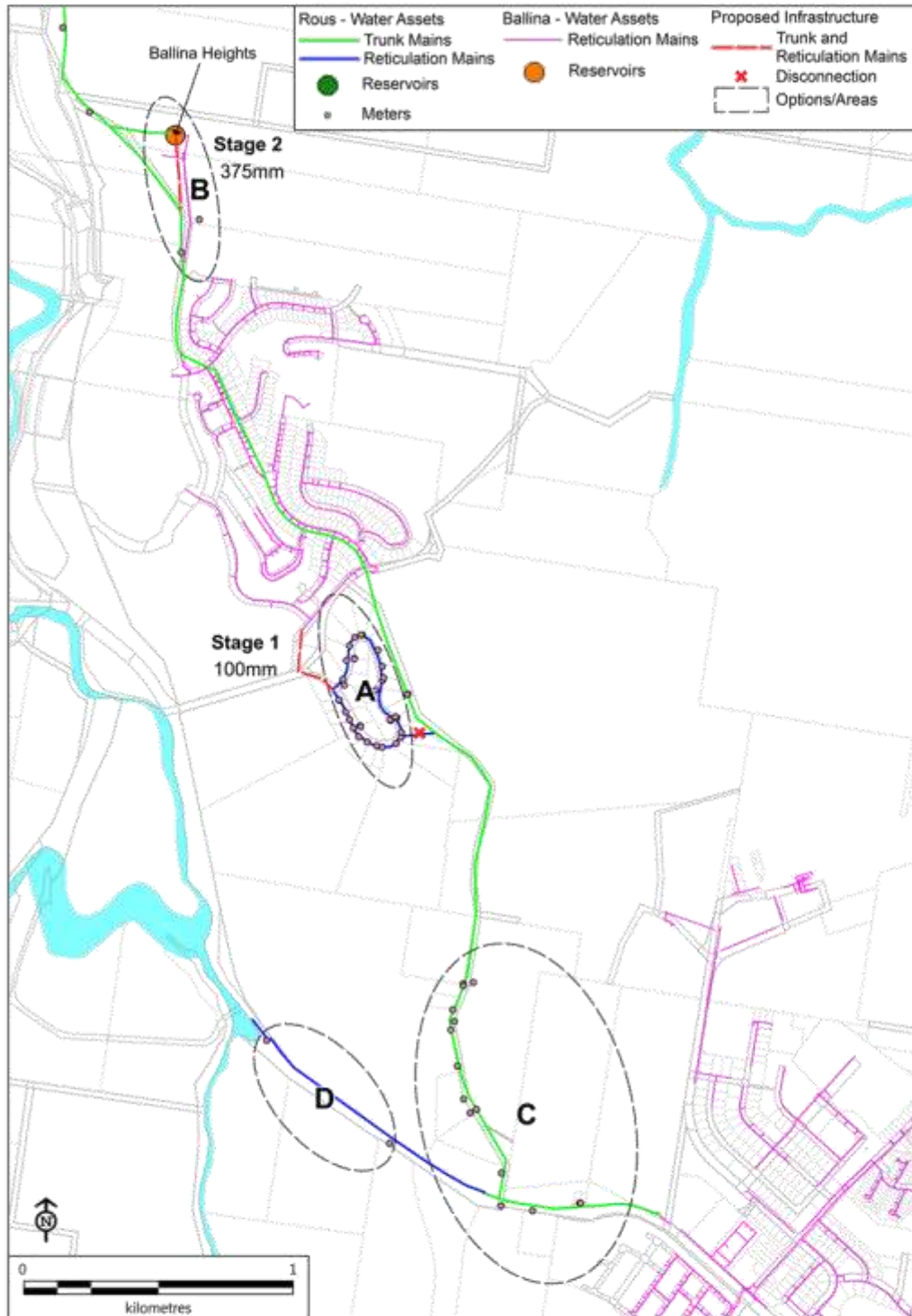


Figure 9: Current configuration and proposed transfer approach - North Ballina

3.10 Summary

This investigation has further developed nine potential options for the transfer of RCC retail customers and assets to the respective council of each LGA.

The cost estimates for the transfer options are summarised in Table 9.

Table 9: Summary of transfer options

Transfer Option	LGA	No. of customers	Capital cost (\$)	Capital cost per customer (\$)
Ewingsdale (Stage 1)	BySC	229	2,604,000	11,400
Ewingsdale (Stage 2)	BySC	229	1,164,000	5,000
<i>Ewingsdale (Stage 1 and 2)</i>	<i>BySC</i>	<i>229</i>	<i>3,768,000</i>	<i>16,400</i>
Bangalow (Stage 1)	BySC	5	72,000	14,400
Bangalow (Stage 2)	BySC	32	120,000	3,750
<i>Bangalow (Stage 1 and 2)</i>	<i>BySC</i>	<i>37</i>	<i>192,000</i>	<i>5,189</i>
Eureka	BySC	26	704,000	37,100
Skidders Shoot	BySC	24	608,000	25,300
Richmond Hill	LCC	319	144,000	450
Monaltrie	LCC	48	1,036,000	21,600
North Woodburn	LCC	10	0	0
Bexhill (Stage 1)	LCC	174	2,566,000	14,700
Bexhill (Stage 2)	LCC	13	204,000	15,700
<i>Bexhill (Stage 1 and 2)</i>	<i>LCC</i>	<i>187</i>	<i>2,770,000</i>	<i>14,800</i>
North Ballina (Stage 1)	BaSC	34	310,000	9,100
North Ballina (Stage 2)	BaSC	19	397,000	20,900
<i>North Ballina (Stage 1 and 2)</i>	<i>BaSC</i>	<i>53</i>	<i>707,000</i>	<i>13,300</i>

REFERENCES

Ardill Payne (2014) *Bexhill township future reservoir and associated infrastructure, Stage 1 concept designs* for RCC Water, Contract No. 801, November 2014

GeoLink (2014) *Identification of Assets for Transfer - CURA A & B*, Memo to Rous Water

Hydrosphere Consulting (2017) *Investigation into Options for Transfer of RCC Retail Customers and Assets to Constituent Councils*, RCC Country Council, November 2017

NOW (2014) *NSW Reference Rates Manual – Valuation of Water Supply, Sewerage and Stormwater Assets*, Department of Primary Industries – NSW Office of Water, June 2014

**APPENDIX A: CUSTOMER GROUPS AND PROPOSED ASSET/CUSTOMER
TRANSFER OPTIONS**

ROUS COUNTY COUNCIL

RETAIL CUSTOMER TRANSFER OPTIONS

Transfer of Retail Assets/Customer Groups	Summary	Modifications required to provide to transfer service	New Assets required	Assets to be transferred	Options/ Areas	Meters	2500 Peak demand (kL)	U/E/T/d Reservoir size (ML)	Pipe Length (m)	Pipe Length (km)	Number of connections to Retic Mains	Number of connections to Meters	Reservoir Ground Elevation (m)	New/Existing Reservoir	TWL (m)	Highest Meter (m)	Elevation Difference	Old Retail Group	Main Suburb	LGA	
Ewingdale	Ewingdale contains two stages which involve the installation of new trunk mains running off the West Byron reticulation network and the transfer of Rous reticulation mains and meters. Sections of the new mains will follow the alignment of the Rous trunk main. This is to be followed by the installation of a new reservoir at the St Helena reservoir location which is provide addition supply for future growth.	Stage 1 - Construction of a new reservoir to supply the Ewingdale area. The reservoir to be filled from St Helena reservoir and positioned within the same lot of land. A bulk meter to be placed between the reservoirs. The new reservoir to be connected to the Ewingdale network via a new trunk main installed along the existing easement of the Rous trunk mains. Stage 2 - Connection of reticulation mains and meters to a new trunk main connected to the West Byron reticulation network (UPVC 150) opposite Cawbah Centre. PRV required.	Trunk main	Meters	A	225	687	0.70	2,360	2.4	2	0	48	Coopers Shoot Reservoir North	53	50	-2	EW2	Ewingdale	Byron	
Bangalow	Bangalow involves the installation of new reticulation mains fed directly via the Granville Reservoir or off the Bangalow retic network and the transfer of rous reticulation mains and meters over to this new network. Sections of the new mains follow the alignment of the Rous trunk mains.	Stage 1 - Transfer of Rous reticulation main and connected meters (Granville retic) from Rous trunk main (Byron 300) over to new high pressure zone fed via the Granville Reservoir. Stage 2 - Transfer of a section of Rous trunk main (Byron 300), connected meters and attached reticulation network (Dudgion Lane retic). Combined	Bulk meter, Reservoir & Trunk main	Rous reticulation mains & Meters	A	5	15	-			1	1	100	New Reservoir next to St Helena Reservoir	105	110	-10	BA3	Bangalow	Byron	
Eureka		Construction of a new supply trunk main off Rous trunk main (St Helena 525) to Rous Eureka reservoir which includes the installation of a bulk meter. The reservoir and new main will supply the Eureka Road retic and including the high pressure zone to the north east. New reticulation main to be extended between the Rous reticulation networks (Eureka Road retic and Bendinella Lane retic) by RCC in 2018/19.	Bulk meter, Trunk main & Reticulation main	Reservoir, Rous reticulation mains & Meters	A	19	57		880	0.9	2	0	130	Eureka Reservoir	140	-10	EUB, EUG		Eureka	Byron	
Skinner's Shoot		Transfer of two Rous reticulation networks and meters from Rous trunk mains (Byron 150 & Coopers Shoot 375) to Byron trunk main	Reticulation main	Rous reticulation mains and meters	A	24	72		720	0.7	4	7	48	Coopers Shoot Reservoir	53	56	-8	SS3, SS2 & part of SS1	Skinner's Shoot	Byron	
Richmond Hill		Transfer of Rous trunk main (Richmond Hill 150), Rous reticulation network, reservoir and connected meters to Lismore Council. Richmond Hill network to be supplied via Pineapple Hill reservoir with a bulk meter installed on the reservoir inlet. Disconnection of the Rous reticulation main (80 AC) and the Rous trunk main (Richmond Hill 300), which both connect to Rous trunk main (Lismore 600), north of the Richmond Hill network.	Bulk meter	Rous trunk main, reservoir, reticulation mains & meters	A	319	967		50	0.1	2	0	194	Bulk meter off Pineapple Hill Reservoir	192	178	8	RH1	Richmond Hill	Lismore	
Monallie		Transfer of Rous reticulation mains and meters (South Gundulimba retic) over to Lismore Council via the extension of the Lismore Central reticulation network (UPVC 100mm) and disconnection from Rous trunk main (Coraki 225). High pressure zone near reservoir.	Reticulation main	Rous reticulation mains, meters and reservoir	A	48	144		2,140	2.1	3	0	60	New Reservoir or upgrade of Stn Gundulimba Reservoir	64	44	16	MO1	Monallie	Lismore	
North Woodburn		Direct transfer of Rous reticulation main (200 AC retic) and connected meters		Rous reticulation main & meters	A	10	36		460	0.5	0	0	NA	NA	NA	10	NA	NW1	North Woodburn	Lismore	
Beethill	Adill Payne (2014) concept	Stage 1 - Transfer of three Rous reticulation networks and connected meters through the installation of new reservoir west of Beethill township with additional supply line, bulk meter and reticulation main to provide a point of supply for the proposed new development. This option follows the Stage 1 Concept design prepared by Adill Payne for the Beethill township. Stage 2 - Transfer of Rous reticulation network (Cosy Camp retic) from Rous trunk main (Wilson River 600) to the network created in Stage 1 via the construction of a new reticulation main (50mm) along Bangalow Rd.	Reservoir, reticulation main, supply main & bulk meter	Reticulation mains & meters	A, New Development	174	522	0.60	2090	2.1	4	0	105	New Reservoir filled from Lismore 600	NA	100	9	BE3, BE4 & BE5	Beethill	Lismore	
North Ballina	Geot.I.N.K. (2014) concept	Stage 1 - Transfer of Rous reticulation main and connected meters (Summerville Crescent retic) from Rous trunk main (Ballina 375) over to Ballina Heights reticulation network via a new reticulation main (100mm). Stage 2 - Transfer of a sections of Rous trunk mains (Ballina 375 & 300), connected meters and attached reticulation network (Tamarind Drive retic) via redirecting supply through the Ballina Heights reservoir with the construction of a new trunk main (375mm). Combined	Reticulation main	Rous reticulation main & meters	A	34	102	0.6	2350	2.4	3	0	80	New Reservoir filled from Lismore 600	NA	40	65	BE2	Beethill	Lismore	
			Reticulation main	Rous reticulation main & meters	A, B	187	561		2350	2.4	3	0	80	Ballina Heights Reservoir via Ballina Heights retic	NA	40	-40	BE2	Beethill	Lismore	
			Reticulation main	Rous trunk main, reticulation mains and meters	A	34	102		350	0.4	3	0	80	Ballina Heights Reservoir via Ballina Heights retic	85	70	10	CU2	Cumbalum	Ballina	
			Reticulation main	Rous trunk main, reticulation mains and meters	B, C, D	19	57		300	0.3	2	0	80	Ballina Heights Reservoir via Ballina Heights retic	85	70	10	CU2, CU3, BL1 & BL2	Cumbalum	Ballina	
					A, B, C, D	53	159		650	0.7	5	0	0			70	10				

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APPENDIX B: DETAILED COSTINGS

The unit rates used for estimating costing are comprised of 2017/18 reference rates which allow for 10% SID (Survey, Investigation, Design and Project Management) for water mains and 15% SID for reservoirs as well as potential additional costs for rock excavation, construction difficulties and dewatering.

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BYRON SHIRE COUNCIL

STAFF REPORTS - INFRASTRUCTURE SERVICES

4.3 - ATTACHMENT 1

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ROUS COUNTY COUNCIL

RETAIL CUSTOMER TRANSFER OPTIONS

<i>Ewingsdale Stage 1</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Trunk Main	200	mm	3140	m	\$ 430	\$/m	\$1,350,200
Main Connections	No.		2		\$ 50,000		\$100,000
Reservoir	0.70	ML	1		\$ 1,000	\$/kL	\$700,000
Bulk Meter			1		\$ 20,000		\$20,000
Sub-total							\$2,170,200
Contingency							\$434,040
Total							\$2,604,240
<i>Ewingsdale Stage 2</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Trunk Main	150	mm	2360	m	\$ 360	\$/m	\$849,600
PRV			1		\$ 20,000		\$20,000
Main Connections	No.		2		\$ 50,000		\$100,000
Sub-total							\$969,600
Contingency							\$193,920
Total							\$1,163,520
Ewingsdale Total (Stages 1 & 2)							\$3,767,760
<i>Bangalow Stage 1</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Main Connections	No.		1		\$ 50,000		\$50,000
Meter Connections	No.		1		\$ 10,000		\$10,000
Sub-total							\$60,000
Contingency							\$12,000
Total							\$72,000
<i>Bangalow Stage 2</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Main Connections	No.		2		\$ 50,000		\$100,000
Sub-total							\$100,000
Contingency							\$20,000
Total							\$120,000
Bangalow Total (Stages 1 & 2)							\$192,000
<i>Eureka</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Trunk Main	150	mm	880	m	\$ 360	\$/m	\$316,800
Main Connections	No.		4		\$ 50,000		\$200,000
Bulk Meter					\$ 20,000		\$20,000
Sub-total							\$536,800
Contingency							\$107,360
Eureka Total							\$644,160

BYRON SHIRE COUNCIL

STAFF REPORTS - INFRASTRUCTURE SERVICES

4.3 - ATTACHMENT 1

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ROUS COUNTY COUNCIL

RETAIL CUSTOMER TRANSFER OPTIONS

<i>Skidders Shoot</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Reticulation Main	150	mm	190	m	\$ 380	\$/m	\$72,200
Reticulation Main	100	mm	530	m	\$ 310	\$/m	\$164,300
Main Connections	No.		4		\$ 50,000		\$200,000
Meter Connections	No.		7		\$ 10,000		\$70,000
Sub-total							\$506,500
Contingency							\$101,300
Skidders Shoot Total							\$607,800

<i>Richmond Hill</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Main Connections	No.		2		\$ 50,000		\$100,000
Bulk Meter	No.		1		\$ 20,000		\$20,000
Sub-total							\$120,000
Contingency							\$24,000
Richmond Hill Total							\$144,000

<i>Monaltrie</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Reticulation Main	100	mm	2,140	m	\$ 310	\$/m	\$663,400
Booster pump station			1		\$ 50,000		\$50,000
Main Connections	No.		3		\$ 50,000		\$150,000
Sub-total							\$863,400
Contingency							\$172,680
Monaltrie Total							\$1,036,080

<i>Bexhill Stage 1</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Trunk Main	200	mm	1420	m	\$ 430	\$/m	\$610,600
Land acquisition							\$500,000
Reservoir	0.60	ML	1		\$ 1,000	\$/kL	\$600,000
Reticulation Main	100	mm	670	m	\$ 310	\$/m	\$207,700
Main Connections	No.		4		\$ 50,000		\$200,000
Bulk Meter	No.		1		\$ 20,000		\$20,000
Sub-total							\$2,138,300
Contingency							\$427,660
Total							\$2,565,960

<i>Bexhill Stage 2</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Reticulation Main	50	mm	260	m	\$ 270	\$/m	\$70,200
Main Connections	No.		2		\$ 50,000		\$100,000
Sub-total							\$170,200
Contingency							\$34,040
Total							\$204,240
Bexhill Total (Stages 1 & 2)							\$2,770,200

BYRON SHIRE COUNCIL

STAFF REPORTS - INFRASTRUCTURE SERVICES

4.3 - ATTACHMENT 1

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ROUS COUNTY COUNCIL

RETAIL CUSTOMER TRANSFER OPTIONS

<i>North Ballina Stage 1</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Reticulation Main	100	mm	350	m	\$ 310	\$/m	\$108,500
Main Connections	No.		3		\$ 50,000		\$150,000
Sub-total							\$258,500
Contingency							\$51,700
Total							\$310,200
<i>North Ballina Stage 2</i>							
Item	Size	Unit	Quantity	Unit	Unit rate	Unit	Cost (\$)
Trunk Main	375	mm	300	m	\$ 770	\$/m	\$231,000
Connections	No.		2		\$ 50,000		\$100,000
Sub-total							\$331,000
Contingency							\$66,200
Total							\$397,200
North Ballina Total (Stages 1 & 2)							\$707,400

Demand management status

2311/16

Recommendation

In progressing the actions in the new Regional Demand Management Plan, it is recommended that the:

1. Quarterly reporting procedure and tables be endorsed.
2. Demand Management Working Group meet in September 2018.
3. Constituent councils confirm adoption/endorsement of the Regional Demand Management Plan.

Purpose

To provide a standard procedure for RDMP reporting and an update on the July-September 2018 quarterly actions identified in the Regional Demand Management Plan (RDMP).

Information

A standard procedure for RDMP reporting has been developed. Within two weeks from the end of each quarter the following will be provided by RCC to the RWSALC:

- Reporting table for RDMP Actions (Appendix A)
- Communication and Engagement Strategy (Appendix B)

The RWSALC will be responsible for ensuring actions are completed and assessing if the plan is meeting its objectives.

The status of RDMP Actions and the Communication and Engagement Strategy for the July-September 2018 quarter has been included in Appendix A and B for your information.

Rous County Council (RCC) wrote to the General Managers of the constituent councils on 26 June 2018 requesting adoption/endorsement of the Regional Demand Management Plan. To date a response has only been received from Lismore City Council.

Proposed actions

It is proposed that the Demand Management Working Group meet in September 2018. The purpose of the meeting will be to:

- Discuss the collated results of the water billing surveys on connection types undertaken by the councils. The aim will be to develop standardised definitions of connection types across the region to provide comparable, useful and accurate data on customer demand.
- Provide a draft design of regional communication materials for the 12-simple water saving steps and target 160 campaign. The intention is for these to be promoted by each of the constituent councils to support consistent messaging and foster water conservation behaviour.
- Discuss any other actions which need addressing.

Conclusion

A standard procedure for RDMP reporting and an update on the July-September 2018 quarterly actions identified in the Regional Demand Management Plan (RDMP) has been provided.

A request has been made for the constituent councils to confirm adoption/endorsement of the Regional Demand Management Plan. It is proposed that the Demand Management Working Group meet in September 2018.

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Appendix A: Reporting table for RDMP Actions

Priority activity	RDMP task	Budget	Who	When	Status	Completion date	KPI result
Monitoring, Evaluation and Reporting							
Develop standard procedure for reporting of RDMP action status and KPIs (including format, responsibilities and timing)	1.1		RCC	Q1	This document and a Communication and Engagement Strategy will be provided at the beginning of each quarter to the RWSALC for reporting of RDMP action status and KPI's for the previous quarter		
Develop standardised definitions of connection types across the region	1.3		RCC with input from all LWUs	Q1	Survey sent to water billing departments at constituent councils. RCC to collate results and arrange a working group meeting to develop standardised definitions		
Develop standardised reporting of water balance data	1.6		RCC	Q1	See Water Loss Summary report for the August RWSLACM		
Investigate the development of a customer relationship management (CRM) system to monitor customer data relating to RDMP implementation	1.9	10,000	RCC	Q1	Meeting with Manager of Corporate and Commercial with a brief provided on the needs and uses of a CRM system. RCC is considering an organisational wide CRM in this financial year		
Water Loss Management							
Engage consultant to develop WLMPs	2.1	80,000	RCC with input from all LWUs	Q1	See Water Loss Summary report for the August RWSLACM		
Develop local NRW targets for each service area/zone to support achievement of regional targets	2.2		All LWUs	Q2	To be undertaken when consultant undertakes the WLMP with each council		

RCC Regional Water Supply Agreement Liaison Committee

Meeting 28 August 2018

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Priority activity	RDMP task	Budget	Who	When	Status	Completion date	KPI result
Sustainable Water Partner Program							
Develop a communication and engagement strategy to promote the SWPP to target customers	3.1	5,000 p/a	RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		
Review and update promotional tools for the SWPP and develop a media kit	3.2	5,000 p/a	RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		
Develop SWPP recognition program	3.6		RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		
Smart Metering							
Review program objectives and scope, technologies/suppliers for infrastructure, software and devices	4.1	30,000	RCC with input from all LWUs	Q1	Finalising brief to send out to prospective consultants. Consultant to be selected by the end of September 2018		
Recycled Water							
Develop procedures for implementation of rebates and reporting requirements	5.1		RCC with input from BaSC and BySC	Q1	Procedure developed and discussed with Ballina Shire Council and Byron Shire Council on 19 July 2018	19/7/2018	
Document strategy for connection to existing recycled water systems or expansion of existing systems	5.3		BaSC and BySC	Q1	Strategy discussed at meeting with BaSC and RCC on 19/7/2018. Developed by Andrew Swan and emailed to RCC on 20/7/2018. BySC indicated at meeting that they would require time to develop strategy and were happy for BaSC to take the lead and the funding available for the first two years	20/7/2018	
Develop marketing strategy and promote opportunities for recycled water connections to existing and new customers	5.4		BaSC and BySC	Q1	Strategy to be developed by Catherine Jost at BaSC		

RCC Regional Water Supply Agreement Liaison Committee

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Priority activity	RDMP task	Budget	Who	When	Status	Completion date	KPI result
Rainwater Tank Rebates							
Develop and implement a communication and engagement strategy (including media kit) to increase the uptake of rainwater tank rebates	6.1	5,000 p/a	RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		
Develop a training program for council staff, plumbers and tank suppliers	6.2		RCC	Q1	Training program currently being developed in consultation with tank suppliers and plumbers.		
Implement rebate program within RCC supply area	6.3	60,000 p/a	RCC with input from LWUs	Q1	Rebate program is being implemented with rebates paid to eligible applicants who apply.	Ongoing	
Community Engagement and Education							
Develop local residential consumption targets to support achievement of regional targets	7.1		All LWUs	Q1	Each constituent council agreed to a local target of 10% reduction on their current residential consumption per capita (L/d) which is shown in Table 15 of the RDMP. The local targets will serve as a KPI to be reported on annually by each council.		
Develop and implement a communication and education program targeting residential households including engagement with customer service staff	7.2	5,000 p/a	RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		
Develop communication materials including webpage, fact sheets, media releases and social media posts	7.3	3,000	RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		
Develop and implement a communication and engagement program targeting schools	7.5	5,000 p/a	RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		
Ongoing development and delivery of community engagement and education program	7.11	15,000 p/a	RCC	Q1	Refer Community and Engagement Strategy which provides the status of priority activities associated with this RDMP task		

Meeting 28 August 2018

RCC Regional Water Supply Agreement Liaison Committee

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Appendix B - Communication and Engagement Strategy July-September 2018

Sustainable Water Partner Program - RDMP Action 3

Priority Activity	RDMP tasks	Audience	Resources required	Engagement/distribution method	Who	Budget	Completion date
Brochure	3.2	Highest water users	Written content for final page of brochure to include "Why Save Water Diagram", info on past success of SWPP and content for recognition program. Design of final page brochure (utilising graphic artist) Printing of entire brochure (4 pages, double sided)	Email/face to face	WSO		30/7/2018
Work with business's who have already been contacted about the SWPP	3.3	Byron Bay High School, Byron and Ballina Discovery Parks	Brochure	Email/phone call/face to face visit Encourage businesses to undertake water saving plan.	WSO		On-going
Create a Top 20 non-residential water users contact list	3.3	Top 10 non-residential water	Detailed contact list	Phone call	EO and EXT		30/7/2018
Develop Recognition Program	3.6	Highest water users	Create updated content for promoting Recognition program, i.e. case studies (i.e. Lismore Shopping Centre)	RCC website Distribution by WSO in person	EO and EXT		30/9/2018

Residential Rainwater Tank Rebate Program - RDMP Action 6

Priority Activity	RDMP task	Audience	Resources required	Engagement/distribution method	Who	Budget	Completion date
Promotion of rainwater tank rebates	6.1		Schedule for businesses/organisations displaying pull-up banners with details of rotation throughout each shire. Pull up banners and flyers Simple fact sheet	Face to face hand over of promotional material and training session with customer service teams of the business's/organisations who are promoting the rainwater tank rebates Primex Art vs Science Festival Sustainable House Day Media Release	WSO		

RCC Regional Water Supply Agreement Liaison Committee

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Community Engagement and Education - RDMP Action 7

Priority Activity	RDMP task	Audience	Resources required	Engagement/distribution method	Who	Budget	Completion date
Identify events/ initiatives that are gaining traction which RCC can have a presence at throughout the year	7.2 7.11	Households and non-residents	List of potential events with associated dates.	Collaboration and joint-promotion with key stakeholders i.e. constituent councils/tank suppliers.	WSO		
Develop communication materials	7.3		A set of 12 simple water saving steps (to be graphically designed) and utilised by each of the constituent councils to foster water conservation behaviour. A regional water consumption target campaign of 160 (L/d) per person as a call to action the simple water saving steps.	Social media for all councils Website Water bills	EO and EXT		
Why Save Water Diagram	7.3	High Water Users: Residential and Businesses	Finalise design of Why Save Water Diagram with Graffiti Design Pull up banner displaying diagram	Diagram displayed on SWPP brochure (see SWPP priority activities)	WSO		
Community Event	7.11		Rainwater tank promotional material	Stall at Art vs Science Festival Promotion at Primex Sustainable House Day	WSO		
Develop a communication and engagement program targeting schools	7.5	Primary and Secondary Schools	Resource inventory and project planning from Dorroughby Environmental Education Centre.	On-line	EO, WSO and EXT		

RCC Regional Water Supply Agreement Liaison Committee

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CONTACT LIST 01 – EMERGENCY COMMUNICATION PROTOCOL

Overview

This document outlines the communication protocols for contact between Rous County Council, the Constituent Councils, Emergency Services and the Northern Rivers Public Health Unit (NSW Ministry of Health) in the event of a water supply emergency.

Procedure

The following Figure 1.0, shows the communication requirements of Rous County Council when a water supply emergency is active. It also includes the individual plans and contact lists that Rous County Council and each Constituent Council is responsible to maintain.

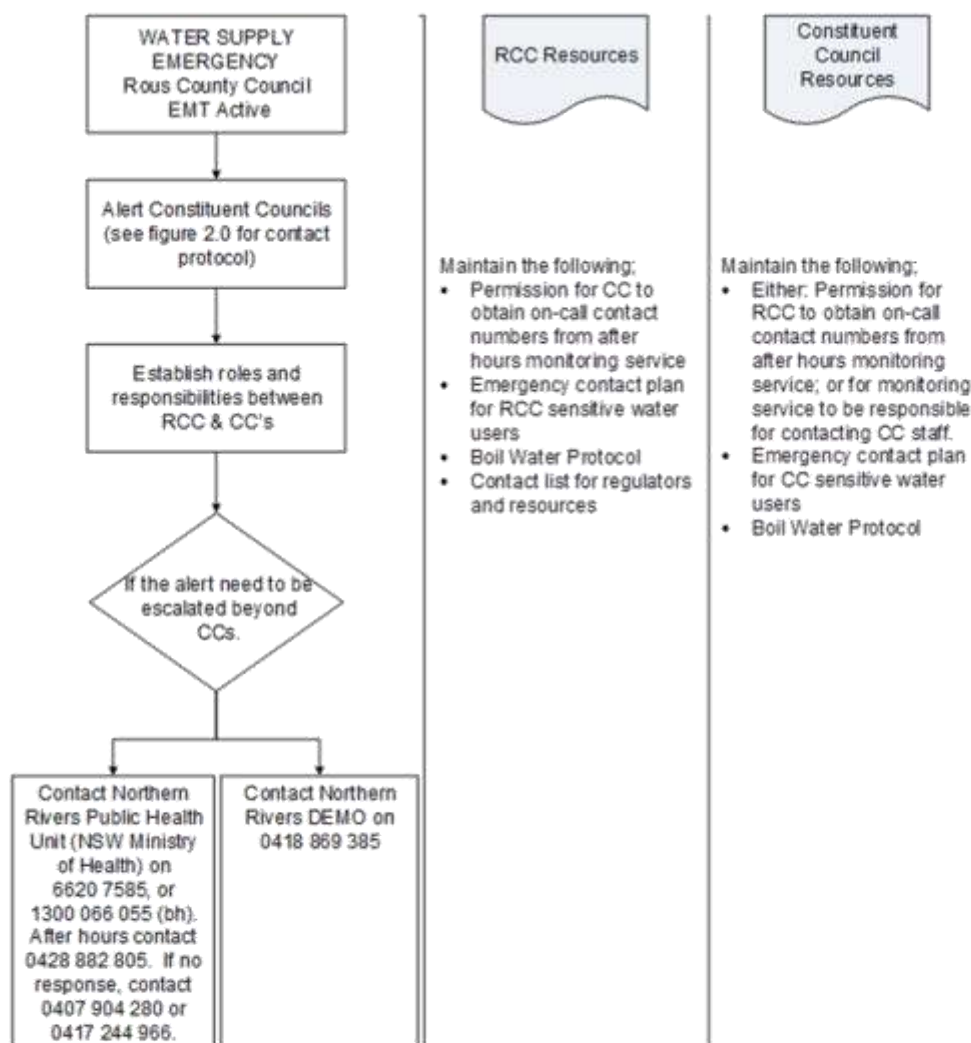
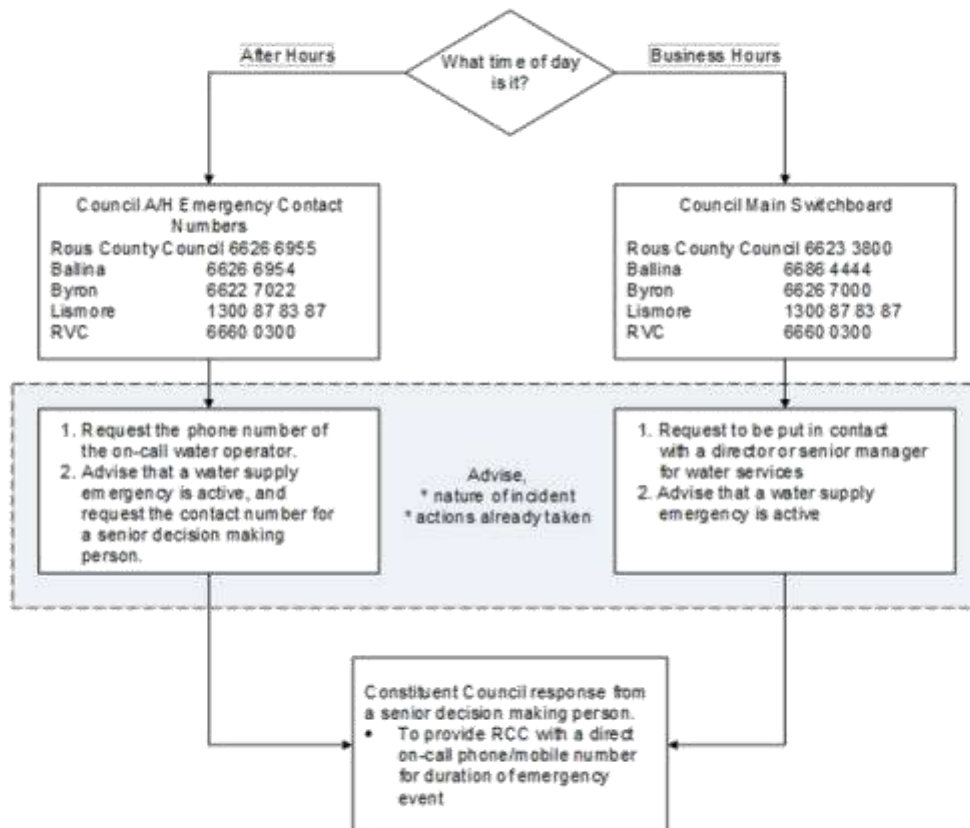
Figure 1.0 – Emergency Communication Protocol

Figure 2.0 – Council Emergency Communication Protocol



RELATED PROCEDURES

Document	Name	Link

RELATED DOCUMENTS

Document Number	Document Name	Link
N/A	Water Supply Agreement with Constituent Councils - June 2014	Wiki link
N/A	Rous Drought Management Plan – August 2016	Wiki Link

RESOURCES AND PREPARATION

Item	Quantity	Storage Location

Issue Date: 15/11/2016 – Next review date: 31/01/2018
Revision Number: 1.5

Contact List 01 – Emergency Communication Protocol
Revision Frequency: Quarterly
Responsible Officer: Sam Curran

RCC Regional Water Supply Agreement Liaison Committee

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Rous County Council

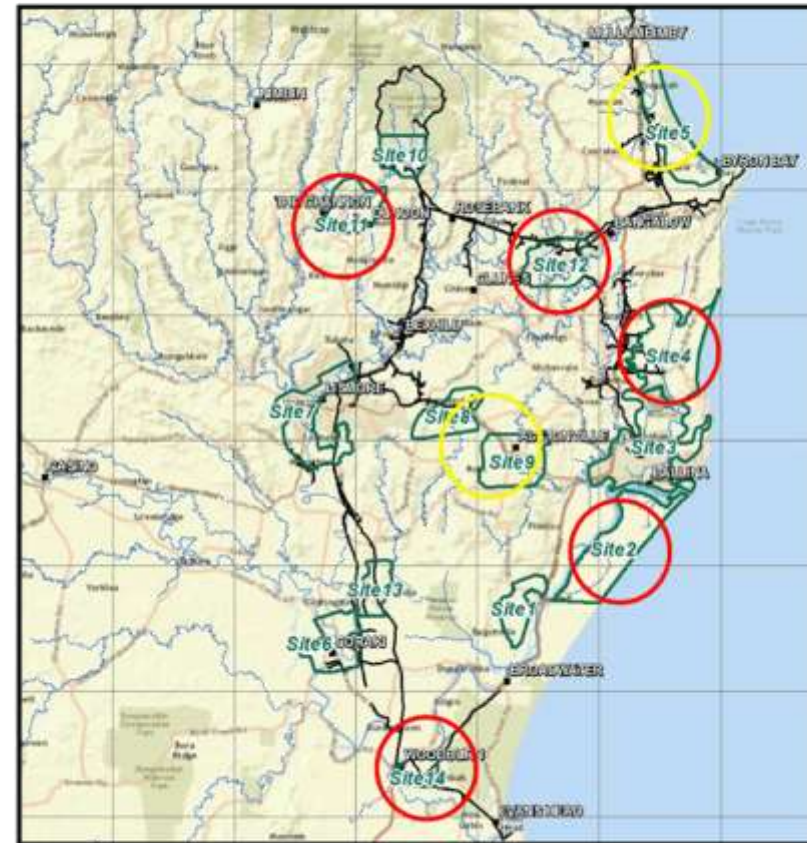
Liaison Committee - Groundwater

28 August 2018



Multi-criteria assessment - outcomes

- Five shortlisted sites:
 - 2: Wardell to Ballina
 - 4: North of Lennox Head
 - 11: Dunoon
 - 12: West of Bangalow
 - 14: Woodburn
- Geology:
 - 2 x fractured basalt
 - 3 x coastal sands



Woodburn: borefield simulation

Borefield Sustainable Daily Yield 22 hours/day – Conservative and Optimistic yields for a range of bore numbers

No. of Bores	Avg. Bore Spacing (m)	Conservative Sy = 0.01		Optimistic Sy = 0.1	
		Avg. Instantaneous Flow per bore (L/s)	Total Borefield Yield (ML/d)	Avg. Instantaneous Flow per bore (L/s)	Total Borefield Yield (ML/d)
1	-	20	1.6	24	1.9
2	1,700	17	2.8	21	3.4
4	570	12	3.9	16	5.0
6	420	9	4.4	13	6.0
8	290	7	4.7	10	6.5

Woodburn: local town water supply demands

Projected Local Demands** – Woodburn, Evans Head, Broadwater and Coraki

Parent Meter	Existing Demand (2013)			Future (2030)			Future (2060)		
	Total PDD (ML/d)	Total ADD (ML/d)	PDD:ADD	Total PDD (ML/d)	Total ADD (ML/d)	PDD:ADD	Total PDD (ML/d)	Total ADD (ML/d)	PDD:ADD
Broadwater	1.4	0.29	4.7	1.9	0.40	4.7	2.8	0.60	4.7
Woodburn	0.92	0.19	4.8	1.03	0.21	4.8	1.43	0.30	4.8
Evans Head	3.49	0.90	3.9	4.61	1.20	3.9	7.24	1.88	3.9
Coraki	1.26	0.36	3.5	1.26	0.36	3.5	1.26	0.36	3.5
TOTAL	7.0	1.7	4.0	8.8	2.2	4.0	12.7	3.1	4.1

**From Rous Water Long-Term Peak Day Demand Forecast Report, May 2013, Hydrosphere Consulting

Concept plan - water treatment plant

6.2 Capital Cost Estimate

Table 6.1 : Capital Cost Estimate for Borefield, Conventional Treatment, Disinfection and Treated Water Transfer

Item	Description	Amount
A	Woodburn Borefield	\$ 2,559,200
B	Raw Water Transfer Pipework to GWTP	Included in Borefield Cost
C	Conventional Water Treatment Plant, Disinfection and 2ML CWS	\$ 8,733,000
D	Treated Water Transfer	\$ 526,000
	Total Construction Cost	\$ 11,818,200
	Design, Project Management and Permits for items not covered by allowance in NSW Reference Rates (15%)	\$1,772,730
	Contingency (25%)	\$3,397,733
	Estimated Capital Cost – Construction and On-costs	\$16,988,663

Table 6.2 : Capital Cost Estimate for Ozone/BAC Process

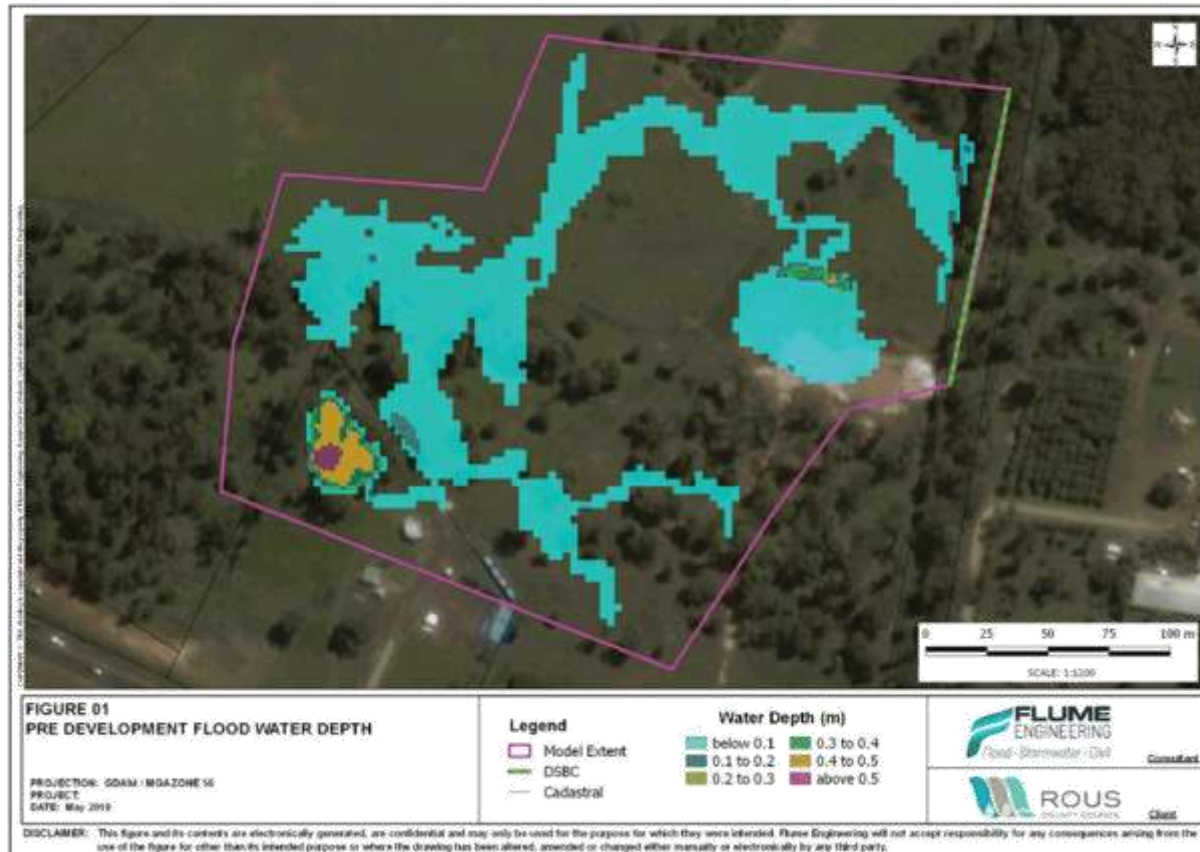
Item	Description	Amount
C2	Ozone/BAC Process	\$ 3,865,000
	Total Construction Cost	\$ 3,865,000
	Design, Project Management and Permits for items not covered by allowance in NSW Reference Rates (15%)	\$579,750
	Contingency (25%)	\$1,111,188
	Estimated Capital Cost – Construction and On-costs	\$ 5,555,938

CCE Figures do not include for power to the bore or WTP sites.
Also no land acquisition/easement costs have been included.

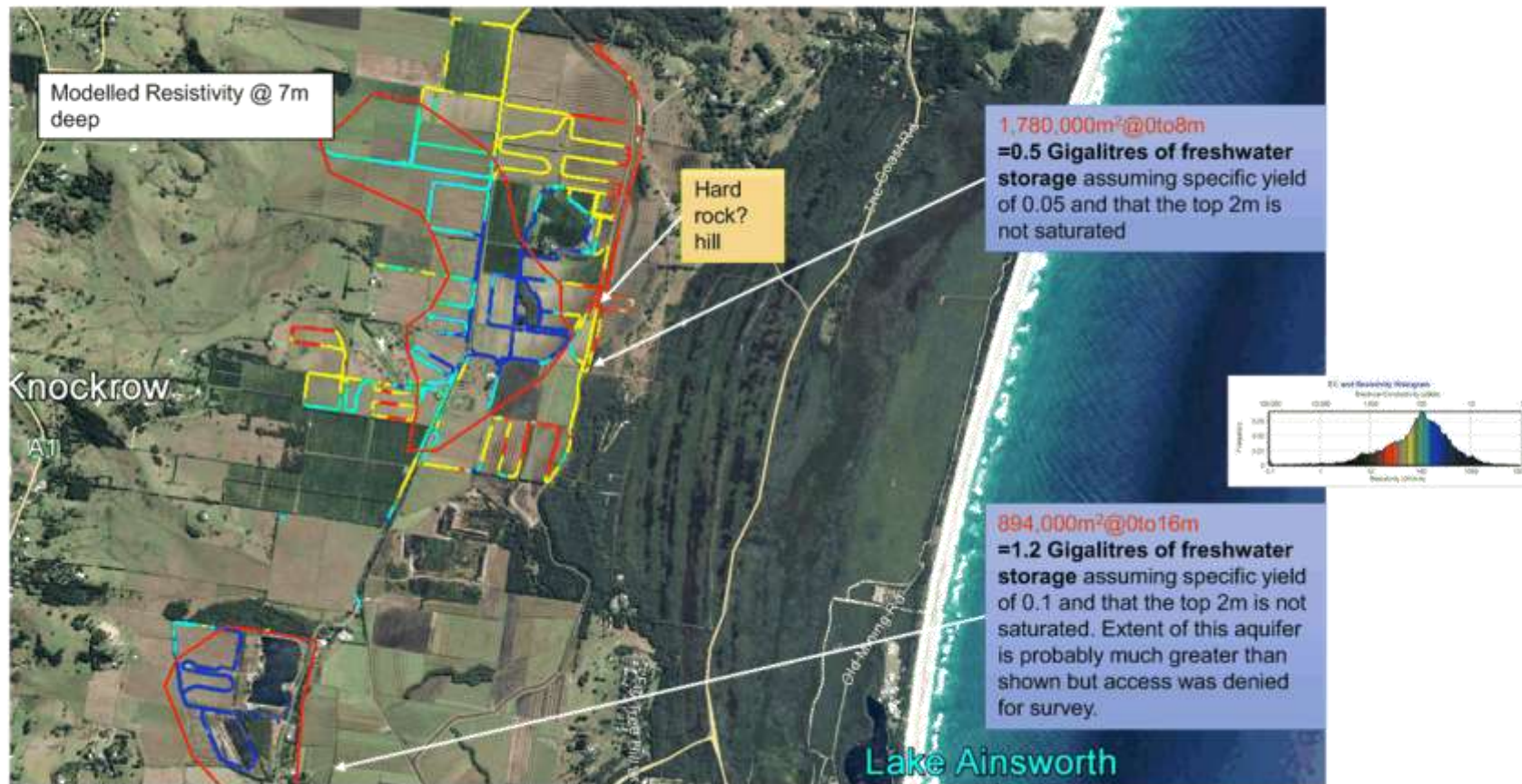


Figure 4.3 : Concept Layout for new Groundwater Treatment Plant

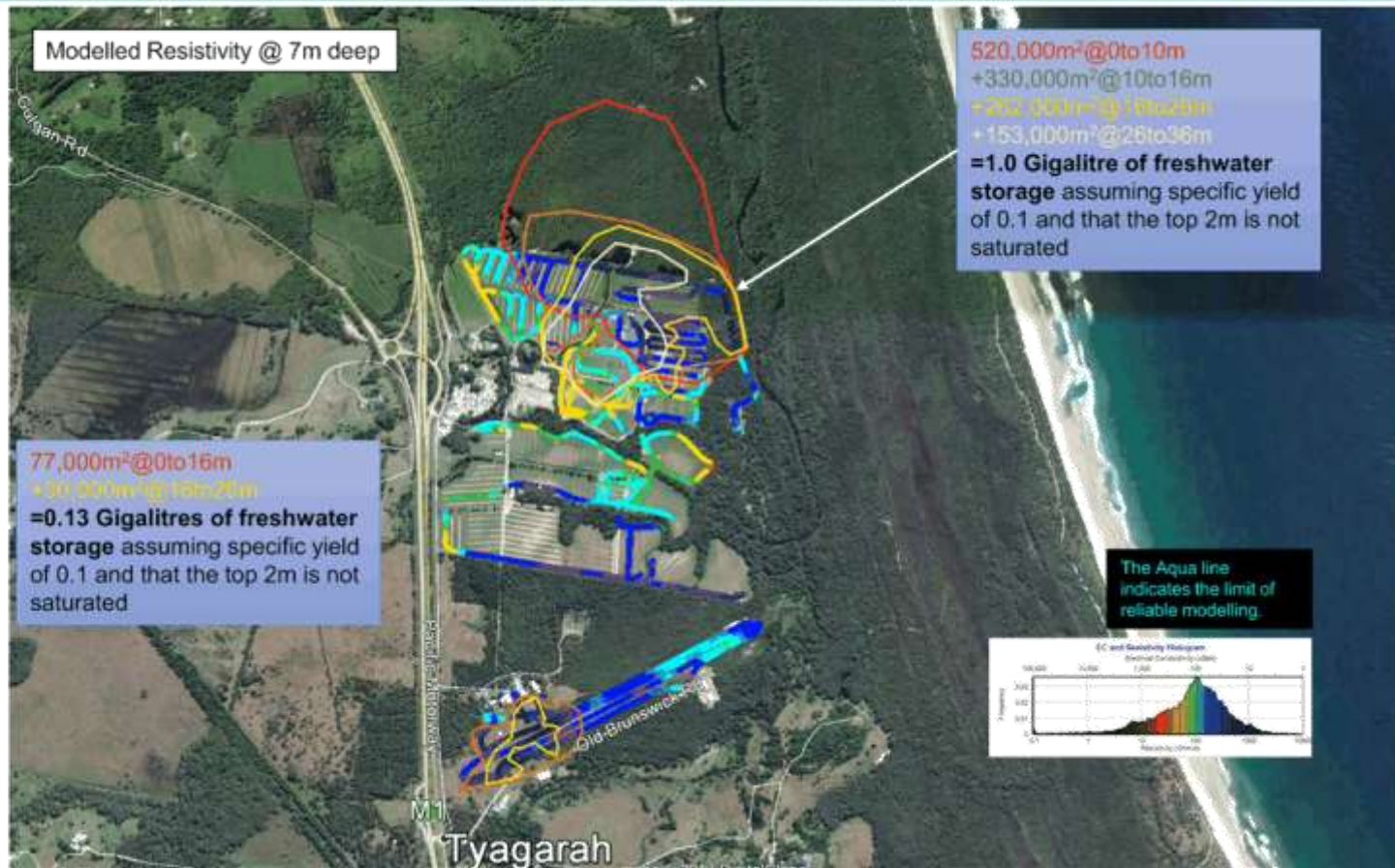
Seven pump test – flood assessment



Aquifers inferred at Newrybar



Inferred freshwater storage Tyagarah



Potential bore sites

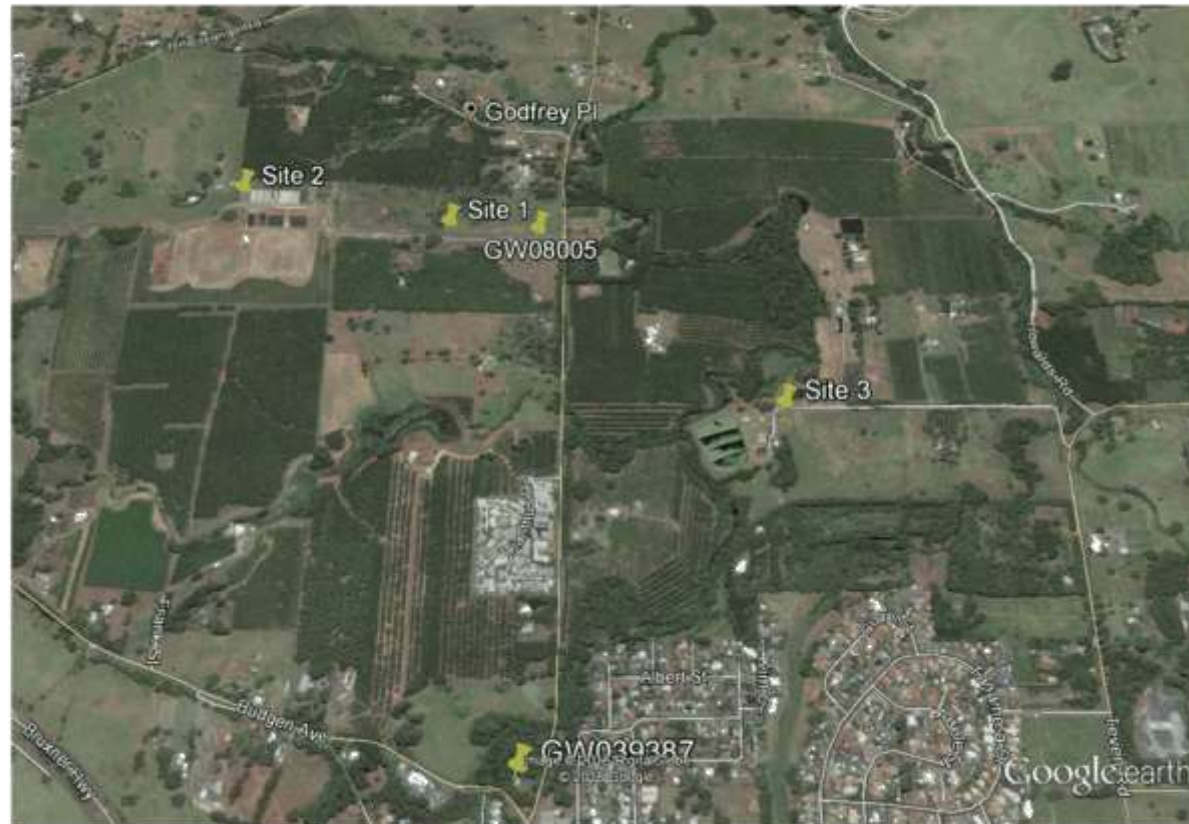


Potential bore sites

Item	Quantity/unit	Rate	Cost (GST excl.)
Mobilise/Demobilise	1	\$3,800	\$3,800
Site setup: test holes	17 sites	\$1,100	\$18,700
Drill test holes to 30m	510 m	\$99	\$50,490
Geophysical logging (see notes)	9 bores	\$3,000	\$27,000
Ream/construct as test production bore	6 bores	\$18,000	\$108,000
Pumping test	3 bores	\$15,000	\$45,000
			\$252,990



Alstonville area



Alstonville area



Alstonville - Site 1 - Looking West.



Alstonville - Site 2 - Looking West.



Item	Quantity/unit	Rate	Cost (GST excl.)
Converys Lane replacement	1	\$40,000	\$40,000
Lumley Park north: Test hole to 150m (not constructed)	1	\$23,000	\$23,000
Lumley Park north: 150m test production bore & pumping tests	2	\$40,000	\$80,000
			\$143,000

Next step

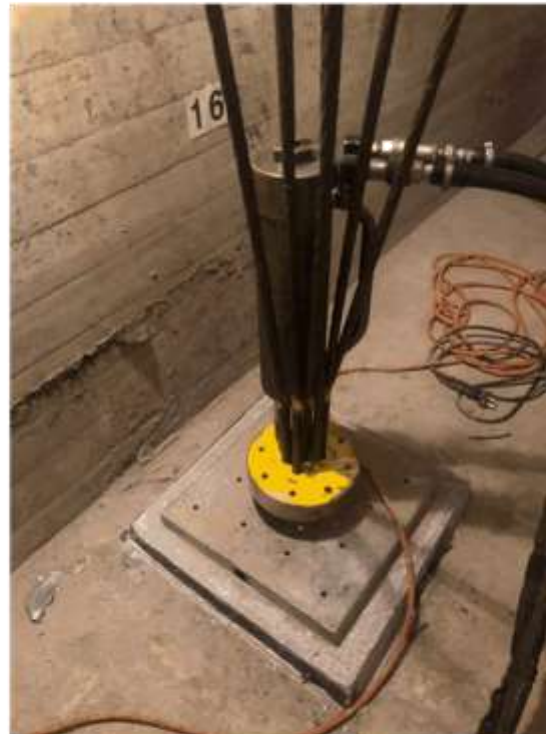
- Completed a seven day pump test at Woodburn (awaiting analysis)
- Strategy drilling project for Newrybar and Tyagarah (Sept – Feb??)
- Deep aquifer testing in the Alstonville Plateau (Sept – Feb??)
- Further geophysical testing South Ballina (Early 2019)
- Testing plan for Binna Burra site 12 West of Bangalow (Late 2019)

Questions?

History of anchors



Completed remediation works – ECD anchors



Questions?

Rocky Creek Dam - New plug Project - next steps

- Tender (September – November)
- Connections completed by (Early 2019)
- Construction Completed (June 2019)

Questions?

Report No. 4.4 **Mullumbimby Inflow and Infiltration update**
Directorate: Infrastructure Services
Report Author: Jason Stanley, Systems Planning Officer
File No: I2018/1660
5 **Theme:** Infrastructure Services
 Sewerage Services

Summary:

Mr Jason Stanley has recently been appointed as Project Manager for the Mullumbimby Inflow and Infiltration project.



The initial stage of the project has focussed on improvement of data acquisition and review of benefits of Water Sensitive Urban Design if fitted throughout Mullumbimby.

A more detailed project scope will be developed during the next 3 months.

RECOMMENDATION:

That the Committee note the report.

Attachments:

- 1 Mullumbimby sewer catchments, E2018/72975 , page 125 [↓](#) 
- 2 Mullumbimby Preliminary Photomontages 03.09.18, E2018/73200 , page 126 [↓](#) 

Report

The Mullumbimby Inflow and Infiltration project is in early stages of implementation. The focus of work to date has been towards the improvement of data acquisition prior to anticipated rainfall events and identification of areas where Water Sensitive Urban Design (WSUD) can be effectively implemented to allow for stormwater management.

Improvement of Mullumbimby flow data acquisition

SCADA coding for all sewage pump stations within Mullumbimby has been upgraded to allow for increased flow data acquisition. Derived inflows and outflows from each site have been established with the recent dry weather providing a good opportunity to analyse dry weather flow diurnal flow patterns and baseline groundwater infiltration.

Mullumbimby experienced a rainfall event between 24-27th August which is currently being assessed to accurately characterise the performance of the sewerage network and identify areas with relatively higher amounts of inflow and infiltration.

Capturing flow data from SPS sites will be an ongoing process for all future dry weather and rainfall events. Regularly reviewing of this data will be performed in order to promptly identify issues. Once a high level of confidence is achieved with flow data integrity, it is anticipated that this SCADA coding will be rolled out to all SPS sites within the Byron Shire.

Water Sensitive Urban Design

The underlying assumption of the WSUD investigation is that a slowing of stormwater runoff to prevent it reaching sewer lines at key locations will reduce the total volume of stormwater being pumped to the Brunswick Valley STP (BVSTP) while also leveraging improved stormwater quality, reduced localised flooding and improved amenity outcomes within the town.

The key steps in the investigation include:-

- Assess existing stormwater infrastructure with regards to function and capacity.
- Identify those locations where stormwater infrastructure and sewer lines are in close proximity.
- Identify those sub-catchments contributing to pump stations with the highest pumping mains following and during rain.
- Compare the relationship between sewer pump rates and rainfall to determine the volume of stormwater that would ideally be intercepted.
- Identify potentially suitable locations where retrofitting of the stormwater infrastructure can be achieved.
- Develop preliminary concepts for discussion.

WSUD as a practice adopts the following principles:-

- Recognition of the value and importance of water in the urban environment through thoughtful landscape and building design.
- Reconnecting communities with the management of their own water supplies through the use of rainwater tanks and greywater recycling.
- Adoption of water management principles that reflect natural hydrological cycles.
- Promotion of evapotranspiration, infiltration and conveyance of stormwater within surface systems that use native vegetation for filtration.
- Reduction of reliance on imported water.

Stormwater Management within Mullumbimby

- 5 The adoption of WSUD within Mullumbimby will enhance the local urban environment through installation of green infrastructure while taking pressure off the town's sewerage network. Presently little to no management of stormwater in what would be considered a water sensitive approach occurs in Mullumbimby. This means that actions to include WSUD are likely to have significant benefit to both the local community and the environment.
- 10 A number of issues and opportunities in the development of a water sensitive approach in Mullumbimby have been identified and include:
- Existing stormwater infrastructure is old and often undersized (Ardill Payne, 2018).
 - Aging undersized infrastructure with low grade results in poor conveyance and localized flooding.
 - Localized flooding leads to sewer infiltration particularly in low lying areas.
 - It is likely that there a large number of illegal connections of stormwater to sewer, particularly in older parts of town (possibly 20 – 50% of properties).
 - Inspection pits located adjacent to swales represent likely access points for direct inflow to sewer.
 - Roof water drains directly to swales and roadways and could be intercepted.
 - There are numerous locations where stormwater within laneways cannot physically reach the stormwater network, meaning flooding occurs in even small rainfall events.
- 25 Opportunities:
- Large network of swales that are suitable for improvement.
 - Large roofs drain into swales and roadways and could be intercepted.
 - Increase harvesting of stormwater (e.g. rainwater tanks).
 - Increase the use of water sensitive design features to capture and treat stormwater (e.g. raingardens, tanks, biofiltration).
- 30

How much water can be captured

- 35 It has been demonstrated that installation of WSUD devices can have a significant impact on peak storm flows. Numerous case studies exist where devices such as raingardens have been installed to reduce stormwater discharges from urban environments. Tanks can also be effective for capturing roof run off if they are with connected to a frequent use or provide delayed discharge to a drain.
- 40 Potential volumes which can be intercepted have been calculated using the 3-month ARI for Mullumbimby. This corresponds to approximately a 40mm rainfall event. It should be recognised that storage and detention can be increased or reduced depending on available space and priority sub catchments where pressure on the sewer system is greatest.
- 45 Table one details storm volumes for sub-catchments around Burringbar Street for the 3-month storm. Also shown are the areas required to detain the design volume in a 300mm deep self-watering garden bed.

Table 1 Sub-catchment areas, flows and volumes for detention in design 3 month event

Sub-catchment	Area m²	Q3 month m³/s	Volume m³	Area required at 300mm deep (m²)
1/A	3670	0.04	24	80
2/A	3445	0.04	22	75
3/A	1780	0.02	12	39
4/A	2433	0.03	16	53
6/A	4526	0.05	30	98
5/A	767	0.01	5	17
5/B	4927	0.05	32	107
7/A	5353	0.06	35	116
8/A	3606	0.03	16	53
8/B	3555	0.04	23	77
9/A	2425	0.03	16	53
8/C	3009	0.03	20	65
10/A	9335	0.07	43	142
16/A	5757	0.04	23	76
16/B	3412	0.02	12	38

Options for WSUD in Mullumbimby

5

The following information is intended to be brief and does not cover all potential WSUD opportunities but is considered a reasonable approach following preliminary investigations.

Rainwater tanks

10

A limited number of properties have rainwater tanks. Rainwater tanks are a simple, cost effective device that can be retrofitted to prevent roof water draining to the street or stormwater network. Rainwater tanks can be used to supply toilet flushing or irrigation of landscaping. Tanks can also be implemented to function in providing detention to reduce the impact of peak flows during rainfall events. Rainwater tank rebates are offered through Rous water to all Byron Shire properties further reducing costs.

15

Benefits: reduce direct connection with stormwater, reduce peak flows, reduce need for potable water, provision of detention during events

20 *Biofiltration swales*

A large network of existing swales is present in Mullumbimby. Some swales are old and do not function as intended. Well maintained swales can be planted or grassed and can be retrofitted to either better convey flows or reduce peak flows during events. Reconfiguration of the existing swale network in key locations is likely to enhance the urban landscape, reduce localized flooding and stormwater infiltration. Inspection pits are frequently located adjacent to swales. If stormwater surcharges swales or inspections pits are damaged, then stormwater enters the sewer network. Improvement to swales can be undertaken in laneways in conjunction with raising of inspection points to reduce the likelihood of inflow.

25

30

Benefits: urban landscaping, enhanced conveyance, stormwater detention

Self-watering garden beds and bio-pods

Installation of self-watering garden beds within the streetscape will provide storm detention during a rainfall and take pressure of the sewer pump stations. A number of locations have been identified that are suitable for installation of garden beds that capture run off. These garden beds would include native plants and trees and would reduce peak discharges during rainfall. Self-watering gardens can be located at street corners in the space where cars cannot park, improving pedestrian safety and urban amenity. Bio-pods are small stormwater detention and treatment devices that can be retrofitted into streets to reduce discharge and provide shade reducing summer temperatures

Benefits: urban landscaping, stormwater detention and treatment

Raingardens

Where rainwater tanks are not suitable small raingardens could be installed under down pipes. These would allow for capture, treatment and reuse of rainwater and prevent discharge to the street and stormwater network.

Benefits: urban landscaping, stormwater detention and treatment.

Kerb treatments

Street kerbs can be retrofitted to include plants and provide detention during an event.

Conclusion and next steps

Investigations completed to date confirm that there is a strong and rapid relationship between sewer pumping rates, rainfall and stormwater. Strategies which intercept stormwater in up the 3-month storm event will significantly reduce pressure on the sewage network while leveraging environmental and amenity benefits for Mullumbimby.

Next steps are to:

- further develop stormwater management options,
- seek feedback from Council and other stakeholders,
- develop appropriate designs for priority locations/demonstration sites to enable monitoring and proof of concept.

Community Consultation

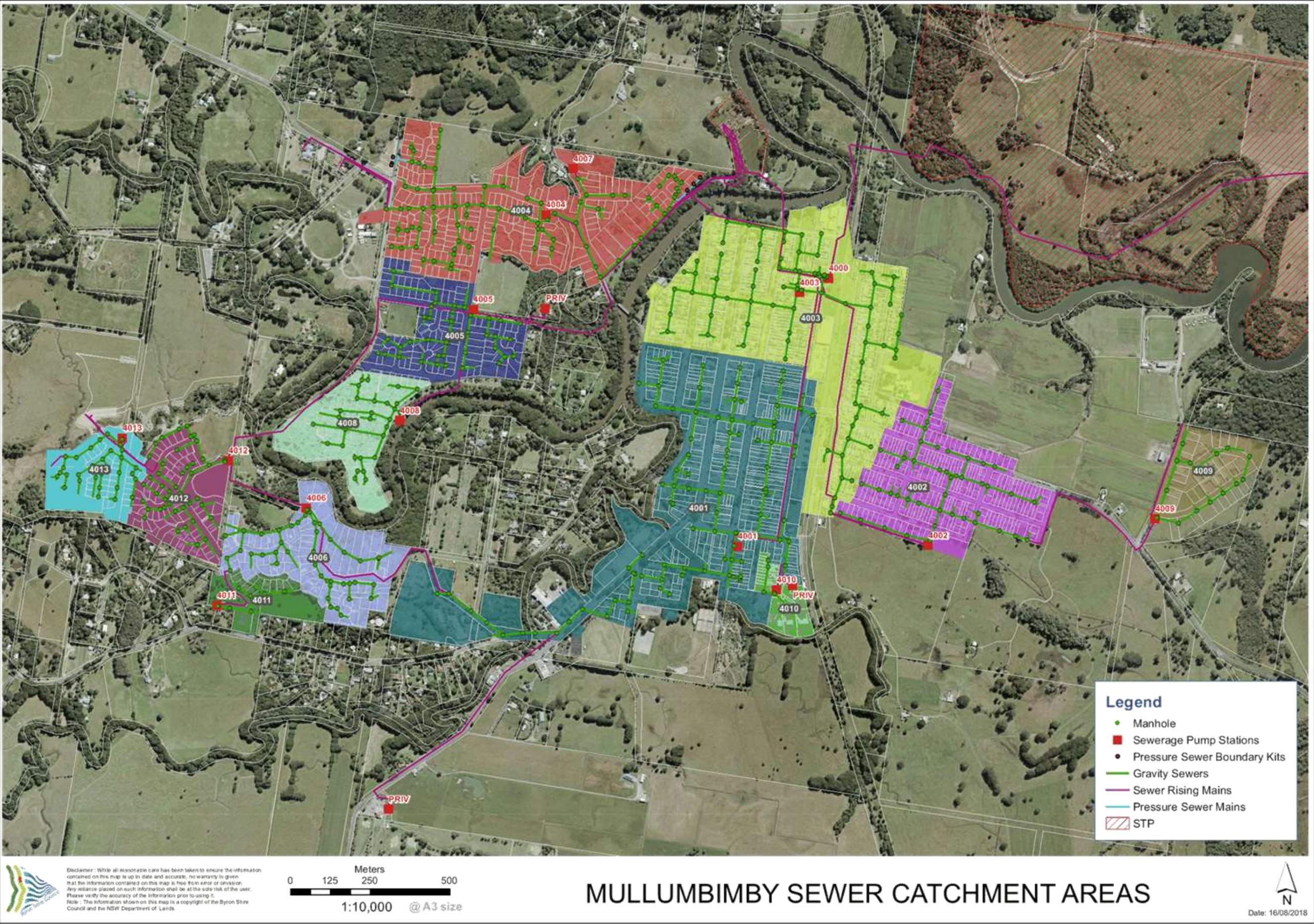
A community engagement and education plan will be prepared for the next WWSAC meeting. Advice has been provided that due to the technical aspects of the project, community information forums should be held with the broader community. Given, however, the importance of bringing the community along with the project, a Project Reference Group may be the better option with possibly a combination of both. For discussion at the meeting.

Financial Implications

The direct connectivity between stormwater and the sewer system will allow for funding of this work from the sewer fund. Initially this will be from the currently allocated budget.

Statutory and Policy Compliance Implications

Compliance with EPA licence 13266.



ARGLYE ST - AVENUE OF TREES - ENTRANCE TO MULLUM

Argyle street currently has very limited vegetation, constricted predominately to residential blocks. In summer the mass expanse of bitumen gets brutally hot and this affects nearby residence and the overall experience of entering the town.

The majority of the road has no street drainage, with the exception of road between Queen and King St. Catchments from adjacent houses is directed onto the street causing flooding in rain events. Localized flooding leads to sewer infiltration particularly in low lying areas

The introduction of self water garden beds and biopod's intercepting both rainwater and stormwater runoff will create localised OSD and prevent sewer infiltration. The large street trees will provide much needed shade and increase the aesthetic value of the street.



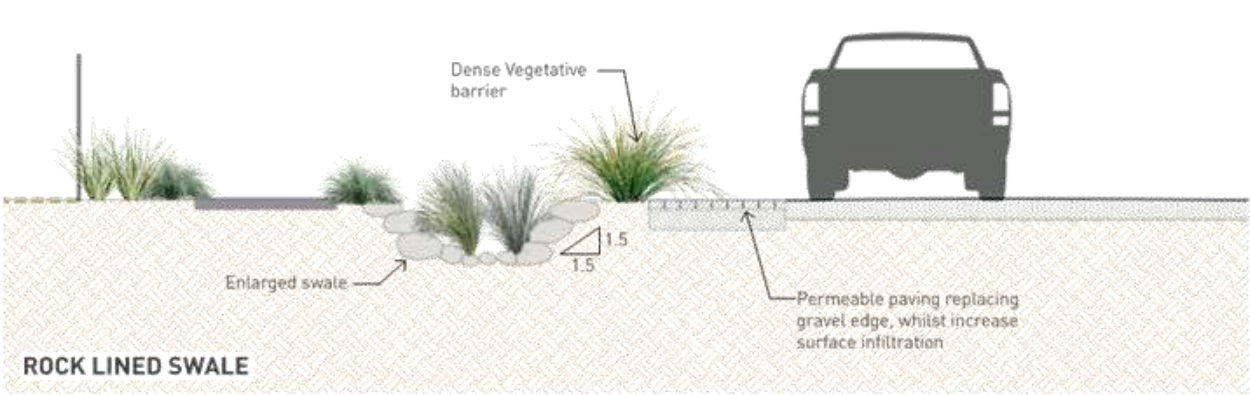
Avenue of trees leading into the main entrance to town evokes a welcoming feeling for those driving down Argyle St



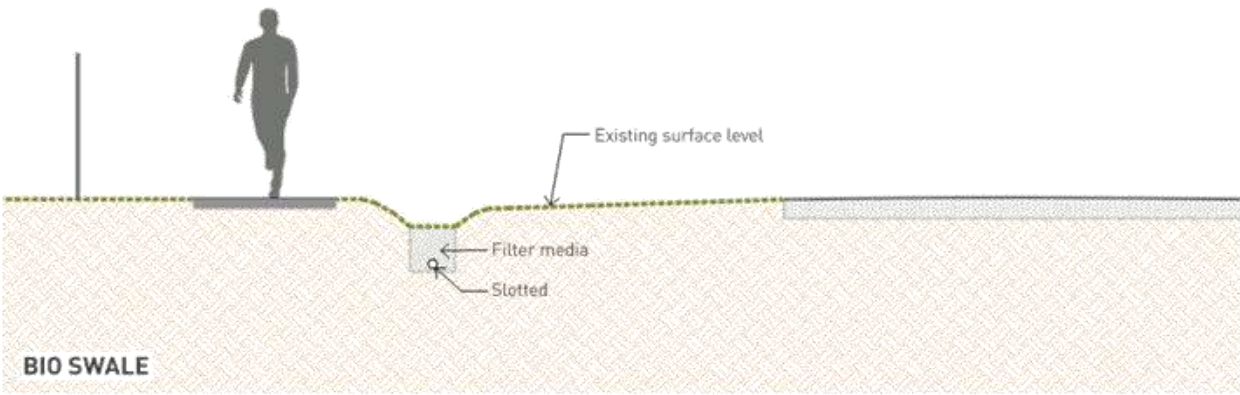
Each street tree location is to be carefully considered, with the intention of providing one large street tree per residential lot. Limitations to positions trees includes distance from intersections, bus stops, stormwater inlets, underground services, driveway, crossovers, power lines, street lighting etc.

Avenue of Brush Box
Lophostemon confertus

DALLEY STREET (NORTH) - ROADSIDE SWALE NATURALISATION



Enlarge swale, rock line, and plant, creating increased flood detention, limiting access to sewer and a visual appealing outcome.



Install a bioretention trench below the existing surface level to create increased OSD and assist with stormwater flow.

SMITH STREET - VERGE RAINGARDEN

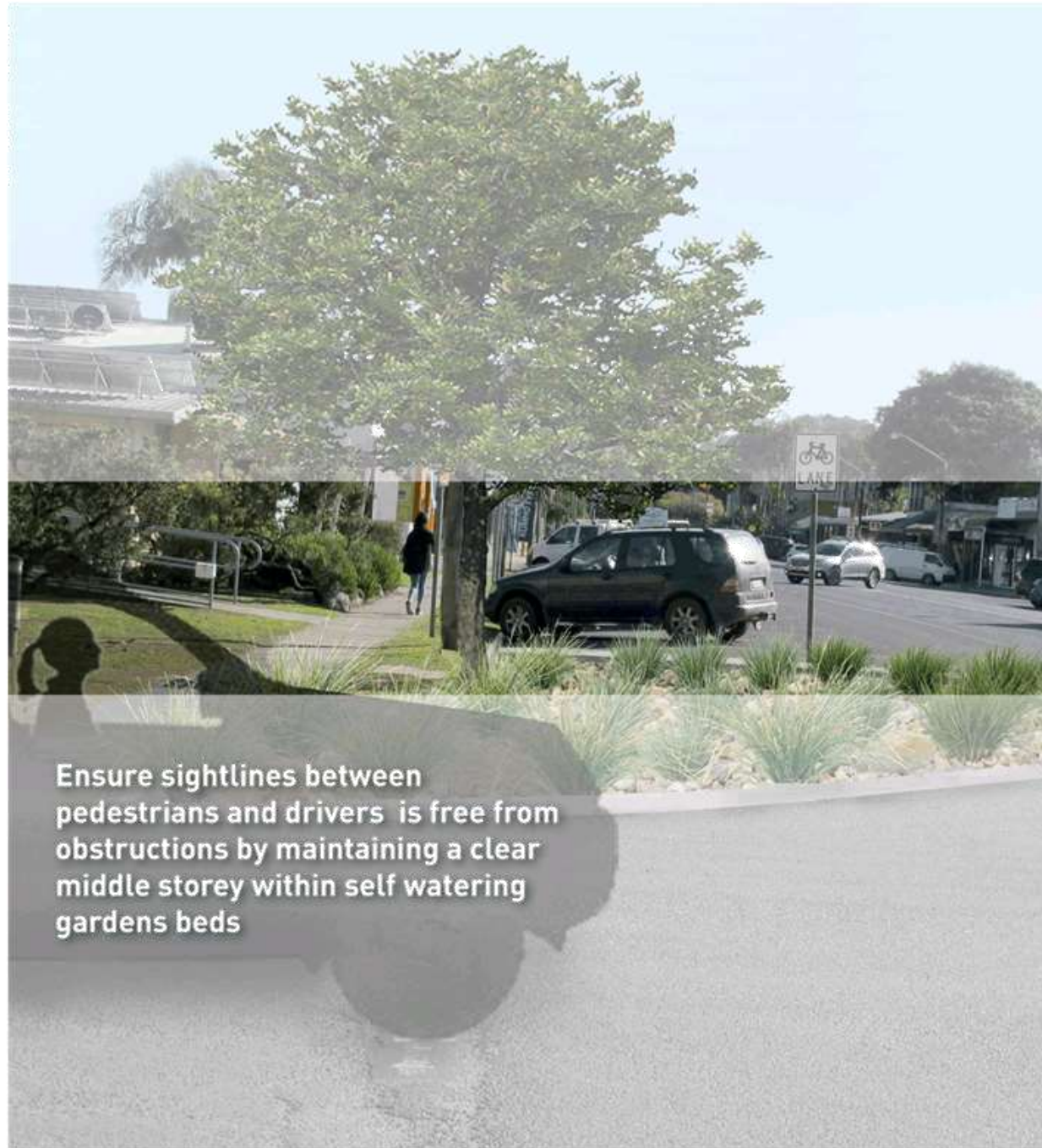


There are many opportunities within the industrial estate to increase OSD, improve stormwater quality and limit infiltration to sewer.

As this is a relatively new building it is assumed that it has its own On Site Detention strategy. There is however opportunities to catch and treat stormwater from the surrounding carpark and road.

The verge through the industrial estate in many places is used for parking and or storage of materials/ products. At a location such as the Byron Food Hub we believe an intervention, like this would be welcomed by the occupants, proving a aesthetically pleasing front to their business.

DALLEY ST - SELF WATERING GARDEN BEDS



Position one tree per corner, set back from the intersection. Clear lower branches of tree for sightlines and CEPTED requirements.

Within the proposed garden beds above approximately 88m³ of OSD is achieved if beds have an extended detention of 200mm.

Detailed design will require the formalisation of pedestrian movement running east/west along across Dalley St, as it currently does running north/south.

STUART STREET BUS STOP - KERB AND GUTTER RAIN GARDEN



AWC - Australian Wetlands Consulting PTY LTD | Project 1-8999_MullumbimbySewerInfiltrationStudy PRELIMINARY DRAFT 03/09/2018

Report No. 4.5 **Nutrient Loading in the Belongil**
Directorate: Infrastructure Services
Report Author: Peter Rees, Manager Utilities
File No: I2018/1704
5 **Theme:** Infrastructure Services
 Sewerage Services

Summary:

10 Council resolution 02-1329 approved the Byron Bay Sewage Treatment plant pursuant to Part 5, Section 112 of the Environmental Planning and Assessment Act 1979. Clause 11 of these consent conditions imposed limits on the total amount of Nitrogen and Phosphorus that could be
15 discharged into the Belongil. These limits were capped at the year 2000 levels from the old treatment plant.

 Currently the yearly average is 79% of these limits. In accordance with the resolution we are required to investigate feasible management strategies to reduce the loads below 80%.

20 The recently adopted Recycled Water management Strategy 2017-27 is a strategy that should reduce the loads as required. The calculation methodology however will need to be reviewed to determine an accurate assessment of the level of nutrients discharged given the configuration of the future recycled water projects.

RECOMMENDATION:

That Council approve a study to determine a new methodology to calculate nutrient discharge into the Belongil to satisfy both Council Resolution 02-1329 and the Recycled Water Management Strategy 2017-27.

Report

Council resolution 02-1329 approved the Byron Bay Sewage Treatment plant pursuant to Part 5, Section 112 of the Environmental Planning and Assessment Act 1979. Clause 11 of these consent conditions states

Nutrient Load Limit for West Byron STP

Nutrient loads discharged to Belongil Creek, as measured at the outlet of the constructed wetland, shall not exceed 1,502 kg per year for Total Nitrogen and 300 kg per year for Total Phosphorus.

Council shall continuously monitor nutrient loads discharged to the Belongil Creek. Determination of nutrient loads shall be based on a minimum of weekly sampling continuously averaged over a two month period, converted to an equivalent annual load.

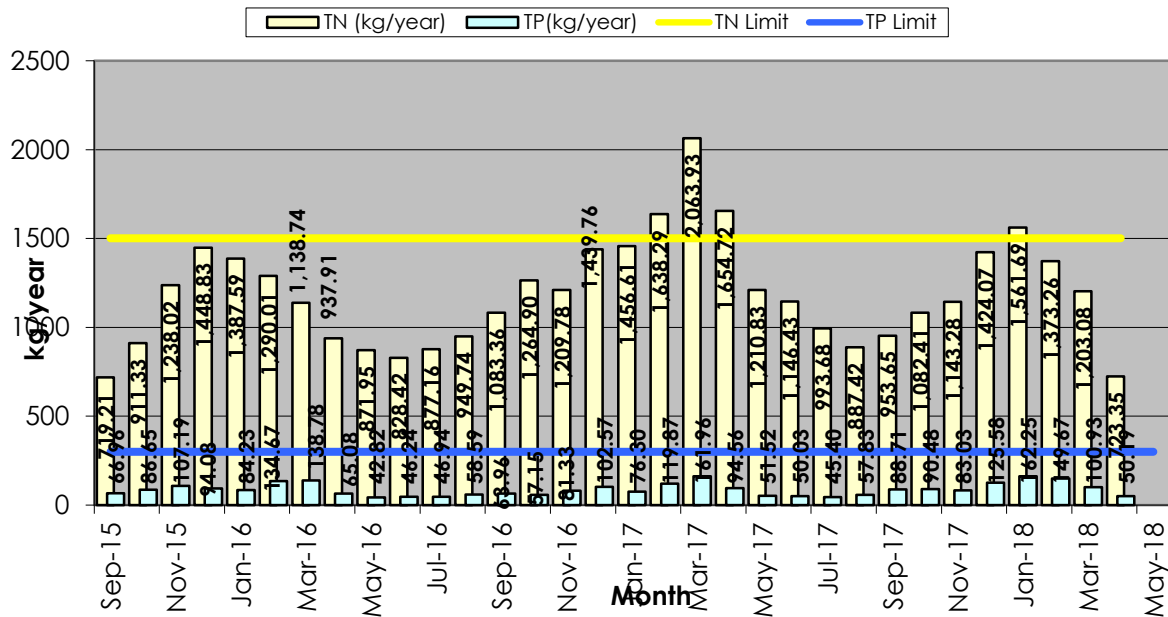
In the event that the equivalent annual nutrient load for either Total Nitrogen or Total Phosphorus exceeds 80% of the applicable limits specified in this Approval Condition, Council shall investigate feasible management strategies to reduce loads below 80%.

In the event that the equivalent annual nutrient load for either Total Nitrogen or Total Phosphorus exceeds 100% of the applicable limits specified in this Approval Condition, Council shall meet to discuss appropriate courses of action to prevent further exceedances.

Calculations undertaken recently indicate this consent condition has been exceeded for short periods during the past 15 months. Please note, this consent condition has a much tighter threshold than Council's EPA licence for the site. There have been no breaches of Council annual total load limits for Total Nitrogen which is 17,456 kilograms. The calculation methods are different for each limit and direct comparisons should not be made except that the consent condition threshold is much tighter than the EPA licence limit.

The graph showing this data is shown below in Graph 1. The exceedences are for total nitrogen only and occur in the peak period of summer – sometimes exacerbated by heavy rainfall such as ex tropical cyclone Debbie last year. It should also be noted the figures in the graph are annual projections based on total nitrogen concentrations averaged on a rolling 2 month basis. If the 12 month average is taken, the total calculated total nitrogen load is 1,191 kilograms or 79% of the Consent Condition limit.

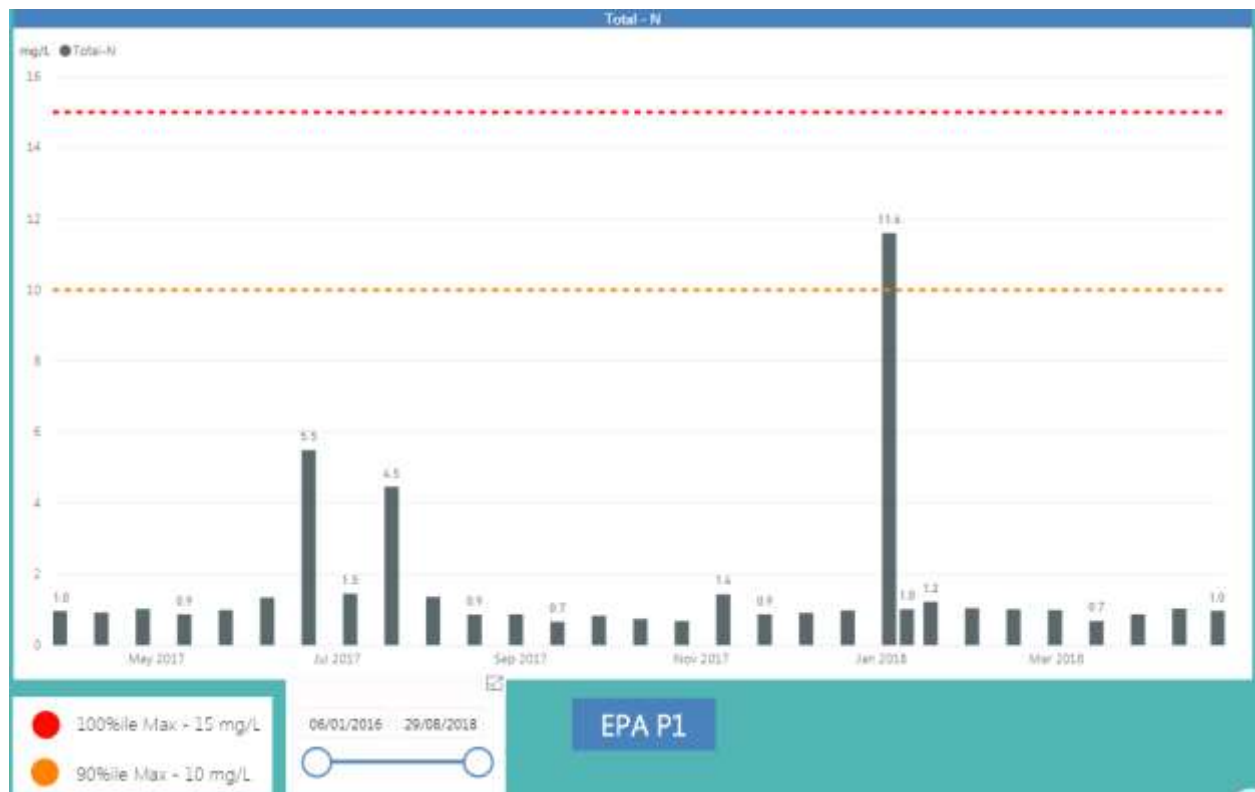
Byron Bay STW EPA Site 4 Condition 11 Two-month moving



Graph 1 Nutrient Loading Calculated in accordance with Clause 11 of Council Consent Conditions for the Byron May STP

5 Generally speaking the performance of the system has been above expectations however, the limited recycled water schemes commissioned to date has caused this situation. The new draft Recycled Water Management Strategy should mitigate this situation in the longer term.

10 To put the situation in context, the graphs below show the actual performance of the treatment plant with nutrient reduction.





5

From these graphs it can be seen we are well within the EPA licence limits.

10

Courses of Action to Prevent Further Exceedences of 02-1329

The recently adopted Recycled Water Management Strategy 2017-27 will have a significant impact on the management of nutrients and hydrology in the Belongil. This strategy will see

- Expansion of Wetlands throughout the catchment
- Use of recycled water to rehabilitate degraded water ways
- Expansion of the western corridor

By 2027 it is expected recycled water schemes will equate to 76% of the total STP inflow. The only issue with this is with wetlands outside of EPA Point 4 will not be accounted for in Resolution 02-1329 methodology. This will need to be considered.

Financial Implications

The recently adopted Recycled Water Strategy 2017-27 is to be factored into the Water and Sewer Strategic Business Plan.

Statutory and Policy Compliance Implications

Council resolution 02-1329.

Report No. 4.6 **Items for the Committee Requested by Mark Tidswell**
Directorate: Infrastructure Services
Report Author: Peter Rees, Manager Utilities
File No: I2018/1715
5 **Theme:** Infrastructure Services
 Sewerage Services

Summary:

10 Committee member Mark Tidswell has requested discussion on 2 topics for discussion at the meeting.

15 There is no formal report on these topics.

RECOMMENDATION:

That the Committee discuss the items as requested.

Report

It was requested by committee member Mark Tidswell to table the following items for discussion at the next Water Waste and Sewer Advisory Committee meeting:-

1. *Stormwater flood problems from culvert Bayshore Drive/Ewingsdale Road impacting landowners Melaleuca Drive Solutions planned actions.*
2. *WBSTP alternative flow path options for treated effluent Update from desktop review done by Planit Consultant as that was 6 mths ago and Belongil catchment current drainage network is at capacity.*

It is proposed that the items be discussed at the meeting.

Financial Implications

Not applicable

Statutory and Policy Compliance Implications

Not Applicable