Urban WaterManagement Strategy

ballina shire council

DRAFT

# Ballina Shire Council

## Development Servicing Plan for Wastewater and Recycled Water Supply Infrastructure

GHD

Adopted: TBC

*GHD has prepared this Report on the basis of information provided by Ballina Shire Council, which GHD has not independently verified or checked ("Unverified Information") beyond the agreed scope of work.*

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- *using information reasonably available to the GHD employee(s) who prepared this Report; and*
- *based on assumptions and judgments made by GHD.*

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# Executive Summary

This Development Servicing Plan (DSP) details wastewater and recycled water developer charges relative to the development areas serviced by Ballina Shire Council (BSC).

This DSP has been prepared in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002) issued by the Minister for Land and Water Conservation (now administered by the NSW Office of Water in the Department of Primary Industries (NOW), pursuant to section 306 (3) of the *Water Management Act 2000*.

The areas covered by this DSP are shown in Figure 1. The wastewater developer charges for the areas covered by this DSP have been calculated as detailed in Table 1. Background documents will be provided in electronic format upon request.

The total developer charge required in consequence of servicing a proposed development in the respective DSP areas will be assessed by multiplying the additional demand (ET) of the proposed development by the developer charge ($/ET) in the table below. Loadings and credits will be assessed in accordance with the NSW Local Government Water Industry Directorate, *Section 64 Determinations of Equivalent Tenements Guidelines* (2005).

Ballina Shire Council anticipates that it will:

- Review this DSP once, and no more than once, in each five year period from the implementation of this plan, and
- Review Developer Charges when and to the extent required by the Department of Environment, Climate Change and Water (DECCW).

In the period between any review, developer charges will be indexed annually (1st day of July) on the basis of movements on the CPI for Sydney, in the preceding 12 months to December, excluding the impact of GST. Current contribution rates are listed in Council's Annual Fees and Charges Document.

The Developer shall be responsible for the full cost of the design and construction of wastewater reticulation works within subdivisions. In addition to this Wastewater DSP there are other Council plans that apply to provision of infrastructure for developments.

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**Table 1 Summary of Wastewater Developer Charges (2011/12 rates)**

| Area | Developer Charge, less Reduction Amount ($ per ET) | Developer Charge 30% Agglomeration Rules applied ($ per ET) |
|---|---|---|
| DSP Area A * Wardell | 16,376 | 4,410 |
| DSP Area C Wollongbar Expansion Area | 11,673 | 12,300 |
| DSP Area E Alstonville and Wollongbar | 6,120 | 4,410 |
| DSP Area B Ballina Island North Ballina West Ballina Pacific Pines Estate Henderson Land Central and South | 4,365 | |
| DSP Area F Cumbalum Precinct A Ballina Heights | 3,304 | 2,808 |
| DSP Area G Cumbalum Precinct B | 2,387 | |

* Capital charge has been reduced by $7,891, in accordance with the subsidy explained in Section 7.7.

Note the Utility Wide Weighted Average Developer Charge, less reduction amount of $1,351, is $4,290 per ET (excluding the effect of subsidies)

A background document titled *Ballina Shire Council – Wastewater Infrastructure Planning* (GHD, 2011) identifies the characteristics of the assets covered by this DSP and is available from Council's website.

Eltham Road
Fernleigh
Fernleigh Road
Friday Hut Road
Knockrow
Alstonvale
Byron Bay Road
Ross Lane
Byron Street
Cumbalum B
Lennox Head
Mcleans Ridges
Tintenbar Road
Teven
The Coast Road
WUEA
Bruxner Highway
Rifle Range Road
Cumbalum A, Ballina Heights
Wollongbar
Alstonville Industrial
Alstonville
Ellis Road
North Ballina
Angels Beach Drive
Pacific Highway
East Ballina
Teven Road
Rous
Ballina Island
Bentinck Street
Hill Street
River Street
Lynwood
West Ballina
Rous Road
Dalwood Road
South Ballina
Pimlico Road
Keith Hall
Pimlico
Perrys Lane
Pimlico Riverbank Road
Marom Crk Road
Coolgardie
Wardell Road
Wardell
Bath Street
Patchs Beach
Pacific Ocean
Bagotville
Cabbage Tree Island

LEGEND

Major Roads
Cadastral Boundaries
DSP Area A
DSP Area B
DSP Area C
DSP Area E
DSP Area F
DSP Area G
Oceans and Waterways

1:80,000
0 1 2 3 4
Kilometres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

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GHD
CLIENTS | PEOPLE | PERFORMANCE

ballina shire council

Ballina Shire Council
Development Servicing Plan: Drinking Water Supply

Job Number | 22-15470
Revision | 1
Date | 11 MAY 2012

# DSP Areas Overview

Figure 1

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317 River Street Ballina NSW 2478 Australia T 61 2 6620 6500 F 61 2 6620 6501 E bnkmail@ghd.com W www.ghd.com.au



Data source: BSC - DSP Areas, Cadastral Boundaries, Waterways (2012). Navteq - Major Roads, Place Names (2011). Created by: CM

# 1. Introduction

Section 64 of the *Local Government Act 1993* enables a local government council to levy developer charges for water supply, wastewater and stormwater. This derives from a cross-reference in that Act to section 306 of the *Water Management Act 2000.*

A Development Servicing Plan (DSP) is a document that details the wastewater and recycled water developer charges to be levied on development areas utilising a water utility's wastewater infrastructure.

This DSP covers wastewater developer charges in regard to development areas served by Ballina Shire Council.

This DSP has been prepared in accordance with the *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater* (2002) [1] issued by the Minister for Land and Water Conservation (now administered by the Department of Environment, Climate Change and Water (DECCW)), pursuant to section 306 (3) of the *Water Management Act 2000*. The guidelines require a review of DSPs to be conducted after a period of 5 to 6 years.

This DSP supersedes all previous wastewater contributions, policies and charges adopted by the Council prior to the adoption of this DSP. This DSP takes precedence over any of Council's codes or policies where there are any inconsistencies relating to wastewater developer charges.

[1] The calculation method for the Reduction Amount (See Section 7.4) was taken from the Draft 2012 Guidelines, as requested by the NSW Office of Water

# 2. Administration

## 2.1 Name of Development Servicing Plan

This Development Servicing Plan (DSP) is known as *Ballina Shire Council Development Servicing Plan – Wastewater Infrastructure*.

## 2.2 Purpose of the Plan

The aims and objectives of this DSP are to:

- Ensure that adequate wastewater infrastructure is provided for as part of new development;
- Provide a comprehensive strategy for the assessment, collection, expenditure accounting and review of contributions on an equitable basis;
- Ensure that the existing community is not burdened by the provision of wastewater infrastructure as a result of future development; and
- Enable Council to be both publicly and financially accountable in its assessment and administration of the Development Servicing Plan.

## 2.3 Land to Which This Plan Applies

This DSP applies to all land within the Ballina Shire Local Government Area that is within the existing and proposed service areas illustrated on Figure 1.

## 2.4 Date of Commencement of Plan

Council adopted this DSP on XXXXX. The DSP came into effect upon recognition by NSW Office of Water.

The charges in this Plan will apply to all Development Applications determined on or after the date the Plan came into effect.

The charges in this Plan will also apply to existing development approvals that have developer charges outstanding.

## 2.5 How Will the DSP be Applied?

In determining a Development Application, Council may impose a condition requiring payment of a monetary contribution in accordance with the provisions of this DSP.

The condition of development consent will outline the amount payable in monetary terms at the time the consent is issued. However, conditions of consent shall advise that the Developer Contributions will be at that rate which applies at the time of payment. Therefore the rate may increase from the time of issue of the development application through indexation or through the replacement or review of this DSP.

## 2.6 Reviewing/Updating of Calculated Developer Charges

Ballina Shire Council anticipates that the developer charges relating to this DSP will be reviewed once and no more than once, in each five year period from the implementation of this plan.

In the period between any review, developer charges will be adjusted on 1 July each year on the basis of movements in the CPI for Sydney, in the preceding 12 months to December, excluding the impact of GST.

Developer charges will be those charges determined by Council from time-to-time and will be published in Council's Annual Fees and Charges.

## 2.7 Works within a Development

The Developer shall be responsible for the full cost of the design and construction of wastewater works, including pump stations within subdivisions that service only that development.

## 2.8 Developments Requiring Forward Funding

Council will generally not support development applications that require the provision of wastewater infrastructure prior to the timeframes outlined within the Works schedule.

Council may however consider a Development Application that requires the provision of infrastructure prior to the planning phase subject to the Developer agreeing to forward fund the infrastructure at the Developer's own cost.

Council may in these instances enter into a written agreement to reimburse the Developer as Council receives developer charges from other developments reliant on that infrastructure in the area.

## 2.9 Payment for Developer Charges

All developer charges will be paid at the rate applicable at the time of application for a Certificate of Compliance pursuant to Division 5 of Part 2 of Chapter 6 of the *Water Management Act 2000* is issued.

Generally payment of developer charges must be finalised at the following stages:

- Time of application for a Certificate of Compliance pursuant to Division 5 of Part 2 of Chapter 6 of the *Water Management Act 2000*.
- Development consents involving subdivisions – prior to release of linen plan;
- Development consents involving building work – prior to release of the construction certificate;
- Development consents where no construction certificate is required – at the time of issue of the notification of consent, or prior to the commencement of approved development as may be determined by Council. Examples may include Exempt or Complying Development under the State Environmental Planning Policy No. 60 – Exempt and Complying Development and approvals under Part 5 of the Environmental Planning and Assessment Act 1979.

## 2.10 Deferred Payment

In general, developer contributions need to be paid as above. However, Council may decide to accept deferred or periodic payment in accordance with Council's Policy No. D10 *Deferral of Developer Contributions*. This document is subject to amendment and, as such, the latest version should be referred to. This can be obtained from Council's website.

## 2.11 Refunds

Ballina Shire Council does not anticipate that developer charges will be refunded. In cases of extenuating circumstances, consideration will be given to a refund where developer charges have been paid in respect of a development consent that has lapsed and the funds have not been allocated/expended on the project identified in the DSP's work schedule.

Refunds will be a matter for Council to decide and it should be noted that any expended funds in the form of preliminary reports, investigations, land acquisitions etc. relating to the project could result in only part of the developer charges being refunded.

## 2.12 Works in Kind

"Works in kind" involves the construction or provision of infrastructure that has been identified in a works schedule contained in the Development Services Plan in lieu of full or part payment of a contribution relating to that section of the plan.

The decision to accept "works in kind" contributions will be at the discretion of Council. Factors that Council will take into consideration include:

- The extent to which the "works in kind" satisfies an item identified on the works program;
- Whether the payment of the contribution in accordance with the provisions of the DSP is unreasonable or unnecessary in the circumstances of the case;
- Whether the "works in kind" contribution will prejudice the timing or manner of the provision of the services for which the contribution is required; and
- The value of the "works in kind".

## 2.13 Developments Outside the Development Servicing Areas

Development areas outside the Development Servicing Plan Area (refer to relevant drawing/s in Section 11) that are to be developed during the term of this policy and have no detailed DSP (and require wastewater services), will be subjected to a separate DSP. The Developer shall be responsible for the preparation cost of this DSP.

## 2.14 Consultation and Dispute Resolution

A Developer who is dissatisfied with how a wastewater utility has calculated a developer charge has a right of appeal pursuant to the DLWC *Guidelines for Calculating Developer Charges of Water Supply, Sewerage, and Stormwater* (2002).

1. A Developer who is dissatisfied with the way in which a wastewater utility has calculated a developer charge may complain to the utility.

2. The General Manager of the utility is to review the complaint or cause it to be reviewed.
3. The Developer, if still dissatisfied, may request that an arbitrator review the matter by way of arbitration. The arbitrator is to be appointed by agreement between the Developer and the wastewater utility.
4. The decision of the arbitrator is to be binding on both the Developer and the utility.
5. Costs of the arbitration are to be borne equally by the utility and the customer.
6. The Commercial Arbitration Act 1984 applies to any such arbitration.

It should be noted that not all aspects of the developer charge calculation are arbitral. That is, those matters of detail which are prescribed in DLWC's Guidelines are not subject to arbitration. For example, discount rates and the forecast horizon for expected net revenues and costs are parameters that are prescribed by DLWC.

# 3. Demographic and Land Use Planning Information

## 3.1 Growth Projections

Growth projections for population and number of ETs are shown in Table 2 below. These projections are for a 20-year planning horizon from the present year to 2030, which is Council's current planning horizon.

**Table 2 Projected Equivalent Tenement Growth[2]**

| Time Period | Projected Shire ET Growth | Total Serviced ETs | Total Shire Population |
|---|---|---|---|
| 2010 | - | 18,309 | 42,546 |
| 2010 – 2015 | 1,501 | 19,810 | 45,356 |
| 2015 – 2020 | 1,538 | 21,348 | 48,116 |
| 2020 – 2025 | 1,562 | 22,910 | 50,786 |
| 2025 – 2030 | 1,561 | 24,471 | 53,276 |

Projected ET growth for the areas covered by individual DSPs are provided in Appendix A as part of the calculations of the capital charge.

## 3.2 Land Use Information

This DSP should be read in conjunction with Ballina Shire Council Urban Land Release Strategy (2000), the Ballina Shire Council Local Environmental Plan (1987) (BLEP) and the Draft Ballina Local Environmental Plan (2010).

## 3.3 Projected Equivalent Tenements

The basis of future development throughout the Ballina Shire has been adopted from information provided by the BSC Strategic and Community Services Group. This included the Ballina Shire Council Local Growth Management Strategy - Housing demand and supply analysis working documents. The information in these documents is derived from information supplied by the Australian Bureau of Statistics, incorporating the latest available population information.

The projected future development areas and dwelling increases across the Shire, based on:

- Areas assumed for future land release;

[2] Source: Ballina Shire Council Local Growth Management Strategy – Housing demand and supply analysis working documents.

- Areas identified as part of the BSC Growth Management Strategy; and
- Potential for Infill Development.

Projected ET growth in this document is for the purpose of capital works planning only. Actual population growth will be subject to the rezoning process and Council Development Approval.

### 3.3.1 Future Development Areas

A number of key development areas have been identified for future land supply in Ballina Shire, including the following:

- West Ballina Structure Plan which identifies approximately 40 ha of land, incorporating a range of industrial, residential and open space land uses.
- Zoned and Candidate Investigation Release Areas in West Ballina, including potential redevelopment of the Boat Harbour precinct;
- Zoned and Candidate Investigation Release Areas in North Ballina, including potential expansion of the Southern Cross Industrial Estate and further industrial expansion;
- Zoned and Candidate Investigation Release Areas in Cumbalum Ridge;
- Zoned Release Area in East Ballina, including Rainforest Ridge;
- Zoned and Candidate Investigation Release Areas in Lennox Head;
- Candidate Investigation Release Area in Skennars Head;
- Wollongbar Urban Expansion Area; and
- Zoned and Candidate Investigation Release Areas in Wardell.

The ET projections associated with the above development areas are further detailed in Section 3.3.2.

### 3.3.2 Development Summary

Significant development has been identified across Lennox Head, with future projections representing a development yield of approximately 3000 ET. In addition, future development and infill growth has also been identified throughout the Ballina, Wardell and Wollongbar wastewater catchment service areas.

The location of the proposed development areas are shown in Figure 1.

# 4. Wastewater Infrastructure

This plan levies developer charges towards the cost of providing wastewater infrastructure to service new development. This infrastructure includes the value of both existing and future assets serving a new development area.

Works covered by this DSP include, but are not limited to:

- Existing Distribution and Trunk Mains;
- Existing Wastewater Pumping Stations;
- Existing Wastewater Treatment Works;
- Proposed Trunk Infrastructure; and
- Recycled Water Infrastructure.

The existing and proposed wastewater trunk infrastructure serving the area covered by this DSP is shown in a spatial format in Section 11.

## 4.1 Estimates of Capital Cost

The estimated capital costs of works serving the area covered by this DSP are provided in Appendix A.

The capital costs for wastewater mains were estimated using the *NSW Office of Water (formerly Ministry of Energy and Utilities), NSW Reference Rates Manual – Valuation of Water Supply, Sewerage and Stormwater Assets (2003 with 2010 update)* (the Manual). More information on these rates, including excluded items can be found in the Manual. Note that any gravity mains with a diameter less than or equal to 150 mm (except as noted below) were classed as reticulation mains and were therefore not included in the calculation of the capital charge per ET. However, these gravity mains are included in the figures of 11 to show connectivity between potential developments and the sewage treatment plants. For the Wollongbar area an additional difficulty rate for 10% rock was included.

For the Wollongbar Urban Expansion Area (WUEA) some gravity mains of diameter 150 mm have been included as DSP costs, as determined by BSC. For the WUEA costs were provided based on the contracts for the works. These have been incorporated instead of using the reference rates for these items.

The pump station costs were estimated using the GHD Cost Database as it was felt that these costs were more appropriate to valuing new works than those provided in the Manual. These rates include a 30% contingency.

Cost estimates for recycled water infrastructure, which is part of the imminent construction program, prepared by the NSW Public Works Department on behalf of Ballina Shire Council were used for the schemes located in Ballina, Ballina Heights, Cumbalum Urban Release Area (Precinct A & B) as well as Lennox Head, East Ballina and Skennars Head. Some infrastructure costs were prorated in the asset register to adequately account for the entire cost of the system.

All assets that will be greater than 30 years of age when the DSP comes into effect have been excluded from the DSP calculations. This is in accordance with IPART recommendations, as BSC were unable to provide documentation justifying that population growth was accounted for in the development of these assets.

## 4.2 Timing of Works

The estimated timing for works serving the area covered by this DSP are provided in Appendix A. Further information regarding how the timings were estimated for individual work items is provided in report Reference 3. Dates identified are approximate only and are contingent on development proceeding.

# 5. Standards of Service

System design and operation are based on providing the following standards of service.

## 5.1 Desired Standards of Service

The wastewater network is required to meet the following standards of service.

**Effluent Quality**

- Sewage effluent meeting Environment Protection Authority 90 Percentile License Limits (BOD, SS, total N, $NH_3N$, Oil and Grease, Total P, Faecal coliforms);

**Water Quality**

- Recycled water quality to comply with Council's Recycled Water Management Plan and the Australian Recycled Water Guidelines.

**Chokages**

- All wastewater chokes removed and service restored within 8 hours;

**Overflows and Odour**

- Wastewater overflows to the environment less than one per 100 km of mains per year; and,
- Odour complaints less than 1 per 1000 properties per year.

# 6. Design Parameters

Investigation and design of wastewater system components is based on the *Manual of Practice: Sewer Design* (1984) and the *Manual of Practice: Sewage Pumping Station Design* (1986). These Manuals were prepared by the former NSW Public Works Department. In order to determine the infrastructure requirements over the planning horizon, the trunk wastewater system was modelled using Haestad Method's SewerCAD software, to determine the performance of the existing and proposed systems under projected hydraulic loads.

The GHD Watewater Infrastructure Planning report (Reference 4) relates to the system components in this DSP.

## 6.1 Planning and Design Parameters

The major components of the wastewater network were planned according to the following:

**Gravity Mains**

- Mannings "n" friction value = 0.014;
- Minimum velocity at Peak Wet Weather Flow (PWWF) = 0.6m/s;

**Trunk wastewater pump stations**

- Emergency storage = 8 hours @ Average Dry Weather Flow (ADWF), where the ADWF is the average dry weather flow of the pump stations gravity catchment only;
- Duty pump to be capable of matching PWWF inflow;

**Rising Mains**

- Minimum velocity = 0.75m/s;
- Maximum velocity = 2.0m/s.

# 7. Calculated Developer Charges

## 7.1 Background

Developer charges are comprised of the following components:

- Capital charge – the cost of providing the asset, and;
- Reduction amount – the cost recovered through annual charges.

The relationship between these components is as follows:

Developer Charge = Capital Charge – Reduction Amount

## 7.2 Service Areas

Developer charges were initially calculated for a number of different service areas within the Ballina Shire Local Government Area.

Service areas were determined by Council.

This resulted in the adoption of the service areas detailed in Table 3 below.

**Table 3 Service Areas**

| Service Areas | Localities Included |
|---|---|
| Area A | Wardell |
| Area B | Lennox Head<br>Skennars Head<br>East Ballina<br>North Ballina<br>West Ballina<br>Ballina Island<br>Pacific Pines Estate<br>Henderson Land Central and South |
| Area C | Release area known as the Wollongbar Urban Expansion Area. |
| Area E | Alstonville and Wollongbar |
| Area F | Existing and future development in Cumbalum Precinct A<br>Existing and future development in Ballina Heights |
| Area G | Future development in Cumbalum Precinct B |

## 7.3 Capital Charge

The capital charge of an asset is calculated using the following steps, as described in the Guidelines (DLWC, 2002):

- *Estimate the period to full take-up of asset capacity, commencing in or after 1996. If information is readily available, actual take-up rates to date should be used. If not, the water utility could use an average based on the take-up rate for similar release or development areas, or other (better) estimates that are available. An estimate of the take-up of existing unused capacity should also be made.*
- *Calculate the capital charge per ET necessary to equate the present value of the stream of charges which would be derived from annual (per ET) charges and the capital cost of the asset.*

There are two basic approaches to calculating the capital charge per ET, the return on investment (ROI) approach and the spreadsheet approach. The latter is more appropriate for development areas where infrastructure will be developed in stages, and therefore was adopted for this DSP.

The capital charge calculations for wastewater are contained in Appendix A.

## 7.4 Reduction Amount

Council has adopted the Direct NPV method to calculate the Reduction Amount, as per the 2012 Draft Guidelines (DPI, 2012). Note that this is a different and simpler method of calculation from the NPV method proposed by the 2002 Guidelines. As per the 2012 Draft Guidelines: *This method involves calculation of the present value (PV) of the future net income, which is the difference between the revenue from annual bills, and annual OMA cost, projected for new development over the next 30 years. This is divided by the PV of the new ETs over 30 years to give the reduction amount.*

The reduction amount calculations for wastewater are contained in Appendix A. The Reduction Amount was calculated using the 2011/2012 OMA costs and annual billing data, as per the basis year for the rest of the calculations.

## 7.5 Methodology for Determining Developer Charges to be Paid

Calculation of the developer charge payable on all developments is based on the following formula:

$$\text{Development Charge Payable} = \text{Developer Charge}^{3}\ (\$/\text{ET}) \times \text{ETs}$$

When a development is assessed by Council, the only variable in this calculation is therefore the number of ETs in the proposed development. The following sections define how the number of ETs are defined for specific development types.

[3] Developer charge as defined by this document.

It should be noted that when a development is assessed, and the assessed ETs for the same falls below or is equal to the current entitlements, no developer charges will be levied, nor monies refunded on unused entitlements.

A developer charge will only be levied against a development where the ET evaluation is above the current entitlement.

### 7.5.1 Existing Unconnected Lots

In the case of an existing lot to be connected to Council's system and which has not previously paid developer charges, a contribution equivalent to the relevant developer charges will be applied.

### 7.5.2 Residential Development

Developer contributions for residential developments are based on industry guidelines that define the number of ETs for common development types. At the time of publishing this policy, the Water Directorate (May 2009 Addendum), *Section 64 Determinations of Equivalent Tenements Guidelines* are the current industry guidelines.

For advice on the current industry guidelines being used to calculate residential developer charges, please contact Ballina Shire Council's Water and Wastewater Section.

### 7.5.3 Non-Residential Developments including Commercial/Industrial Developments

Developer contributions for non-residential developments are based on industry guidelines that define the number of ETs for common development types, such as commercial and industrial uses.

At the time of publishing this policy, the Water Directorate *Section 64 Determinations of Equivalent Tenements Guidelines* are the current industry guidelines.

For advice on the current industry guidelines being used to calculate non-residential developer charges, please contact Ballina Shire Council's Water and Wastewater Section.

If the industry guidelines do not provide an appropriate match to the development being assessed, then the developer contribution will be determined via the use of one of the following methods:

1. Based on historical sewage production figures of similar developments (see Section 7.5.4); or
2. The number of water / wastewater fixture units (FU's – see Section 7.5.5); or
3. Information supplied by the Developer for sewage production (see Section 7.5.6).

### 7.5.4 Historical Sewage Production Method

This is applicable where historical water consumption information is available.

The ET loading will be determined by assessing the historical water consumption and applying an appropriate discharge factor for similar developments (i.e.: 1 ET = 230 kL/annum of water consumption (Water Directorate, May 2009 Addendum)).

### 7.5.5 Fixture Unit (FU) Method

The fixture unit method will be used in cases where the above-mentioned methods are not appropriate.

The fixture units are calculated using the table from Section 6.2 of Part 2.2 of the National Plumbing and Drainage Code – AS3500. This number is then converted to an equivalent tenement using the probable simultaneous flow rate for a standard house.

### 7.5.6 Information Supplied by the Developer

This will normally be applicable for developments that cannot be determined by historical sewage production (such as a heavy industrial development).

For the calculation of ETs based on this method, the Developer will need to supply to Council a submission outlining the proposed flow rates (instantaneous daily and average annual flow rates) together with relevant supporting documentation.

## 7.6 Developer Charges

The developer charges determined prior to any agglomeration or cross-subsidy are shown in Table 4. The charges calculated were updated to 2011/12 rates by applying the CPI rate to December 2010 for Sydney (as per updating method in the Guidelines).

**Table 4 Developer Charges determined prior to Agglomeration**

| Development Area | Total Capital Charge per ET ($) | Total ET Growth (ET) | Proportion of Growth (%) | Weighted Capital ($) | Reduction amount ($) | Developer charge (prior to agglomeration or subsidies) ($) | Developer charge with subsidies (prior to agglomeration) ($) |
|---|---|---|---|---|---|---|---|
| A* | 17,727 | 120 | 0.9% | 160 | 1,351 | 16,376 | 8,486 |
| B | 5,715 | 6814 | 51.1% | 2923 | 1,351 | 4,365 | 4,365 |
| C | 13,024 | 780 | 5.9% | 763 | 1,351 | 11,673 | 11,673 |
| E | 7,471 | 179 | 1.3% | 100 | 1,351 | 6,120 | 6,120 |
| F | 4,655 | 2490 | 18.7% | 870 | 1,351 | 3,304 | 3,304 |
| G | 3,738 | 2939 | 22.1% | 825 | 1,351 | 2,387 | 2,387 |

* Area A (Wardell) will be subsidised to equal Area B's Developer Charge; see Section 7.7

## 7.7 Cross-Subsidy

The Guidelines (DLWC, 2002) permit Local Government Authorities to cross-subsidise the calculated developer charge for an area, provided the extent of cross-subsidisation is fully disclosed. It is also noted that a developer charge cannot be cross-subsidised from one area to another. Instead, a developer charge for a particular area can be cross-subsidised via a corresponding change in the annual charge being paid through water rates. This final Developer Change includes a subsidy for the Wardell wastewater developer charge of $7891. The subsidy will be achieved by increasing annual wastewater bills by an equivalent amount (around $1 per year)

## 7.8 Agglomeration of Service Areas

Once the developer charges have been calculated for each service area, the Guidelines (DLWC, 2002) permit the agglomeration of charges that are within 30% of each other. Agglomeration is intended to minimise the number of different developer charges within the local government area. The agglomeration methodology outlined in the Guidelines (DLWC, 2002) was used to determine the adopted developer charge. The agglomerated charges are shown in Table 5. The charges calculated were updated to 2011/12 rates by applying the CPI rate to December 2010 for Sydney (as per updating method in the Guidelines).

Note that due to the subsidy applied to Area A (Wardell), it will have the same charge as to Areas B and E, though these areas are not technically agglomerated, since agglomeration is to take place prior to reductions and subsidies.

**Table 5 Adopted Developer Charges after Agglomeration (2011/12 rates)**

| Development Area | Total Capital Charge per ET ($/ET) | *Agglomeration inspection (70% of $/ET)* | Total ET Growth (ET) | Proportion of Growth | Weighted Capital Charge for Each Location ($/ET) | Capital Charge for each DSP Area ($/ET) | Reduction amount ($/ET) | Calculated Developer Charge ($/ET) | Utility Wide Weighted Average Developer Charge per ET ($/ET) | *Subsidies ($/ET)* | Adopted Developer Charge, after subsidies ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | 17,727 | 12,409 | 120 | 0.9% | 160 | | | | | 7,891 | 4,410 |
| C | 13,024 | | 780 | 5.9% | 763 | | | | | | 12,300 |
| Total for Area A & C | | | | 6.8% | 922 | 13,651 | 1,351 | 12,300 | | - | |
| E | 7,471 | 5,230 | 179 | 1.3% | 100 | | | | | - | |
| B | 5,715 | | 6814 | 51.1% | 2,923 | | | | | - | |
| Total for Areas E & B | | | | 52.5% | 3,024 | 5,760 | 1,351 | 4,410 | | | 4,410 |
| F | 4,655 | 3,258 | 2490 | 18.7% | 870 | | | | | - | |
| G | 3,738 | | 2939 | 22.1% | 825 | | | | | - | |
| Total for Areas F & G | | | | 40.8% | 1,695 | 4,159 | 1,351 | 2,808 | | | 2,808 |
| Total for all areas | | | | 100.00% | 5,641 | | 1,351 | | 4,290 | | |
| Note Area A is subsidised by $7891 as per Section 7.7 | | | | | | | | | | | |

# 8. Reference Documents

Background information and calculations relating to this DSP are contained in the following documents:


1. Department of Land and Water Conservation (2002), *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater.*
2. Department of Primary Industries (2012), *Developer Charges Guidelines for Water Supply, Sewerage and Stormwater, 2012 – Consultation Draft*
3. New South Wales Government Office of Water, Ministry of Energy and Utilities (2003 with amendments in 2010), *NSW Reference Rates Manual – Valuation of Water Supply, Sewerage and Stormwater Assets*.
4. GHD (June 2011), *Ballina Shire Council – Wastewater Infrastructure Planning, Summary of Updates.*
5. Water Directorate (May 2009 Addendum), *Section 64 Determinations of Equivalent Tenements Guidelines.*
6. Department of Energy, Utilities and Sustainability (DEUS) (October 2004), Circular: *Additional Agglomeration Options for Section 64 Development Servicing Plans (DSPs) for Water Supply and Sewerage*.
7. GHD (2011), *Report for Lennox Head Sewage Pump Station 3001 Pump Upgrade Recommendation.*
8. NSW Water Solutions (NSW Public Works Department) (November 2011), *Ballina Shire Council – Ballina Recycled Water Storage & Distribution Systems: Concept Design Report*
9. NSW Water Solutions (NSW Public Works Department) (November 2011), *Ballina Shire Council – Lennox Head Recycled Water Storage & Distribution Systems: Concept Design Report*


These documents contain more detailed reference information relevant to the derivation of the developer charges. These documents can be reviewed in Council's offices by appointment. To review the documents, please contact Council on (02) 6686 4444.

# 9. Other DSP's and Related Plans

Other DSP's and related plans include:

- GHD (2004), *Ballina Shire Council – Water Supply Infrastructure – Development Servicing Plan* (anticipated to be revised in the 2011/12 financial year).
- Rous Water (2003), *Rous Water Development Servicing Plans – Regional Water Supply.*

Ballina Shire Council also levies developer contributions for various public amenities under Section 94 of the *Environmental Planning and Assessment Act, 1979*.

# 10. Glossary

| | |
|---|---|
| ADWF | Average Dry Weather Flow |
| Annual Demand | Total annual sewer loading |
| BOD | Biochemical oxygen demand. Used as a measure of the 'strength' of wastewater. |
| Capital Cost | The Present Value (MEERA basis) of assets used to service the development. |
| Capital Charge | Capital cost of assets per ET x Return on Investment (ROI) Factor. |
| CPI | Consumer Price Index |
| Developer Charge (DC) | A charge levied on Developers to recover part of the capital cost incurred in providing infrastructure to new development. |
| Discount Rate | The rate used to calculate the present value of money arising in the future. |
| DSP | Development Servicing Plan |
| DCP | Development Control Plan |
| DLWC | Department of Land and Water Conservation – now known as DIPNR |
| DIPNR | Department of Infrastructure, Planning and Natural Resources – formerly known as DLWC |
| EP | Equivalent Person |
| ET | Equivalent Tenement |
| IPART | Independent Pricing and Regulatory Tribunal |
| kL/d | Kilolitres per day |
| kL/a | Kilolitres per annum |
| LEP | Local Environmental Plan |
| MEERA | Modern Equivalent Engineering Replacement Asset |
| ML/d | Megalitres per day |
| NHMRC | National Health and Medical Research Council |
| NPV | Net Present Value |
| OMA | Operation, maintenance and administration (costs) |
| Peak Day Demand | Highest water consumption on one day in a year |
| Post 1996 Asset | An Asset that was commissioned by a water utility on or after 1 January 1996 or that is yet to be commissioned |

| | |
|---|---|
| Pre-1996 Asset | An Asset that was commissioned by a water utility before 1 January 1996 |
| PV | Present value. The value now of money, or ETs, in the future. |
| Real Terms | The value of a variable adjusted for inflation by a CPI adjustment |
| Reduction Amount | The amount by which the capital charge is reduced to arrive at the developer charge. This amount reflects the present value of the capital contribution that will be paid by the occupier of a development as part of future annual charges |
| ROI | Return on investment. Represents the income that is, or could be, generated by investing money |
| PWWF | Peak Wet Weather Flow |
| PS | Pumping Station |
| RWTP | Recycled Water Treatment Plant |
| Service Area | An area served by a separate water supply system, an area served by a separate sewage treatment works, a separate small town or village, or a new development of over 500 lots. |
| SR | Service Reservoir |
| SS | Suspended solids, or the concentration of particles in wastewater. Used as a measure of the 'strength' of sewage. |
| TRB | Typical residential bill |
| WWTP | Wastewater Treatment Plant |

# 11. DSP Areas

Table 6 provides an index to the figures defining the DSP areas provided in this section. Each figure (excluding Figure 1) indicates:

- The boundaries to the DSP area[4];
- The extent of existing trunk infrastructure;

**Table 6 Figure Index**

| Figure Number | Scheme | Locality | DSP Area |
|---|---|---|---|
| 1 | Wastewater | Ballina Shire | All DSP Areas |
| 2 | Wastewater | Wardell | DSP Area A |
| 3 | Wastewater | Ballina (Area B north) | DSP Area B (north) |
| 4 | Wastewater | Ballina (Area B south) | DSP Area B (south) |
| 5 | Wastewater | Ballina (Area B west) | DSP Area B (west) |
| 6 | Wastewater | Wollongbar Urban Expansion Area | DSP Area C |
| 7 | Wastewater | Cumbalum A, Cumbalum B and Ballina Heights | DSP Areas F and G |
| 8 | Wastewater | Wollongbar and Alstonville | DSP Area E |
| 9 | Recycled | Skennars Head, Lennox Head and Fig Tree Hill | DSP Area B (North) |
| 10 | Recycled | Skennars Head, East Ballina, Ballina Island | DSP Area B (South) |
| 11 | Recycled | North Ballina, Ballina Island, West Ballina | DSP Area B (West) |
| 12 | Recycled | Cumbalum A, Ballina Heights | DSP Area F |
| 13 | Recycled | Cumbalum B | DSP Area G |

[4] The DSP boundaries indicated on all figures represent the extent of the proposed charge boundary. They do not necessarily reflect Council's approval of the extent of the serviceable area. Development within the DSP Areas is subject to Rezoning and Development Approval. For further details regarding development within the DSP Areas please contact Ballina Shire Council.


LEGEND

- Pump Stations
- Pump Storage Upgrade
- Waste Water Treatment Plants
- Existing Gravity Mains
- Future Gravity Mains
- Existing Rising Mains
- Cadastre Boundaries

0 100 200 300 400 500
Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

CLIENTS | PEOPLE | PERFORMANCE

Ballina Shire Council
BSC Wastewater DSP

Job Number 22-15241
Revision 4
Date 11 MAY 2012

# Area A (Wardell)

# Figure 2

N:\AU\Toowoomba\Projects\22\15241\GIS\Maps\2215241_22.wor

317 River Street Ballina NSW 2478 Australia **T** 61 2 6620 6500 **F** 61 2 6620 6501 **E** bnkmail@ghd.com **W** www.ghd.com.au



Data source: Ballina Shire Council - Cadastre Boundaries (2010). GHD - Service Areas (2010), Capital Works (Gravity Mains, Rising Mains), Pump Stations, Sewerage Treatment Plants. Created by: CM

Lennox Head

SP3001

RM-3001-3, 250 mm (2015)

RM-3001-4, 250 mm (2015)

RM-3001-5, 250 mm (2015)

RM-3001-6, 250 mm (2015)

RM-3001-7, 250 mm (2015)

RM-3001-8, 250 mm (2015)

RM-3001-9, 250 mm (2015)

RM-3001-10, 250 mm (2015)

SP3002

Lennox Head

RM-3001-1, 250 mm (2015)

GM-3110-11-1, 450 mm (2011)

SP3110

SP3107

SP3114

SP3102

Lennox Head

SP3115

SP3101

Lennox Head STP

PS New North Creek

RM-PSNNC-2, 150 mm (2020)

RM-PSNNC-1, 150 mm (2020)

Skennars Head

LEGEND

Recycled Water Treatment Plant

New Pump Station

Pump Station Upgrade

Existing Pump Station

Pump Storage Upgrade

Future Gravity Mains

Existing Gravity Mains

Future Rising Mains

Existing Rising Mains

Cadastre Boundaries

0 250 500 750 1000

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

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ballina shire council

Ballina Shire Council
BSC Wastewater DSP

Job Number | 22-15241
Revision | 5
Date | 30 APR 2014

# Area B (North)

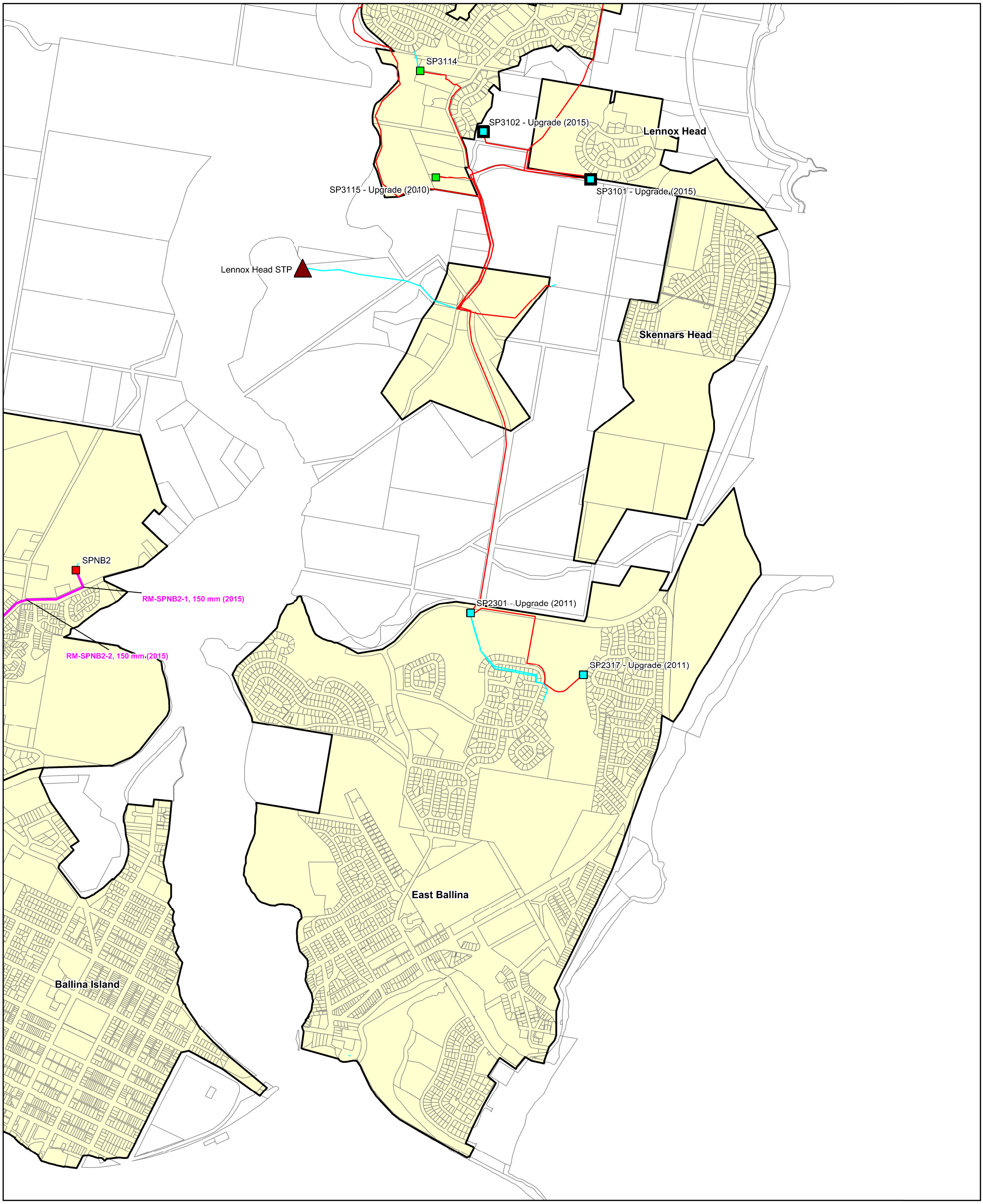
# Figure 3

N:\AU\Toowoomba\Projects\22\15241\GIS\Maps\2215241_28.wor

317 River Street Ballina NSW 2478 Australia **T** 61 2 6620 6500 **F** 61 2 6620 6501 **E** bnkmail@ghd.com **W** www.ghd.com.au



Data source: Ballina Shire Council - Cadastre Boundaries (2010). GHD - Service Areas (2010), Capitsl Works (Gravity Mains, Rising Mains), Pump Stations, Sewerage Treatment Plants. Created by: CM




LEGEND

- Recycled Water Treatment Plant
- New Pump Station
- Pump Station Upgrade
- Existing Pump Station
- Pump Storage Upgrade
- Future Gravity Mains
- Existing Gravity Mains
- Future Rising Mains
- Existing Rising Mains
- Cadastre Boundaries

0 250 500 750 1000
Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

CLIENTS | PEOPLE | PERFORMANCE

Ballina Shire Council
BSC Wastewater DSP

Job Number 22-15241
Revision 5
Date 30 APR 2014

# Area B (South)

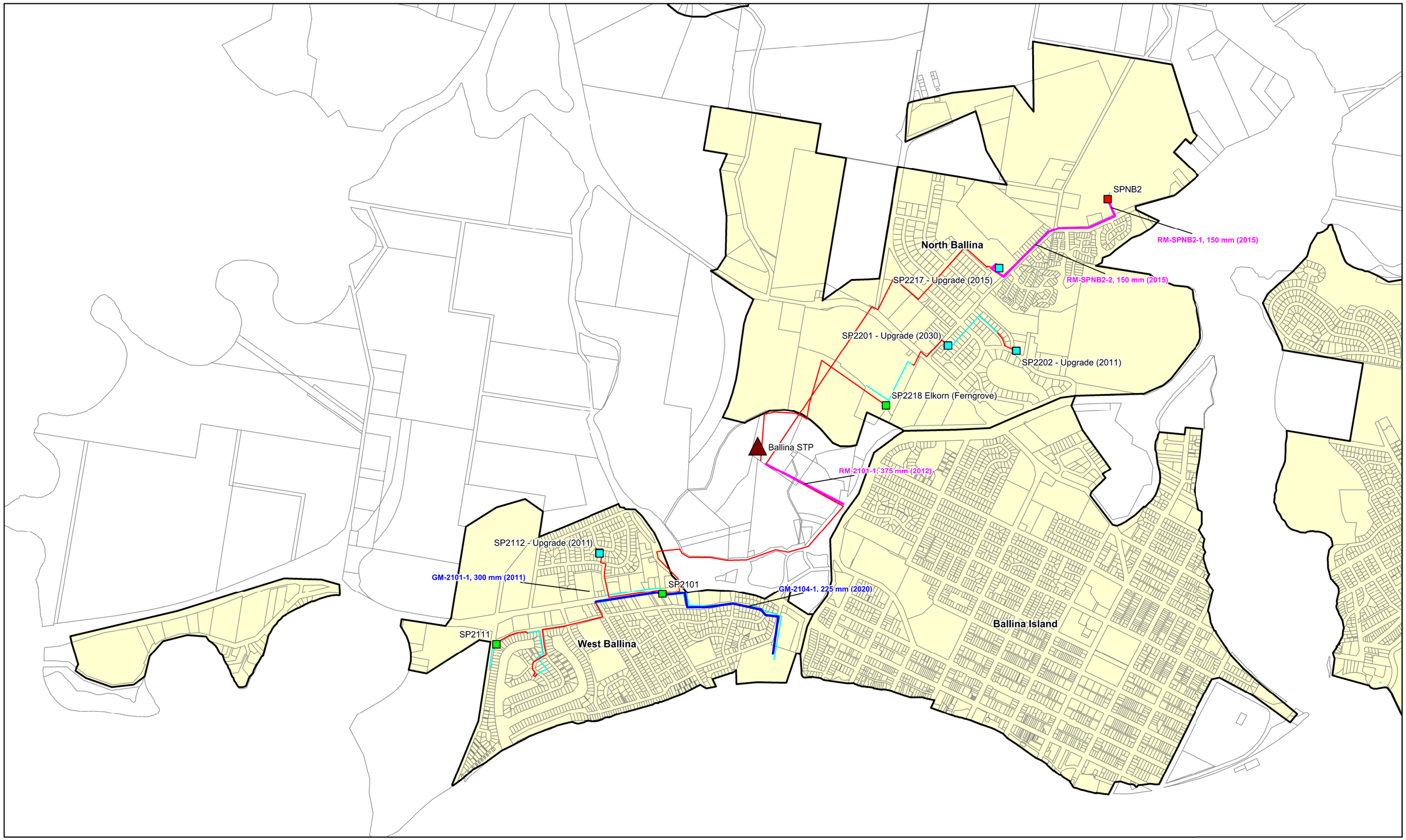
Figure 4

N:\AU\Toowoomba\Projects\22\15241\GIS\Maps\2215241_29.wor

317 River Street Ballina NSW 2478 Australia T 61 2 6620 6500 F 61 2 6620 6501 E bnkmail@ghd.com W www.ghd.com.au



Data source: Ballina Shire Council - Cadastre Boundaries (2010). GHD - Service Areas (2010), Capital Works (Gravity Mains, Rising Mains), Pump Stations, Sewerage Treatment Plants. Created by: CM




1:20,000 (at A3)

0 200 400 600 800

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid Of Australia, Zone 56

N

LEGEND

- Recycled Water Treatment Plant
- New Pump Station
- Pump Station Upgrade
- Existing Pump Station
- Pump Storage Upgrade
- Future Gravity Mains
- Existing Gravity Mains
- Future Rising Mains
- Existing Rising Mains
- Cadastre Boundaries

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BSC Wastewater DSP

Job Number 22-15241
Revision 5
Date 30 APR 2014

# Area B (West)

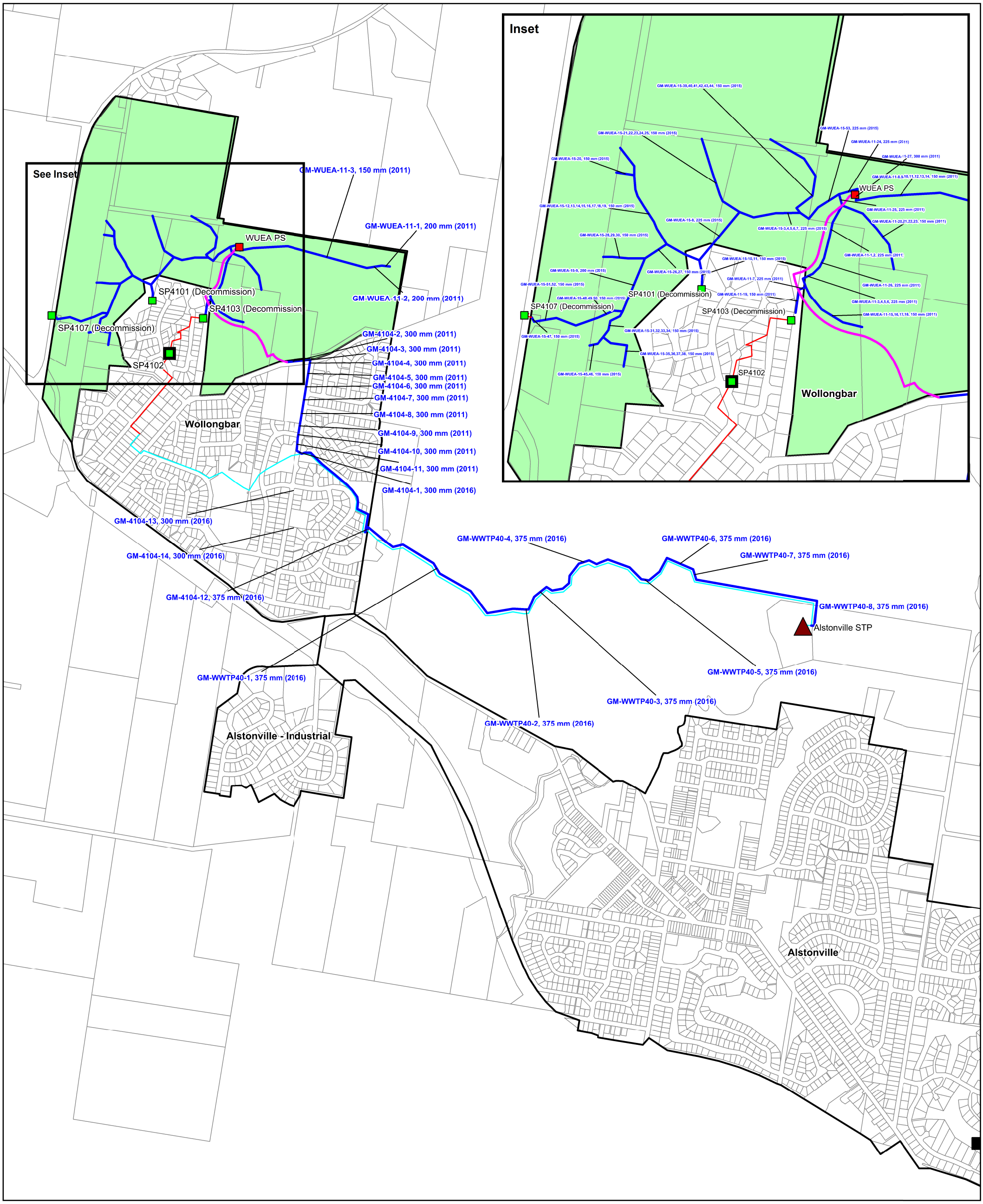
# Figure 5

N:\AU\Toowoomba\Projects\22\15241\GIS\Maps\2215241_30.wor



Data source: Ballina Shire Council (2010) - Cadastre boundary, Existing Gravity Mains, Existing Rising Mains, Existing Pump Station. GHD - New Pump Station, Pump Station Upgrade, Existing Pump Station, Pump Storage Upgrade, Future Gravity Mains,

317 River Street Ballina NSW 2478 Australia **T** 61 2 6620 6500 **F** 61 2 6620 6501 **E** bnkmail@ghd.com **W** www.ghd.com.au




LEGEND

- Wastewater Treatment Plant
- New Pump Station
- Pump Station Upgrade
- Existing Pump Station
- Pump Storage Upgrade
- Future Rising Mains
- Existing Rising Mains
- Future Gravity Mains
- Existing Gravity Mains
- Area C

0 200 400 600 800
Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

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BSC Wastewater DSP

Job Number | 22-15241
Revision | 5
Date | 30 APR 2014

# Area C (Wollongbar UEA)

# Figure 6

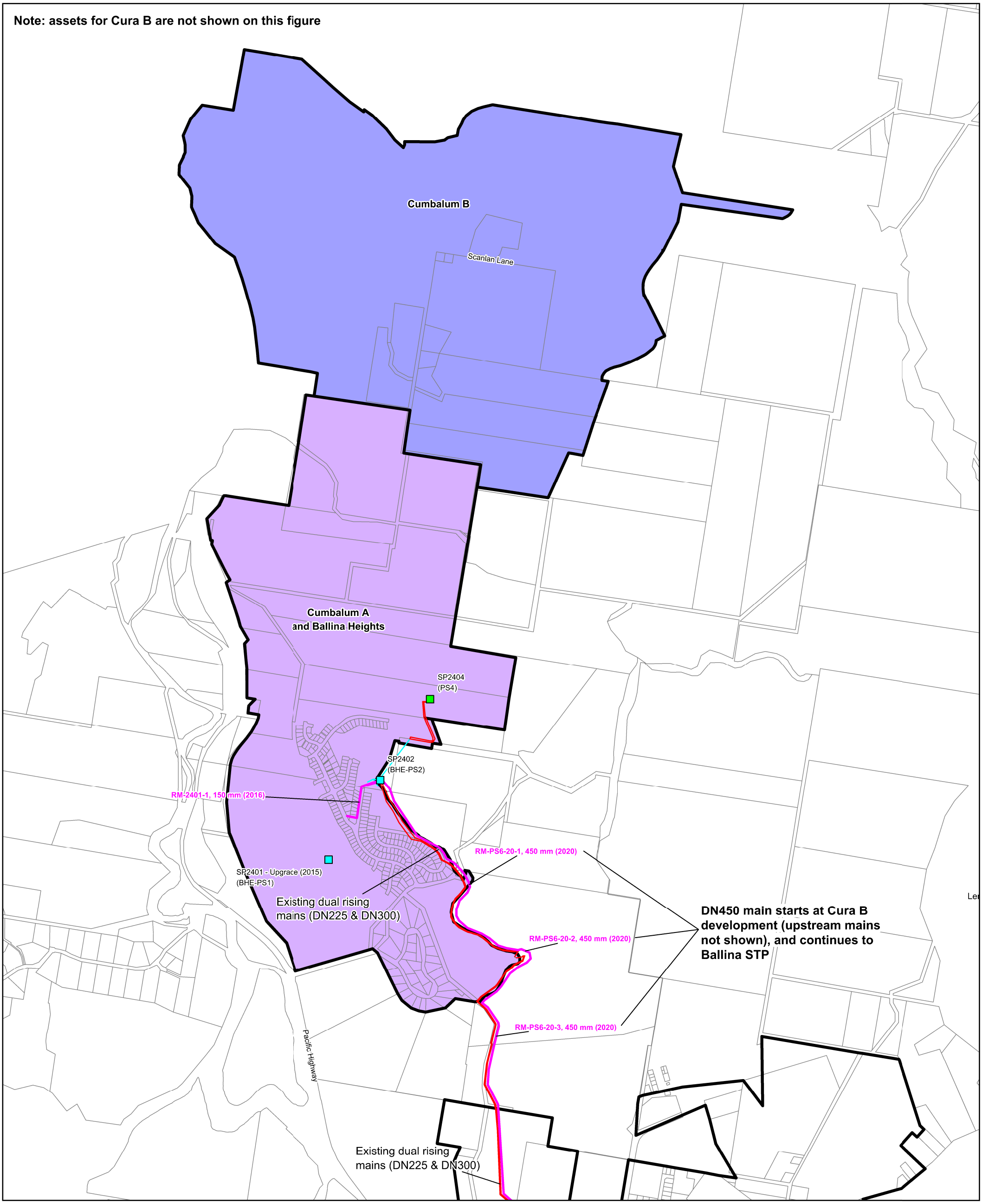
N:\AU\Toowoomba\Projects\22\15241\GIS\Maps\2215241_24.wor

317 River Street Ballina NSW 2478 Australia **T** 61 2 6620 6500 **F** 61 2 6620 6501 **E** bnkmail@ghd.com **W** www.ghd.com.au



Data source: Ballina Shire Council - Cadastre Boundaries (2010). GHD - Service Areas (2010), Capital Works (Gravity Mains, Rising Mains), Pump Stations, Sewerage Treatment Plants. Created by: CM

Note: assets for Cura B are not shown on this figure




LEGEND

| | | | |
|---|---|---|---|
| New Pump Station | Existing Gravity Mains | Area F | |
| Pump Station Upgrade | Existing Rising Mains | Area G | |
| Existing Pump Station | Future Rising Mains | Cadastre Boundaries | |

0 250 500 750 1000
Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

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BSC Wastewater DSP

Job Number | 22-15241
Revision | 5
Date | 30 APR 2014

# Area F and G (Cumbalum A and Ballina Heights and Cumbalum B)

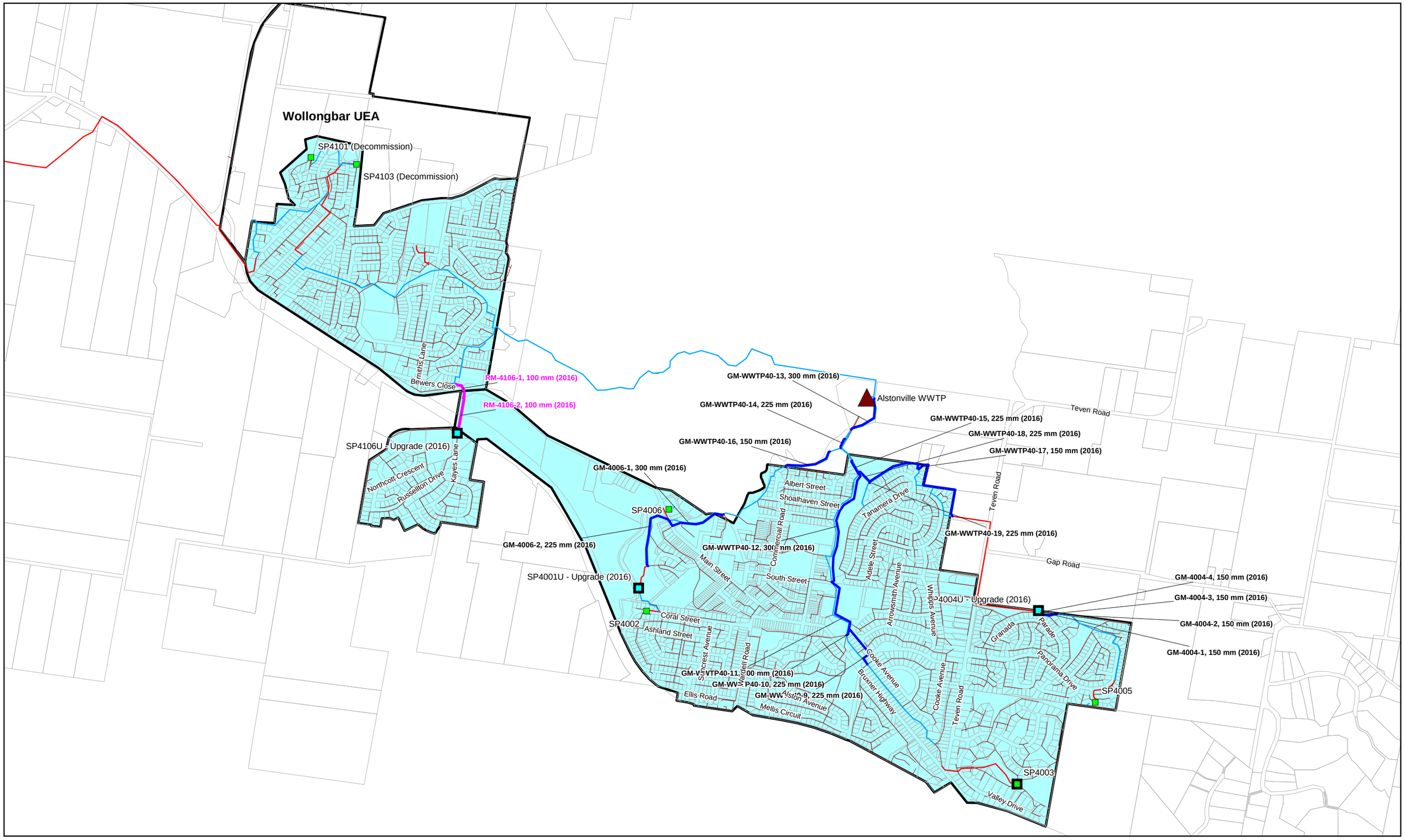
Figure 7

N:\AU\Toowoomba\Projects\22\15241\GIS\Maps\2215241_21.wor

317 River Street Ballina NSW 2478 Australia **T** 61 2 6620 6500 **F** 61 2 6620 6501 **E** bnkmail@ghd.com **W** www.ghd.com.au



Data source: Ballina Shire Council - Cadastre Boundaries (2010). GHD - Service Areas (2010), Capitol Works (Gravity Mains, Rising Mains), Pump Stations, Sewerage Treatment Plants. Created by: CM




1:15,000 (at A3)

0 150 300 450 600

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid Of Australia, Zone 56

LEGEND

- Wastewater Treatment Plant
- Pump Station Upgrade
- Existing Pump Station
- Pump Storage Upgrade
- Future Gravity Mains
- Existing Gravity Mains
- Future Rising Mains
- Existing Rising Mains
- Gravity Reticulation
- Cadastre Boundaries
- Area E

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BSC Wastewater DSP

Job Number 22-15241
Revision 5
Date 30 APR 2014

# DSP Area E (Alstonville and Wollongbar) Figure 8

N:\AU\Toowoomba\Projects\22\15241\GIS\Maps\2215241_26.wor



Data source: Ballina Shire Council (2010) - Cadastre boundary, Existing Gravity Mains, Existing Rising Mains, Existing Pump Station. GHD - New Pump Station, Pump Station Upgrade, Existing Pump Station, Pump Storage Upgrade, Future Gravity Mains,

317 River Street Ballina NSW 2478 Australia **T** 61 2 6620 6500 **F** 61 2 6620 6501 **E** bnkmail@ghd.com **W** www.ghd.com.au

Fig Tree Hill

Ross Lane

Byron Bay Road

Byron Street

Ballina Street

Lennox Head

RWP73 (150 mm ,2015)

RWP71 (150 mm ,2015)

RWP77 (100 mm ,2015)

RWP81 (150 mm ,2015)

RWP79 (200 mm ,2015)

RWP69 (150 mm ,2015)

RWP75 (200 mm ,2015)

RWP63 (200 mm ,2015)

RWP67 (200 mm ,2015)

RWP61 (200 mm ,2015)

RWP65 (200 mm ,2015)

RWP91 (150 mm ,2012)

RWP89 (150 mm ,2012)

RWP55 (250 mm ,2015)

RWP59 (250 mm ,2015)

RWP83 (250 mm ,2012)

RWP87 (150 mm ,2012)

RWR3 (2015)

RWP57 (250 mm ,2015)

RWP85 (150 mm ,2012)

RWP51 (250 mm ,2012)

RWP116 (250 mm ,2012)

RWP53 (250 mm ,2012)

RWP49 (250 mm ,2012)

RWP101 (100 mm ,2012)

RWP99 (100 mm ,2012)

RWP47 (250 mm ,2012)

RWP97 (100 mm ,2012)

RWP95 (100 mm ,2012)

RWP120 (250 mm ,2012)

RWP93 (100 mm ,2012)

RWP45 (250 mm ,2012)

RWRBP1 (2012)

RWR4 (2015)

RWP43 (250 mm ,1990)

RWP110 (200 mm ,1990)

LEGEND

DSP Area

Cadastral Boundaries

Major Roads

Pumps

Reservoirs

Recycled Water Pipe Network

Existing

Future

Recycled Water Development Areas

Urban Dual Reticulation

1:20,000

0 250 500 750 1000

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

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Ballina Shire Council
Development Servicing Plan - Recycled Water

Job Number | 22-15470
Revision | 1
Date | 11 MAY 2012

# DSP Area B - North

Figure 9

N:\AU\Toowoomba\Projects\22\15470\GIS\Maps\2215470_10A.wor

317 River Street Ballina NSW 2478 Australia T 61 2 6620 6500 F 61 2 6620 6501 E bnkmail@ghd.com W www.ghd.com.au



Data source: BSC - DSP Areas, Cadastral Boundaries, Pumps, Reservoirs, Recycled Water Pipe Network, Recycled Water Development Areas (2012). Navteq - Major Roads, Place Names (2011). Created by: CM

RWP101 (100 mm ,2012)
RWP99 (100 mm ,2012)
RWP47 (250 mm ,2012)
RWP97 (100 mm ,2012)
RWP43 (250 mm ,1990)
RWP93 (100 mm ,2012)
RWRBP1 (2012)
RWP45 (250 mm ,2012)
RWR4 (2013)
RWP95 (100 mm ,2012)
RWP110 (200 mm ,1990)
RWP120 (250 mm ,2012)
Skennars Head
RWP105 (150 mm ,2012)
RWP107 (150 mm ,2012)
RWP109 (200 mm ,1990)
RWP127 (200 mm ,1990)
RWP139 (200 mm ,1990)
RWP113 (200 mm ,1990)
RWP111 (200 mm ,1990)
RWP141 (200 mm ,2010)
RWP115 (200 mm ,1990)
RWP129 (200 mm ,1990)
RWP123 (200 mm ,1990)
RWP131 (200 mm ,1990)
RWP121 (200 mm ,1990)
RWP21 (200 mm ,1990)
Angels Beach Drive
Links Avenue
RWP119 (200 mm ,1990)
RWP133 (150 mm ,1990)
Bangalow Road
Kerr Street
RWP135 (200 mm ,1990)
Manly Street
East Ballina
RWP143 (200 mm ,1990)
Hill Street
RWP137 (150 mm ,1990)
RWP145 (200 mm ,1990)
Bentinck Street
RWP23 (200 mm ,1990)
RWP147 (150 mm ,1990)
Ballina
River Street
Kingsford Smith Drive
RWP149 (150 mm ,1990)

LEGEND

DSP Area
Cadastral Boundaries
Major Roads
Pumps
Reservoirs
Recycled Water Pipe Network
Existing
Future
Recycled Water Development Areas
Urban Dual Reticulation

1:20,000
0 250 500 750 1000
Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

GHD
CLIENTS | PEOPLE | PERFORMANCE

ballina shire council

Ballina Shire Council
Development Servicing Plan - Recycled Water

Job Number | 22-15470
Revision | 1
Date | 11 MAY 2012

# DSP Area B - South

Figure 10

N:\AU\Toowoomba\Projects\22\15470\GIS\Maps\2215470_10B.wor
317 River Street Ballina NSW 2478 Australia T 61 2 6620 6500 F 61 2 6620 6501 E bnkmail@ghd.com W www.ghd.com.au



Data source: BSC - DSP Areas, Cadastral Boundaries, Pumps, Reservoirs, Recycled Water Pipe Network (2012). Navteq - Major Roads, Place Names (2011). Created by: CM

Recycled Water Pipe Network
Existing
Future

Recycled Water Development Areas
Urban Dual Reticulation

RWP31 (200 mm ,2010)
RWP25 (300 mm ,2012)
Pacific Highway
Cumbalum
RWP120 (250 mm ,2012)
RWP45 (250 mm ,2012)
RWRBP1 (2012)
RWR4 (2013)
RWP43 (250 mm ,1990)
RWP110 (200 mm ,1990)
RWP105 (150 mm ,2012)
RWP109 (200 mm ,1990)
RWP107 (150 mm ,2012)
RWP127 (200 mm ,1990)
RWP113 (200 mm ,1990)
RWP111 (200 mm ,1990)
RWP139 (200 mm ,1990)
RWP125 (200 mm ,1990)
Angels Beach Drive
North Ballina
RWP141 (200 mm ,2010)
RWP11 (200 mm ,2012)
RWP115 (200 mm ,1990)
RWP129 (200 mm ,1990)
RWP21 (200 mm ,1990)
RWP123 (200 mm ,1990)
RWP131 (200 mm ,1990)
RWP19 (200 mm ,2010)
RWP114 (200 mm ,2012)
Links Avenue
RWP121 (200 mm ,1990)
Ballina WWTP Supply (2012)
RWP119 (200 mm ,1990)
RWP133 (150 mm ,1990)
RWP13 (200 mm ,2012)
Bangalow Road
Kerr Street
RWP135 (200 mm ,1990)
RWP15 (200 mm ,2012)
RWP23 (200 mm ,1990)
East Ballina
RWP143 (200 mm ,1990)
Hill Street
RWP137 (150 mm ,1990)
Bruxner Highway
RWP117 (200 mm ,1990)
West Ballina
RWP147 (150 mm ,1990)
Ballina Island
RWP145 (200 mm ,1990)
Kingsford Smith Drive
RWP149 (150 mm ,1990)
South Ballina

1:30,000 (at A3)
0 0.5 1 1.5
Kilometres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

LEGEND
DSP Area
Cadastral Boundaries
Major Roads
Pumps
Reservoirs

CLIENTS | PEOPLE | PERFORMANCE

Ballina Shire Council
Development Servicing Plan - Recycled Water

Job Number 22-15470
Revision 1
Date 11 MAY 2012

# DSP Area B - West

Figure 11

N:\AU\Toowoomba\Projects\22\15470\GIS\Maps\2215470_10C.wor



Data source: BSC - DSP Areas, Cadastral Boundaries, Recycled Water Pipe Network, Pumps, Reservoirs (2012). Navteq - Major Roads, Place Names (2011). Created by: CM

317 River Street Ballina NSW 2478 Australia T 61 2 6620 6500 F 61 2 6620 6501 E bnkmail@ghd.com W www.ghd.com.au

RWP41 (100 mm, 2012)

RWRBP2 (2015)

RWP118 (300 mm, 2015)

RWR1 (2015)

RWP33 (200 mm ,2012)

RWP27 (350 mm, 2015)

Cumbalum A

RWP29 (200 mm, 2015)

RWP31 (200 mm, 2010)

Ballina Heights

Pacific Highway

RWP25 (300 mm, 2012)

LEGEND

DSP Area

Cadastral Boundaries

Major Roads

Pumps

Reservoirs

Recycled Water Pipe Network

Existing

Future

Recycled Water Development Areas

Urban Dual Reticulation

1:15,000

0 200 400 600 800

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

Ballina Shire Council
Development Servicing Plan - Recycled Water

# DSP Area F
# Cumbalum A, Ballina Heights

Job Number 22-15470
Revision 2
Date 30 APR 2014

Figure 12

N:\AU\Toowoomba\Projects\22\15470\GIS\Maps\2215470_11.wor

317 River Street Ballina NSW 2478 Australia **T** 61 2 6620 6500 **F** 61 2 6620 6501 **E** bnkmail@ghd.com **W** www.ghd.com.au



Data source: BSC - DSP Areas, Cadastral Boundaries, Pumps, Reservoirs, Recycled Water Pipe Network (2012). Navteq - Major Roads, Place Names (2011). Created by: CM

RWR2 (2015)

RWP39 (500 mm ,2015)

RWP112 (250 mm ,2015)

Cumbalum B

RWP37 (250 mm ,2015)

RWP41 (100 mm ,2012)

RWRBP2 (2013)

RWR1 (2015)

RWP 118 (300 mm, 2015)

RWP33 (200 mm ,2012)

RWP 27 (350 mm, 2015)

Pacific Highway

RWP 29 (200 mm, 2015)

LEGEND

DSP Area

Cadastral Boundaries

Major Roads

Pumps

Reservoirs

Recycled Water Pipe Network

Existing

Future

Recycled Water Development Areas

Urban Dual Reticulation

1:15,000

0 200 400 600 800

Metres

Map Projection: Universal Transverse Mercator
Horizontal Datum: Geocentric Datum of Australia 1994
Grid: Map Grid of Australia, Zone 56

N

GHD

CLIENTS | PEOPLE | PERFORMANCE

ballina shire council

Ballina Shire Council
Development Servicing Plan - Recycled Water

Job Number | 22-15470
Revision | 1
Date | 11 MAY 2012

# DSP Area G: Cumbalum B

Figure 13

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317 River Street Ballina NSW 2478 Australia T 61 2 6620 6500 F 61 2 6620 6501 E bnkmail@ghd.com W www.ghd.com.au



Data source: BSC - DSP Areas, Cadastral Boundaries, Pumps, Reservoirs, Recycled Water Pipe Network (2012). Navteq - Major Roads, Place Names (2011). Created by: CM

Appendix A

# Capital Charge Calculation

Extracted spreadsheets from calculation process

**Capital Charge per ET, Summary of Calculations**

| | | Future Works | | | | Existing Works | | | | Recycled Infrastructure | Total Capital cost per ET |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Development Area** | **Gravity Mains** | **Rising Mains** | **SPS** | **STWs** | **Gravity Mains** | **Rising Mains** | **SPS** | **STWs** | | |
| Wardell | A | 76 | - | - | 755 | - | 2,590 | 2,607 | 11,699 | - | **17,727** |
| Ballina Island, EB, WB, NB, Skenners Head, Lennox Head | B | 39 | 40 | 289 | 1,118 | 235 | 823 | 288 | 2,153 | 730 | **5,715** |
| WUEA | C | 4,696 | 208 | 2,963 | 40 | - | - | 716 | 4,401 | - | **13,024** |
| Alst. Industr, Alstonville, Wollongbar | F | - | 425 | 92 | 2,509 | 15 | 624 | 160 | - | 829 | **4,655** |
| Cura A, Ballina Heights | E | 203 | 15 | 633 | 40 | 1,242 | 742 | 196 | 4,401 | - | **7,471** |
| Cura B | G | - | 475 | - | 2,509 | 4 | - | - | - | 750 | **3,738** |

30% agglomeration rules applied

**With agglomeration**

Reduction amount: $ 1,351

| **Development Area** | **Total Capital Charge per ET ($/ET)** | ***Agglomeration inspection (70% of $/ET)*** | **Total ET Growth (ET)** | **Proportion of Growth** | **Weighted Capital Charge for Each Location ($/ET)** | **Capital Charge for each DSP Area ($/ET)** | **Reduction amount ($/ET)** | **Calculated Developer Charge ($/ET)** | **Utility Wide Weighted Average Developer Charge per ET ($/ET)** | *Subsidies ** *($/ET)* | **Adopted Developer Charge, after subsidies ($/ET)** | **Area** |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | **17,727** | *12,409* | 120 | 0.9% | 160 | | | | | *7,891* | **4,410** | **Area A** |
| C | **13,024** | | 780 | 5.9% | 763 | | | | | | **12,300** | **Area C** |
| Total for Area A & C | | | | **6.8%** | **922** | **13,651** | **1,351** | **12,300** | | - | | |
| E | **7,471** | *5,230* | 179 | 1.3% | 100 | | | | | - | | |
| B | **5,715** | | 6814 | 51.1% | 2,923 | | | | | - | | |
| Total for Areas E & B | | | | **52.5%** | **3,024** | **5,760** | **1,351** | **4,410** | | | **4,410** | **Areas E & B** |
| F | **4,655** | *3,258* | 2490 | 18.7% | 870 | | | | | - | | |
| G | **3,738** | | 2939 | 22.1% | 825 | | | | | - | | |
| Total for Areas F & G | | | | **40.8%** | **1,695** | **4,159** | **1,351** | **2,808** | | | **2,808** | **Areas F & G** |
| **Total for all areas** | | | | **100.00%** | **5,641** | | **1,351** | | **4,290** | | | |

* Note Area A is subsidised by $7891 as per Section 7.7

**Reduction Amount by NPV of annual bills method**

7%

**Constant projected annual charges and OMA costs**

| | | | |
|---|---|---|---|
| Annual Sewerage Charges (A) | 630 | $ per ET | = 2011/12 Access charge |
| Annual Sewerage OMA Cost (B) | 518 | $ per ET | = $8.88 m (2011/12 actual OMA) / 17,162 (2011/12 ET projection) |
| Future operating profits ('C) | 112 | $ per ET | |

| Year | Total ETs | New ETs per year | PV (New ETs) (over 30 years @ 7%) | Cumulative New ETs | Net Operating Results for New ETs ($'000) | PV (future operating profits) from new ETs over 30 years @ 7% ($'000) | **Reduction Amount ($ per ET)** |
|---|---|---|---|---|---|---|---|
| | (1) | (2) = $(1)_i - (1)_{i-1}$ | (3) = PV of (2) | (4) | (5) = (4) * ('C) | (6) = PV of (5) | (7) = (6) / (3) |
| 2010/11 | 16,351 | | | | | | |
| 2011/12 | 17,162 | 811 | 8,282.80 | 811 | 91 | 11,186.38 | **1,351** |
| 2012/13 | 18,013 | 851 | | 1,663 | 187 | | |
| 2013/14 | 18,907 | 894 | | 2,556 | 288 | | |
| 2014/15 | 19,845 | 938 | | 3,494 | 393 | | |
| 2015/16 | 20,829 | 984 | | 4,479 | 504 | | |
| 2016/17 | 21,536 | 706 | | 5,185 | 583 | | |
| 2017/18 | 22,266 | 730 | | 5,915 | 665 | | |
| 2018/19 | 23,021 | 755 | | 6,670 | 750 | | |
| 2019/20 | 23,801 | 781 | | 7,451 | 838 | | |
| 2020/21 | 24,608 | 807 | | 8,258 | 929 | | |
| 2021/22 | 25,139 | 530 | | 8,788 | 989 | | |
| 2022/23 | 25,680 | 542 | | 9,329 | 1,049 | | |
| 2023/24 | 26,233 | 553 | | 9,883 | 1,112 | | |
| 2024/25 | 26,799 | 565 | | 10,448 | 1,175 | | |
| 2025/26 | 27,376 | 577 | | 11,025 | 1,240 | | |
| 2026/27 | 27,859 | 483 | | 11,508 | 1,295 | | |
| 2027/28 | 28,351 | 492 | | 12,000 | 1,350 | | |
| 2028/29 | 28,852 | 501 | | 12,501 | 1,406 | | |
| 2029/30 | 29,361 | 509 | | 13,010 | 1,464 | | |
| 2030/31 | 29,879 | 518 | | 13,529 | 1,522 | | |
| 2031/32 | | | | 13,529 | 1,522 | | |
| 2032/33 | | | | 13,529 | 1,522 | | |
| 2033/34 | | | | 13,529 | 1,522 | | |
| 2034/35 | | | | 13,529 | 1,522 | | |
| 2035/36 | | | | 13,529 | 1,522 | | |
| 2036/37 | | | | 13,529 | 1,522 | | |
| 2037/38 | | | | 13,529 | 1,522 | | |
| 2038/39 | | | | 13,529 | 1,522 | | |
| 2039/40 | | | | 13,529 | 1,522 | | |
| 2040/41 | | | | 13,529 | 1,522 | | |
| 2041/42 | | | | 13,529 | 1,522 | | |

**Basis of Capacity and Full Take-up Year, including Population Projections**

| Inc. Areas | Area | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Year when capacity is taken up, or 2040 (default 30 years) | Population projection Service area | 2010 ET | 2015 ET | 2020 ET | 2025 ET | 2030 ET | *Growth* |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Wardell | A | Wardell (100%) | 507 | 2025 | A | 409 | 447 | 489 | 509 | 529 | *120* |
| Ballina Island, EB, WB, NB, Skenners Head, Lennox Head | B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2030 | B | 11326 | 13282 | 15377 | 16959 | 18140 | *6814* |
| WUEA | C | Alstonville STP (15% of STP capacity) | 730 | 2030 | C | 0 | 195 | 390 | 585 | 780 | *780* |
| Alst. Industr, Alstonville, Wollongbar | E | Alstonville STP (85% of STP capacity) | 4,135 | 2030 | E | 3943 | 3975 | 4045 | 4078 | 4122 | *179* |
| Cura A, Ballina Heights | F | Ballina RWF (25% of capacity) | 3,272 | 2030 | F | 672 | 2254 | 3162 | 3162 | 3162 | *2490* |
| Cura B | G | Ballina RWF (25% of capacity) | 3,272 | 2030 | G | 207 | 676 | 1145 | 2083 | 3146 | *2939* |
| | | | | | **Total** | **16,351** | **20,829** | **24,608** | **27,376** | **29,879** | ***13,322*** |

| **Plant capacity:** | ET | Basis |
|---|---|---|
| Ballina | 13087 | Upgrade/design basis: 1,832 ML/year, 140 kL/a/ET, 70% run time |
| Lennox Head STP | 11676 | 2011 DSP/Planning Report Planning basis for upgrades |
| Alstonville STP | 4865 | 2011 DSP/Planning Report Planning basis for upgrades |
| Wardell | 507 | 2011 DSP/Planning Report Planning basis for upgrades |

| Ballina Plant figures: | | | | | |
|---|---|---|---|---|---|
| Scenario | Flow Rate | Membrane up time | kl/a | kL/a/ET | ET |
| Current | 63 | 70% | 1,390,738 | 140 | 9933.84 |
| Ultimate | 83 | 70% | 1,832,242 | 140 | 13087.44 |

**DSP - Existing Gravity Mains**

| Area | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET |
|---|---|---|---|---|
| A | Wardell (100%) | 507 | 2025 | 0 |
| B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2030 | 235 |
| C | Alstonville STP (15% of STP capacity) | 730 | 2030 | 0 |
| E | Alstonville STP (85% of STP capacity) | 4,135 | 2030 | 1,242 |
| F | Ballina RWF (25% of capacity) | 3,272 | 2030 | 15 |
| G | Ballina RWF (25% of capacity) | 3,272 | 2030 | 4 |

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| Label | Area | PS Catchment | Diameter (mm) | Length (Unified) (m) | Year of Construction | Material | Relevant material rate to apply | Total Rate (2003$/m) | Total Rate (2010$/m) | Capital Cost (2010$) | Capital Cost (2011/12$ = 2010 price x 1.03) | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MH-229-Diversion Link | B | MH-229 | 304.8 | 26.5 | 2010 | unplasticised poly vinyl chloride | Relining | 313 | 438 | 11,612 | 11,961 | Post | 7% | 1995 | 4,335 | 18,220 | $ 0.24 | 2030 | 36 | 2.58 | 0.61 |
| P-1006 | B | MH-1169 | 225 | 26.5 | 1975 | Vitrious Clay | Relining | 238 | 333 | 8,830 | 9,095 | Pre | 3% | 1995 | 16,426 | 18,220 | $ 0.90 | 2030 | 36 | 1.60 | 1.44 |
| P-1007 | B | MH-1170 | 225 | 34.5 | 2010 | unplasticised poly vinyl chloride | Relining | 238 | 333 | 11,495 | 11,840 | Post | 7% | 1995 | 4,291 | 18,220 | $ 0.24 | 2030 | 36 | 2.58 | 0.61 |
| P-1008 | B | MH-1171 | 381 | 10 | 1995 | unplasticised poly vinyl chloride | Relining | 405 | 567 | 5,670 | 5,840 | Pre | 3% | 1995 | 5,840 | 18,220 | $ 0.32 | 2030 | 36 | 1.60 | 0.51 |
| P-1057 | B | 2173 | 304.8 | 4 | 2010 | unplasticised poly vinyl chloride | Relining | 313 | 438 | 1,753 | 1,805 | Post | 7% | 1995 | 654 | 18,220 | $ 0.04 | 2030 | 36 | 2.58 | 0.09 |
| P-1059 | B | MH-272 | 304.8 | 17 | 2010 | unplasticised poly vinyl chloride | Relining | 313 | 438 | 7,449 | 7,673 | Post | 7% | 1995 | 2,781 | 18,220 | $ 0.15 | 2030 | 36 | 2.58 | 0.39 |
| P-1084a | B | MH-NB4 | 225 | 152.5 | 1975 | Vitrious Clay | Relining | 238 | 333 | 50,813 | 52,337 | Pre | 3% | 1995 | 94,527 | 18,220 | $ 5.19 | 2030 | 36 | 1.60 | 8.31 |
| P-1095a | F | MH-Cura A SP2403 | 254 | 48 | 2010 | unplasticised poly vinyl chloride | Relining | 238 | 333 | 15,994 | 16,473 | Post | 7% | 1995 | 5,971 | 3,272 | $ 1.82 | 2030 | 36 | 2.58 | 4.71 |
| P-1115 | B | MH-664 | 304.8 | 39.5 | 1980 | Vitrious Clay | Relining | 313 | 438 | 17,309 | 17,828 | Pre | 3% | 1995 | 27,776 | 18,220 | $ 1.52 | 2030 | 36 | 1.60 | 2.44 |
| P-1116 | B | MH-1324 | 304.8 | 10 | 1980 | Cast Iron | DICL | 313 | 438 | 4,382 | 4,513 | Pre | 3% | 1995 | 7,032 | 18,220 | $ 0.39 | 2030 | 36 | 1.60 | 0.62 |
| P-1117 | B | MH-661 | 304.8 | 83 | 1980 | Vitrious Clay | Relining | 313 | 438 | 36,371 | 37,462 | Pre | 3% | 1995 | 58,364 | 18,220 | $ 3.20 | 2030 | 36 | 1.60 | 5.13 |
| P-1134 | F | MH-Cura A SP2402 | 381 | 33 | 1995 | unplasticised poly vinyl chloride | Relining | 405 | 567 | 18,711 | 19,272 | Pre | 3% | 1995 | 19,272 | 3,272 | $ 5.89 | 2030 | 36 | 1.60 | 9.43 |
| P-1144 | B | MH-1256 | 225 | 32.5 | 1975 | Vitrious Clay | Relining | 238 | 333 | 10,829 | 11,154 | Pre | 3% | 1995 | 20,145 | 18,220 | $ 1.11 | 2030 | 36 | 1.60 | 1.77 |
| P-1145 | B | MH-1257 | 225 | 246 | 1975 | Vitrious Clay | Relining | 238 | 333 | 81,967 | 84,426 | Pre | 3% | 1995 | 152,483 | 18,220 | $ 8.37 | 2030 | 36 | 1.60 | 13.40 |
| P-235 | B | MH-271 | 304.8 | 73 | 1994 | Vitrious Clay | DICL | 313 | 438 | 31,989 | 32,948 | Pre | 3% | 1995 | 33,937 | 18,220 | $ 1.86 | 2030 | 36 | 1.60 | 2.98 |
| P-236 | B | B8 | 304.8 | 73.5 | 1994 | Vitrious Clay | DICL | 313 | 438 | 32,208 | 33,174 | Pre | 3% | 1995 | 34,169 | 18,220 | $ 1.88 | 2030 | 36 | 1.60 | 3.00 |
| P-237 | B | MH-273 | 304.8 | 41 | 1994 | Vitrious Clay | Relining | 313 | 438 | 17,966 | 18,505 | Pre | 3% | 1995 | 19,060 | 18,220 | $ 1.05 | 2030 | 36 | 1.60 | 1.67 |
| P-251 | B | MH-288 | 304.8 | 88 | 1980 | Vitrious Clay | Relining | 313 | 438 | 38,562 | 39,718 | Pre | 3% | 1995 | 61,880 | 18,220 | $ 3.40 | 2030 | 36 | 1.60 | 5.44 |
| P-252 | B | MH-289 | 304.8 | 29.5 | 1980 | Vitrious Clay | Relining | 313 | 438 | 12,927 | 13,315 | Pre | 3% | 1995 | 20,744 | 18,220 | $ 1.14 | 2030 | 36 | 1.60 | 1.82 |
| P-253 | B | MH-290 | 304.8 | 37.5 | 1980 | Vitrious Clay | Relining | 313 | 438 | 16,433 | 16,925 | Pre | 3% | 1995 | 26,369 | 18,220 | $ 1.45 | 2030 | 36 | 1.60 | 2.32 |
| P-254 | B | MH-293 | 304.8 | 40.5 | 1980 | Vitrious Clay | Relining | 313 | 438 | 17,747 | 18,280 | Pre | 3% | 1995 | 28,479 | 18,220 | $ 1.56 | 2030 | 36 | 1.60 | 2.50 |
| P-256 | B | MH-295 | 304.8 | 53.5 | 1980 | Vitrious Clay | Relining | 313 | 438 | 23,444 | 24,147 | Pre | 3% | 1995 | 37,620 | 18,220 | $ 2.06 | 2030 | 36 | 1.60 | 3.31 |
| P-258 | B | MH-297 | 225 | 71.5 | 1980 | Vitrious Clay | Relining | 238 | 333 | 23,824 | 24,539 | Pre | 3% | 1995 | 38,230 | 18,220 | $ 2.10 | 2030 | 36 | 1.60 | 3.36 |
| P-259 | B | MH-298 | 225 | 81 | 1980 | Vitrious Clay | Relining | 238 | 333 | 26,989 | 27,799 | Pre | 3% | 1995 | 43,310 | 18,220 | $ 2.38 | 2030 | 36 | 1.60 | 3.81 |
| P-260 | B | MH-299 | 225 | 79.5 | 1980 | Vitrious Clay | Relining | 238 | 333 | 26,489 | 27,284 | Pre | 3% | 1995 | 42,508 | 18,220 | $ 2.33 | 2030 | 36 | 1.60 | 3.74 |
| P-261 | B | MH-300 | 225 | 60 | 1980 | Vitrious Clay | Relining | 238 | 333 | 19,992 | 20,592 | Pre | 3% | 1995 | 32,081 | 18,220 | $ 1.76 | 2030 | 36 | 1.60 | 2.82 |
| P-262 | B | MH-301 | 225 | 72 | 1980 | Vitrious Clay | Relining | 238 | 333 | 23,990 | 24,710 | Pre | 3% | 1995 | 38,498 | 18,220 | $ 2.11 | 2030 | 36 | 1.60 | 3.38 |
| P-274 | B | MH-314 | 304.8 | 30 | 1994 | Vitrious Clay | Relining | 313 | 438 | 13,146 | 13,540 | Pre | 3% | 1995 | 13,947 | 18,220 | $ 0.77 | 2030 | 36 | 1.60 | 1.23 |
| P-275 | B | MH-315 | 304.8 | 67.5 | 1994 | Vitrious Clay | Relining | 313 | 438 | 29,579 | 30,466 | Pre | 3% | 1995 | 31,380 | 18,220 | $ 1.72 | 2030 | 36 | 1.60 | 2.76 |
| P-276 | B | MH-316 | 304.8 | 48.5 | 1994 | Vitrious Clay | Relining | 313 | 438 | 21,253 | 21,890 | Pre | 3% | 1995 | 22,547 | 18,220 | $ 1.24 | 2030 | 36 | 1.60 | 1.98 |
| P-277 | B | MH-317 | 304.8 | 66 | 1994 | Vitrious Clay | Relining | 313 | 438 | 28,921 | 29,789 | Pre | 3% | 1995 | 30,683 | 18,220 | $ 1.68 | 2030 | 36 | 1.60 | 2.70 |
| P-278 | B | MH-312 | 304.8 | 92.5 | 1994 | Vitrious Clay | Relining | 313 | 438 | 40,534 | 41,750 | Pre | 3% | 1995 | 43,002 | 18,220 | $ 2.36 | 2030 | 36 | 1.60 | 3.78 |
| P-498 | B | MH-547 | 304.8 | 63.5 | 1979 | Vitrious Clay | DICL | 313 | 438 | 27,826 | 28,660 | Pre | 3% | 1995 | 45,992 | 18,220 | $ 2.52 | 2030 | 36 | 1.60 | 4.04 |
| P-567 | B | MH-546 | 304.8 | 16 | 1979 | Vitrious Clay | DICL | 313 | 438 | 7,011 | 7,222 | Pre | 3% | 1995 | 11,588 | 18,220 | $ 0.64 | 2030 | 36 | 1.60 | 1.02 |
| P-602 | B | MH-133 | 304.8 | 81 | 1979 | Vitrious Clay | DICL | 313 | 438 | 35,494 | 36,559 | Pre | 3% | 1995 | 58,667 | 18,220 | $ 3.22 | 2030 | 36 | 1.60 | 5.15 |
| P-603 | B | MH-592 | 304.8 | 82.5 | 1979 | Vitrious Clay | DICL | 313 | 438 | 36,152 | 37,236 | Pre | 3% | 1995 | 59,753 | 18,220 | $ 3.28 | 2030 | 36 | 1.60 | 5.25 |
| P-604 | B | MH-593 | 304.8 | 76.5 | 1979 | Vitrious Clay | DICL | 313 | 438 | 33,522 | 34,528 | Pre | 3% | 1995 | 55,407 | 18,220 | $ 3.04 | 2030 | 36 | 1.60 | 4.87 |
| P-605 | B | MH-594 | 304.8 | 76.5 | 1979 | Vitrious Clay | DICL | 313 | 438 | 33,522 | 34,528 | Pre | 3% | 1995 | 55,407 | 18,220 | $ 3.04 | 2030 | 36 | 1.60 | 4.87 |
| P-606 | B | MH-116 | 304.8 | 44.5 | 1979 | Vitrious Clay | DICL | 313 | 438 | 19,500 | 20,085 | Pre | 3% | 1995 | 32,230 | 18,220 | $ 1.77 | 2030 | 36 | 1.60 | 2.83 |
| P-718 | B | MH-291 | 304.8 | 30 | 1980 | Vitrious Clay | Relining | 313 | 438 | 13,146 | 13,540 | Pre | 3% | 1995 | 21,095 | 18,220 | $ 1.16 | 2030 | 36 | 1.60 | 1.85 |
| P-720 | B | MH-296 | 304.8 | 83.5 | 1980 | Vitrious Clay | Relining | 313 | 438 | 36,590 | 37,687 | Pre | 3% | 1995 | 58,716 | 18,220 | $ 3.22 | 2030 | 36 | 1.60 | 5.16 |
| P-721 | B | MH-662 | 304.8 | 36 | 1980 | Vitrious Clay | Relining | 313 | 438 | 15,775 | 16,248 | Pre | 3% | 1995 | 25,315 | 18,220 | $ 1.39 | 2030 | 36 | 1.60 | 2.22 |
| P-722 | B | MH-294 | 304.8 | 35.5 | 1980 | Vitrious Clay | Relining | 313 | 438 | 15,556 | 16,023 | Pre | 3% | 1995 | 24,963 | 18,220 | $ 1.37 | 2030 | 36 | 1.60 | 2.19 |
| P-723 | B | MH-663 | 304.8 | 74 | 1980 | Vitrious Clay | Relining | 313 | 438 | 32,427 | 33,400 | Pre | 3% | 1995 | 52,035 | 18,220 | $ 2.86 | 2030 | 36 | 1.60 | 4.57 |
| P-724 | B | MH-292 | 304.8 | 86 | 1980 | Vitrious Clay | Relining | 313 | 438 | 37,685 | 38,816 | Pre | 3% | 1995 | 60,474 | 18,220 | $ 3.32 | 2030 | 36 | 1.60 | 5.31 |
| P-738 | B | MH-313 | 304.8 | 12.5 | 1994 | Vitrious Clay | Relining | 313 | 438 | 5,478 | 5,642 | Pre | 3% | 1995 | 5,811 | 18,220 | $ 0.32 | 2030 | 36 | 1.60 | 0.51 |
| P-739 | B | MH-673 | 304.8 | 99.5 | 1994 | Vitrious Clay | Relining | 313 | 438 | 43,601 | 44,909 | Pre | 3% | 1995 | 46,256 | 18,220 | $ 2.54 | 2030 | 36 | 1.60 | 4.06 |
| P-740 | B | MH-674 | 304.8 | 115.5 | 1994 | Vitrious Clay | Relining | 313 | 438 | 50,612 | 52,130 | Pre | 3% | 1995 | 53,694 | 18,220 | $ 2.95 | 2030 | 36 | 1.60 | 4.72 |
| P-741 | B | MH-270 | 304.8 | 102 | 1994 | Vitrious Clay | DICL | 313 | 438 | 44,696 | 46,037 | Pre | 3% | 1995 | 47,418 | 18,220 | $ 2.60 | 2030 | 36 | 1.60 | 4.17 |
| P-742 | B | MH-675 | 304.8 | 69.5 | 1994 | Vitrious Clay | DICL | 313 | 438 | 30,455 | 31,369 | Pre | 3% | 1995 | 32,310 | 18,220 | $ 1.77 | 2030 | 36 | 1.60 | 2.84 |
| P-743 | B | MH-269 | 304.8 | 116.5 | 1994 | Vitrious Clay | DICL | 313 | 438 | 51,050 | 52,582 | Pre | 3% | 1995 | 54,159 | 18,220 | $ 2.97 | 2030 | 36 | 1.60 | 4.76 |
| P-744 | B | MH-676 | 304.8 | 87 | 1994 | Vitrious Clay | DICL | 313 | 438 | 38,123 | 39,267 | Pre | 3% | 1995 | 40,445 | 18,220 | $ 2.22 | 2030 | 36 | 1.60 | 3.55 |
| P-745 | B | MH-677 | 304.8 | 85 | 1994 | Vitrious Clay | DICL | 313 | 438 | 37,247 | 38,364 | Pre | 3% | 1995 | 39,515 | 18,220 | $ 2.17 | 2030 | 36 | 1.60 | 3.47 |
| P-746 | B | MH-678 | 304.8 | 28.5 | 1994 | Vitrious Clay | DICL | 313 | 438 | 12,489 | 12,863 | Pre | 3% | 1995 | 13,249 | 18,220 | $ 0.73 | 2030 | 36 | 1.60 | 1.16 |
| P-809 | B | MH-717 | 381 | 11 | 1986 | Vitrious Clay | DICL | 405 | 567 | 6,237 | 6,424 | Pre | 3% | 1995 | 8,382 | 18,220 | $ 0.46 | 2030 | 36 | 1.60 | 0.74 |
| P-832 | B | MH-1124 | 762 | 929 | 2009 | Reinforced Concrete Pipe | Relining | 870 | 1218 | 1,131,522 | 1,165,468 | Post | 7% | 1995 | 451,988 | 18,220 | $ 24.81 | 2030 | 36 | 2.58 | 64.03 |
| P-1086a | B | MH-SP3115-1 | 225 | 8.5 | 2010 | | DICL | 238 | 333 | 2,832 | 2,917 | Post | 7% | 1995 | 1,057 | 18,220 | $ 0.06 | 2030 | 36 | 2.58 | 0.15 |
| P-1093a | F | MH-Cura A BHEPS3 | 304.8 | 9.5 | 2010 | | DICL | 313 | 438 | 4,163 | 4,288 | Post | 7% | 1995 | 1,554 | 3,272 | $ 0.48 | 2030 | 36 | 2.58 | 1.23 |
| P-1097a | G | MH-Cura B PS10 Defered North | 304.8 | 13.5 | 2010 | | DICL | 313 | 438 | 5,916 | 6,093 | Post | 7% | 1995 | 2,208 | 3,272 | $ 0.68 | 2030 | 36 | 2.58 | 1.74 |
| P-1098a | G | MH-Cura B PS11 | 225 | 10 | 2010 | | DICL | 238 | 333 | 3,332 | 3,432 | Post | 7% | 1995 | 1,244 | 3,272 | $ 0.38 | 2030 | 36 | 2.58 | 0.98 |
| P-1100a | G | MH-Cura B PS 8 | 304.8 | 10.5 | 2010 | | DICL | 313 | 438 | 4,601 | 4,739 | Post | 7% | 1995 | 1,718 | 3,272 | $ 0.53 | 2030 | 36 | 2.58 | 1.36 |
| P-1101a | B | MH-1330 | 225 | 98.5 | 2010 | | DICL | 238 | 333 | 32,820 | 33,805 | Post | 7% | 1995 | 12,252 | 18,220 | $ 0.67 | 2030 | 36 | 2.58 | 1.74 |
| P-1102a | B | MH-1230 | 304.8 | 46.5 | 2010 | | DICL | 313 | 438 | 20,376 | 20,988 | Post | 7% | 1995 | 7,607 | 18,220 | $ 0.42 | 2030 | 36 | 2.58 | 1.08 |
| P-1107a | B | MH-1236 | 225 | 33 | 2010 | | DICL | 238 | 333 | 10,996 | 11,325 | Post | 7% | 1995 | 4,105 | 18,220 | $ 0.23 | 2030 | 36 | 2.58 | 0.58 |
| P-237 | E | MH-813 | 304.8 | 19.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 8,545 | 8,801 | Pre | 3% | 1995 | 9,906 | 4,135 | $ 2.40 | 2030 | 36 | 1.60 | 3.83 |
| P-238 | E | MH-815 | 304.8 | 32.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 14,242 | 14,669 | Pre | 3% | 1995 | 16,510 | 4,135 | $ 3.99 | 2030 | 36 | 1.60 | 6.39 |
| P-239 | E | MH-816 | 304.8 | 44.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 19,500 | 20,085 | Pre | 3% | 1995 | 22,606 | 4,135 | $ 5.47 | 2030 | 36 | 1.60 | 8.75 |
| P-240 | E | MH-817 | 304.8 | 146.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 64,196 | 66,122 | Pre | 3% | 1995 | 74,421 | 4,135 | $ 18.00 | 2030 | 36 | 1.60 | 28.81 |
| P-241 | E | MH-818 | 304.8 | 43.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 19,062 | 19,634 | Pre | 3% | 1995 | 22,098 | 4,135 | $ 5.34 | 2030 | 36 | 1.60 | 8.55 |
| P-242 | E | MH-819 | 304.8 | 158 | 1991 | Vitrious Clay | Relining | 313 | 438 | 69,236 | 71,313 | Pre | 3% | 1995 | 80,263 | 4,135 | $ 19.41 | 2030 | 36 | 1.60 | 31.07 |
| P-243 | E | MH-820 | 304.8 | 116 | 1991 | Vitrious Clay | Relining | 313 | 438 | 50,831 | 52,356 | Pre | 3% | 1995 | 58,927 | 4,135 | $ 14.25 | 2030 | 36 | 1.60 | 22.81 |
| P-244 | E | MH-821 | 304.8 | 43.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 19,062 | 19,634 | Pre | 3% | 1995 | 22,098 | 4,135 | $ 5.34 | 2030 | 36 | 1.60 | 8.55 |
| P-245 | E | MH-822 | 304.8 | 75 | 1991 | Vitrious Clay | Relining | 313 | 438 | 32,865 | 33,851 | Pre | 3% | 1995 | 38,100 | 4,135 | $ 9.21 | 2030 | 36 | 1.60 | 14.75 |
| P-246 | E | MH-823 | 304.8 | 49 | 1991 | Vitrious Clay | Relining | 313 | 438 | 21,472 | 22,116 | Pre | 3% | 1995 | 24,892 | 4,135 | $ 6.02 | 2030 | 36 | 1.60 | 9.64 |
| P-247 | E | MH-824 | 304.8 | 19 | 1991 | Vitrious Clay | Relining | 313 | 438 | 8,326 | 8,576 | Pre | 3% | 1995 | 9,652 | 4,135 | $ 2.33 | 2030 | 36 | 1.60 | 3.74 |
| P-248 | E | MH-825 | 304.8 | 68 | 1991 | Vitrious Clay | Relining | 313 | 438 | 29,798 | 30,692 | Pre | 3% | 1995 | 34,544 | 4,135 | $ 8.35 | 2030 | 36 | 1.60 | 13.37 |
| P-249 | E | MH-826 | 304.8 | 59.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 26,073 | 26,855 | Pre | 3% | 1995 | 30,226 | 4,135 | $ 7.31 | 2030 | 36 | 1.60 | 11.70 |
| P-250 | E | MH-827 | 304.8 | 26 | 1991 | Vitrious Clay | Relining | 313 | 438 | 11,393 | 11,735 | Pre | 3% | 1995 | 13,208 | 4,135 | $ 3.19 | 2030 | 36 | 1.60 | 5.11 |
| P-251 | E | MH-828 | 304.8 | 51.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 22,567 | 23,244 | Pre | 3% | 1995 | 26,162 | 4,135 | $ 6.33 | 2030 | 36 | 1.60 | 10.13 |
| P-252 | E | MH-829 | 304.8 | 45 | 1991 | Vitrious Clay | Relining | 313 | 438 | 19,719 | 20,311 | Pre | 3% | 1995 | 22,860 | 4,135 | $ 5.53 | 2030 | 36 | 1.60 | 8.85 |
| P-253 | E | MH-830 | 304.8 | 35.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 15,556 | 16,023 | Pre | 3% | 1995 | 18,034 | 4,135 | $ 4.36 | 2030 | 36 | 1.60 | 6.98 |
| P-254 | E | MH-831 | 304.8 | 53.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 23,444 | 24,147 | Pre | 3% | 1995 | 27,178 | 4,135 | $ 6.57 | 2030 | 36 | 1.60 | 10.52 |
| P-255 | E | MH-832 | 304.8 | 37.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 16,433 | 16,925 | Pre | 3% | 1995 | 19,050 | 4,135 | $ 4.61 | 2030 | 36 | 1.60 | 7.37 |

| Label | Area | PS Catchment | Diameter (mm) | Length (Unified) (m) | Year of Construction | Material | Relevant material rate to apply | Total Rate (2003$/m) | Total Rate (2010$/m) | Capital Cost (2010$) | Capital Cost (2011/12$ = 2010 price x 1.03) | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P-256 | E | MH-833 | 304.8 | 30 | 1991 | Vitrious Clay | Relining | 313 | 438 | 13,146 | 13,540 | Pre | 3% | 1995 | 15,240 | 4,135 | $ 3.69 | 2030 | 36 | 1.60 | 5.90 |
| P-257 | E | MH-834 | 304.8 | 61.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 26,949 | 27,758 | Pre | 3% | 1995 | 31,242 | 4,135 | $ 7.55 | 2030 | 36 | 1.60 | 12.09 |
| P-258 | E | MH-835 | 304.8 | 87.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 38,343 | 39,493 | Pre | 3% | 1995 | 44,449 | 4,135 | $ 10.75 | 2030 | 36 | 1.60 | 17.21 |
| P-259 | E | MH-836 | 304.8 | 76.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 33,522 | 34,528 | Pre | 3% | 1995 | 38,862 | 4,135 | $ 9.40 | 2030 | 36 | 1.60 | 15.04 |
| P-260 | E | MH-837 | 304.8 | 39 | 1991 | Vitrious Clay | Relining | 313 | 438 | 17,090 | 17,602 | Pre | 3% | 1995 | 19,812 | 4,135 | $ 4.79 | 2030 | 36 | 1.60 | 7.67 |
| P-261 | E | MH-838 | 304.8 | 66 | 1991 | Vitrious Clay | Relining | 313 | 438 | 28,921 | 29,789 | Pre | 3% | 1995 | 33,528 | 4,135 | $ 8.11 | 2030 | 36 | 1.60 | 12.98 |
| P-262 | E | MH-839 | 304.8 | 62 | 1991 | Vitrious Clay | Relining | 313 | 438 | 27,168 | 27,983 | Pre | 3% | 1995 | 31,496 | 4,135 | $ 7.62 | 2030 | 36 | 1.60 | 12.19 |
| P-263 | E | MH-840 | 304.8 | 106.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 46,668 | 48,068 | Pre | 3% | 1995 | 54,101 | 4,135 | $ 13.08 | 2030 | 36 | 1.60 | 20.94 |
| P-264 | E | MH-841 | 304.8 | 49 | 1991 | Vitrious Clay | Relining | 313 | 438 | 21,472 | 22,116 | Pre | 3% | 1995 | 24,892 | 4,135 | $ 6.02 | 2030 | 36 | 1.60 | 9.64 |
| P-265 | E | MH-842 | 304.8 | 516.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 226,330 | 233,120 | Pre | 3% | 1995 | 262,379 | 4,135 | $ 63.45 | 2030 | 36 | 1.60 | 101.58 |
| P-266 | E | MH-843 | 304.8 | 96.5 | 1991 | Vitrious Clay | Relining | 313 | 438 | 42,286 | 43,555 | Pre | 3% | 1995 | 49,021 | 4,135 | $ 11.85 | 2030 | 36 | 1.60 | 18.98 |
| P-267 | E | MH-814 | 304.8 | 21 | 1991 | Vitrious Clay | Relining | 313 | 438 | 9,202 | 9,478 | Pre | 3% | 1995 | 10,668 | 4,135 | $ 2.58 | 2030 | 36 | 1.60 | 4.13 |
| P-416 | E | MH-470 | 225 | 76.5 | 1975 | Vitrious Clay | Relining | 237 | 332 | 25,383 | 26,144 | Pre | 3% | 1995 | 47,219 | 4,135 | $ 11.42 | 2030 | 36 | 1.60 | 18.28 |
| P-417 | E | MH-471 | 225 | 56 | 1975 | Vitrious Clay | Relining | 237 | 332 | 18,581 | 19,138 | Pre | 3% | 1995 | 34,566 | 4,135 | $ 8.36 | 2030 | 36 | 1.60 | 13.38 |
| P-418 | E | MH-472 | 225 | 58.5 | 1975 | Vitrious Clay | Relining | 237 | 332 | 19,410 | 19,993 | Pre | 3% | 1995 | 36,109 | 4,135 | $ 8.73 | 2030 | 36 | 1.60 | 13.98 |
| P-419 | E | MH-473 | 225 | 77.5 | 1989 | Vitrious Clay | Relining | 237 | 332 | 25,715 | 26,486 | Pre | 3% | 1995 | 31,626 | 4,135 | $ 7.65 | 2030 | 36 | 1.60 | 12.24 |
| P-420 | E | MH-474 | 225 | 34.5 | 1988 | Vitrious Clay | Relining | 237 | 332 | 11,447 | 11,791 | Pre | 3% | 1995 | 14,501 | 4,135 | $ 3.51 | 2030 | 36 | 1.60 | 5.61 |
| P-423 | E | MH-477 | 225 | 37 | 1991 | Vitrious Clay | Relining | 237 | 332 | 12,277 | 12,645 | Pre | 3% | 1995 | 14,232 | 4,135 | $ 3.44 | 2030 | 36 | 1.60 | 5.51 |
| P-424 | E | MH-478 | 225 | 64.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 21,401 | 22,043 | Pre | 3% | 1995 | 24,810 | 4,135 | $ 6.00 | 2030 | 36 | 1.60 | 9.60 |
| P-425 | E | MH-479 | 225 | 59.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 19,742 | 20,334 | Pre | 3% | 1995 | 22,887 | 4,135 | $ 5.53 | 2030 | 36 | 1.60 | 8.86 |
| P-427 | E | MH-481 | 225 | 65.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 21,733 | 22,385 | Pre | 3% | 1995 | 25,194 | 4,135 | $ 6.09 | 2030 | 36 | 1.60 | 9.75 |
| P-429 | E | MH-483 | 225 | 31 | 1991 | Vitrious Clay | Relining | 237 | 332 | 10,286 | 10,594 | Pre | 3% | 1995 | 11,924 | 4,135 | $ 2.88 | 2030 | 36 | 1.60 | 4.62 |
| P-431 | E | MH-485 | 225 | 45.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 15,097 | 15,550 | Pre | 3% | 1995 | 17,501 | 4,135 | $ 4.23 | 2030 | 36 | 1.60 | 6.78 |
| P-432 | E | MH-486 | 225 | 73 | 1991 | Vitrious Clay | Relining | 237 | 332 | 24,221 | 24,948 | Pre | 3% | 1995 | 28,079 | 4,135 | $ 6.79 | 2030 | 36 | 1.60 | 10.87 |
| P-434 | E | MH-488 | 225 | 23.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 7,797 | 8,031 | Pre | 3% | 1995 | 9,039 | 4,135 | $ 2.19 | 2030 | 36 | 1.60 | 3.50 |
| P-435 | E | MH-489 | 225 | 37 | 1991 | Vitrious Clay | Relining | 237 | 332 | 12,277 | 12,645 | Pre | 3% | 1995 | 14,232 | 4,135 | $ 3.44 | 2030 | 36 | 1.60 | 5.51 |
| P-436 | E | MH-480 | 225 | 48.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 16,092 | 16,575 | Pre | 3% | 1995 | 18,655 | 4,135 | $ 4.51 | 2030 | 36 | 1.60 | 7.22 |
| P-437 | E | MH-491 | 225 | 35 | 1991 | Vitrious Clay | Relining | 237 | 332 | 11,613 | 11,961 | Pre | 3% | 1995 | 13,463 | 4,135 | $ 3.26 | 2030 | 36 | 1.60 | 5.21 |
| P-443 | E | MH-497 | 225 | 38.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 12,774 | 13,158 | Pre | 3% | 1995 | 14,809 | 4,135 | $ 3.58 | 2030 | 36 | 1.60 | 5.73 |
| P-460 | E | MH-514 | 225 | 12 | 1991 | *Vitrious Clay* | *Relining* | 237 | 332 | 3,982 | 4,101 | Pre | 3% | 1995 | 4,616 | 4,135 | $ 1.12 | 2030 | 36 | 1.60 | 1.79 |
| P-461 | E | MH-487 | 225 | 12 | 1991 | Vitrious Clay | Relining | 237 | 332 | 3,982 | 4,101 | Pre | 3% | 1995 | 4,616 | 4,135 | $ 1.12 | 2030 | 36 | 1.60 | 1.79 |
| P-694 | E | MH-650 | 225 | 58 | 1991 | Vitrious Clay | Relining | 237 | 332 | 19,244 | 19,822 | Pre | 3% | 1995 | 22,310 | 4,135 | $ 5.39 | 2030 | 36 | 1.60 | 8.64 |
| P-698 | E | MH-649 | 225 | 78.5 | 1988 | Vitrious Clay | Relining | 237 | 332 | 26,046 | 26,828 | Pre | 3% | 1995 | 32,995 | 4,135 | $ 7.98 | 2030 | 36 | 1.60 | 12.77 |
| P-699 | E | MH-475 | 225 | 28 | 1988 | Vitrious Clay | Relining | 237 | 332 | 9,290 | 9,569 | Pre | 3% | 1995 | 11,769 | 4,135 | $ 2.85 | 2030 | 36 | 1.60 | 4.56 |
| P-700 | E | MH-482 | 225 | 41 | 1991 | Vitrious Clay | Relining | 237 | 332 | 13,604 | 14,012 | Pre | 3% | 1995 | 15,771 | 4,135 | $ 3.81 | 2030 | 36 | 1.60 | 6.11 |
| P-702 | E | MH-484 | 225 | 36 | 1991 | Vitrious Clay | Relining | 237 | 332 | 11,945 | 12,303 | Pre | 3% | 1995 | 13,847 | 4,135 | $ 3.35 | 2030 | 36 | 1.60 | 5.36 |
| P-703 | E | MH-652 | 225 | 36.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 12,111 | 12,474 | Pre | 3% | 1995 | 14,040 | 4,135 | $ 3.40 | 2030 | 36 | 1.60 | 5.44 |
| P-704 | E | MH-651 | 225 | 17 | 1991 | Vitrious Clay | Relining | 237 | 332 | 5,641 | 5,810 | Pre | 3% | 1995 | 6,539 | 4,135 | $ 1.58 | 2030 | 36 | 1.60 | 2.53 |
| P-973 | E | MH-490 | 225 | 26.5 | 1991 | Vitrious Clay | Relining | 237 | 332 | 8,793 | 9,056 | Pre | 3% | 1995 | 10,193 | 4,135 | $ 2.46 | 2030 | 36 | 1.60 | 3.95 |
| P-230 | E | MH-359 | 304.8 | 61 | 1973 | Vitrious Clay | Relining | 313 | 438 | 26,730 | 27,532 | Pre | 3% | 1995 | 52,754 | 4,135 | $ 12.76 | 2030 | 36 | 1.60 | 20.42 |
| P-231 | E | MH-808 | 400 | 62 | 1983 | Vitrious Clay | Relining | 435 | 609 | 37,787 | 38,921 | Pre | 3% | 1995 | 55,491 | 4,135 | $ 13.42 | 2030 | 36 | 1.60 | 21.48 |
| P-232 | E | MH-809 | 400 | 75 | 1983 | Vitrious Clay | Relining | 435 | 609 | 45,710 | 47,081 | Pre | 3% | 1995 | 67,127 | 4,135 | $ 16.23 | 2030 | 36 | 1.60 | 25.99 |
| P-233 | E | MH-810 | 400 | 60.5 | 1983 | Vitrious Clay | Relining | 435 | 609 | 36,873 | 37,979 | Pre | 3% | 1995 | 54,149 | 4,135 | $ 13.09 | 2030 | 36 | 1.60 | 20.96 |
| P-234 | E | MH-811 | 400 | 55 | 1983 | Vitrious Clay | Relining | 435 | 609 | 33,521 | 34,526 | Pre | 3% | 1995 | 49,226 | 4,135 | $ 11.90 | 2030 | 36 | 1.60 | 19.06 |
| P-235 | E | MH-812 | 381 | 25 | 1983 | *Vitrious Clay* | *Relining* | 405 | 567 | 14,175 | 14,600 | Pre | 3% | 1995 | 20,816 | 4,135 | $ 5.03 | 2030 | 36 | 1.60 | 8.06 |
| P-236 | E | MH-368 | 225 | 56 | 1983 | *Vitrious Clay* | *Relining* | 237 | 332 | 18,581 | 19,138 | Pre | 3% | 1995 | 27,287 | 4,135 | $ 6.60 | 2030 | 36 | 1.60 | 10.56 |
| P-300 | E | MH-347 | 225 | 16 | 1973 | Vitrious Clay | Relining | 237 | 332 | 5,309 | 5,468 | Pre | 3% | 1995 | 10,477 | 4,135 | $ 2.53 | 2030 | 36 | 1.60 | 4.06 |
| P-314 | E | MH-362 | 304.8 | 43 | 1973 | Vitrious Clay | Relining | 313 | 438 | 18,843 | 19,408 | Pre | 3% | 1995 | 37,188 | 4,135 | $ 8.99 | 2030 | 36 | 1.60 | 14.40 |
| P-316 | E | MH-364 | 304.8 | 65.5 | 1973 | Vitrious Clay | Relining | 313 | 438 | 28,702 | 29,563 | Pre | 3% | 1995 | 56,646 | 4,135 | $ 13.70 | 2030 | 36 | 1.60 | 21.93 |
| P-317 | E | MH-365 | 304.8 | 63 | 1973 | Vitrious Clay | Relining | 313 | 438 | 27,607 | 28,435 | Pre | 3% | 1995 | 54,484 | 4,135 | $ 13.18 | 2030 | 36 | 1.60 | 21.09 |
| P-318 | E | MH-366 | 304.8 | 37 | 1973 | Vitrious Clay | Relining | 313 | 438 | 16,213 | 16,700 | Pre | 3% | 1995 | 31,999 | 4,135 | $ 7.74 | 2030 | 36 | 1.60 | 12.39 |
| P-319 | E | MH-367 | 304.8 | 60.5 | 1973 | Vitrious Clay | Relining | 313 | 438 | 26,511 | 27,306 | Pre | 3% | 1995 | 52,322 | 4,135 | $ 12.65 | 2030 | 36 | 1.60 | 20.26 |
| P-320 | E | MH-369 | 225 | 59 | 1973 | *Vitrious Clay* | *Relining* | 237 | 332 | 19,576 | 20,163 | Pre | 3% | 1995 | 38,635 | 4,135 | $ 9.34 | 2030 | 36 | 1.60 | 14.96 |
| P-321 | E | MH-370 | 225 | 49.5 | 1973 | *Vitrious Clay* | *Relining* | 237 | 332 | 16,424 | 16,917 | Pre | 3% | 1995 | 32,414 | 4,135 | $ 7.84 | 2030 | 36 | 1.60 | 12.55 |
| P-322 | E | MH-371 | 225 | 113 | 1973 | *Vitrious Clay* | *Relining* | 237 | 332 | 37,493 | 38,618 | Pre | 3% | 1995 | 73,996 | 4,135 | $ 17.89 | 2030 | 36 | 1.60 | 28.65 |
| P-330 | E | MH-873 | 304.8 | 81.8 | 1973 | *Vitrious Clay* | *Relining* | 313 | 438 | 35,845 | 36,920 | Pre | 3% | 1995 | 70,743 | 4,135 | $ 17.11 | 2030 | 36 | 1.60 | 27.39 |
| P-333 | E | MH-382 | 225 | 9 | 1989 | Vitrious Clay | Relining | 237 | 332 | 2,986 | 3,076 | Pre | 3% | 1995 | 3,673 | 4,135 | $ 0.89 | 2030 | 36 | 1.60 | 1.42 |
| P-334 | E | MH-383 | 225 | 112 | 1989 | Vitrious Clay | Relining | 237 | 332 | 37,162 | 38,276 | Pre | 3% | 1995 | 45,704 | 4,135 | $ 11.05 | 2030 | 36 | 1.60 | 17.69 |
| P-341 | E | MH-878 | 304.8 | 85.6 | 1973 | *Vitrious Clay* | *Relining* | 313 | 438 | 37,510 | 38,635 | Pre | 3% | 1995 | 74,029 | 4,135 | $ 17.90 | 2030 | 36 | 1.60 | 28.66 |
| P-345 | E | MH-394 | 304.8 | 30 | 1973 | Vitrious Clay | Relining | 313 | 438 | 13,146 | 13,540 | Pre | 3% | 1995 | 25,945 | 4,135 | $ 6.27 | 2030 | 36 | 1.60 | 10.04 |
| P-349 | E | MH-398 | 225 | 72.5 | 1973 | Vitrious Clay | Relining | 237 | 332 | 24,056 | 24,777 | Pre | 3% | 1995 | 47,476 | 4,135 | $ 11.48 | 2030 | 36 | 1.60 | 18.38 |
| P-645 | E | MH-396 | 225 | 99 | 1973 | Vitrious Clay | Relining | 237 | 332 | 32,848 | 33,834 | Pre | 3% | 1995 | 64,829 | 4,135 | $ 15.68 | 2030 | 36 | 1.60 | 25.10 |
| P-647 | E | MH-617 | 225 | 51 | 1973 | Vitrious Clay | Relining | 237 | 332 | 16,922 | 17,429 | Pre | 3% | 1995 | 33,397 | 4,135 | $ 8.08 | 2030 | 36 | 1.60 | 12.93 |
| P-649 | E | MH-618 | 225 | 45 | 1973 | Vitrious Clay | Relining | 237 | 332 | 14,931 | 15,379 | Pre | 3% | 1995 | 29,468 | 4,135 | $ 7.13 | 2030 | 36 | 1.60 | 11.41 |
| P-650 | E | MH-620 | 304.8 | 81 | 1973 | Vitrious Clay | Relining | 313 | 438 | 35,494 | 36,559 | Pre | 3% | 1995 | 70,051 | 4,135 | $ 16.94 | 2030 | 36 | 1.60 | 27.12 |
| P-651 | E | MH-393 | 304.8 | 62.5 | 1973 | Vitrious Clay | Relining | 313 | 438 | 27,388 | 28,209 | Pre | 3% | 1995 | 54,052 | 4,135 | $ 13.07 | 2030 | 36 | 1.60 | 20.93 |
| P-652 | E | MH-621 | 304.8 | 40.5 | 1973 | Vitrious Clay | Relining | 313 | 438 | 17,747 | 18,280 | Pre | 3% | 1995 | 35,025 | 4,135 | $ 8.47 | 2030 | 36 | 1.60 | 13.56 |
| P-666 | E | MH-631 | 225 | 71.5 | 1989 | Vitrious Clay | Relining | 237 | 332 | 23,724 | 24,435 | Pre | 3% | 1995 | 29,177 | 4,135 | $ 7.06 | 2030 | 36 | 1.60 | 11.30 |
| P-667 | E | MH-373 | 225 | 80 | 1989 | Vitrious Clay | Relining | 237 | 332 | 26,544 | 27,340 | Pre | 3% | 1995 | 32,646 | 4,135 | $ 7.89 | 2030 | 36 | 1.60 | 12.64 |
| P-676 | E | MH-636 | 225 | 58 | 1973 | Vitrious Clay | Relining | 237 | 332 | 19,244 | 19,822 | Pre | 3% | 1995 | 37,980 | 4,135 | $ 9.18 | 2030 | 36 | 1.60 | 14.70 |
| P-677 | E | MH-348 | 225 | 72.5 | 1973 | Vitrious Clay | Relining | 237 | 332 | 24,056 | 24,777 | Pre | 3% | 1995 | 47,476 | 4,135 | $ 11.48 | 2030 | 36 | 1.60 | 18.38 |
| P-678 | E | MH-637 | 225 | 69.5 | 1973 | Vitrious Clay | Relining | 237 | 332 | 23,060 | 23,752 | Pre | 3% | 1995 | 45,511 | 4,135 | $ 11.01 | 2030 | 36 | 1.60 | 17.62 |
| P-679 | E | MH-355 | 225 | 42.5 | 1973 | Vitrious Clay | Relining | 237 | 332 | 14,102 | 14,525 | Pre | 3% | 1995 | 27,831 | 4,135 | $ 6.73 | 2030 | 36 | 1.60 | 10.77 |
| P-680 | E | MH-638 | 225 | 25 | 1973 | Vitrious Clay | Relining | 237 | 332 | 8,295 | 8,544 | Pre | 3% | 1995 | 16,371 | 4,135 | $ 3.96 | 2030 | 36 | 1.60 | 6.34 |

**Future GM**

| Area | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET |
|---|---|---|---|---|
| A | Wardell (100%) | 507 | 2025 | 76 |
| B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2030 | 39 |
| C | Alstonville STP (15% of STP capacity) | 730 | 2030 | 4,696 |
| E | Alstonville STP (85% of STP capacity) | 4,135 | 2030 | 203 |
| F | Ballina RWF (25% of capacity) | 3,272 | 2030 | 0 |
| G | Ballina RWF (25% | 3,272 | 2030 | 0 |

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| Label | Area | PS Catchment | Diameter (mm) | Length (m) | Year | Material | Total Rate (2003$/m) | Total Rate (2010$/m) | Capital Cost (2010$) | Capital Cost (2011/12$ = 2010 price x 1.03) | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GM-3110-11-1 | B | SP3110 | 450 | 628 | 2011 | New | 496 | 694 | 436,083 | 449,166 | Post | 7% | 1995 | 152,148 | 18,220 | $ 8.35 | 2030 | 36 | 2.58 | 21.55 |
| GM-2101-1 | B | SP2101 | 300 | 393.5 | 2011 | Vitrious Clay | 313 | 438 | 172,432 | 177,605 | Post | 7% | 1995 | 60,161 | 18,220 | $ 3.30 | 2030 | 36 | 2.58 | 8.52 |
| GM-2104-1 | B | SP2104 | 225 | 1,009.00 | 2020 | Vitrious Clay | 238 | 333 | 336,199 | 346,285 | Post | 7% | 1995 | 63,803 | 18,220 | $ 3.50 | 2030 | 36 | 2.58 | 9.04 |
| GM-4104-1 | C | SP4104 | 300 | 25.5 | 2016 | unplasticised poly vinyl chloride | 328 | 459 | 11,710 | 12,061 | Post | 7% | 1995 | 2,913 | 730 | $ 3.99 | 2030 | 36 | 2.58 | 10.30 |
| GM-WUEA-15-53 | C | WUEA | 225 | 60.0 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 21,084 | 21,717 | Post | 7% | 1995 | 5,612 | 730 | $ 7.69 | 2030 | 36 | 2.58 | 19.85 |
| GM-WUEA-11-24 | C | WUEA | 300 | 46.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 21,123 | 21,757 | Post | 7% | 1995 | 7,370 | 730 | $ 10.10 | 2030 | 36 | 2.58 | 26.07 |
| GM-WUEA-11-25 | C | WUEA | 225 | 28.5 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 10,015 | 10,315 | Post | 7% | 1995 | 3,494 | 730 | $ 4.79 | 2030 | 36 | 2.58 | 12.36 |
| GM-WUEA-11-26 | C | WUEA | 225 | 55.0 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 19,327 | 19,907 | Post | 7% | 1995 | 6,743 | 730 | $ 9.24 | 2030 | 36 | 2.58 | 23.85 |
| GM-4104-2 | C | SP4104 | 300 | 52.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 23,878 | 24,595 | Post | 7% | 1995 | 8,331 | 730 | $ 11.42 | 2030 | 36 | 2.58 | 29.47 |
| GM-4104-3 | C | SP4104 | 300 | 52.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 23,878 | 24,595 | Post | 7% | 1995 | 8,331 | 730 | $ 11.42 | 2030 | 36 | 2.58 | 29.47 |
| GM-4104-4 | C | SP4104 | 300 | 28.5 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 13,087 | 13,480 | Post | 7% | 1995 | 4,566 | 730 | $ 6.26 | 2030 | 36 | 2.58 | 16.15 |
| GM-4104-5 | C | SP4104 | 300 | 60.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 27,552 | 28,379 | Post | 7% | 1995 | 9,613 | 730 | $ 13.17 | 2030 | 36 | 2.58 | 34.00 |
| GM-4104-6 | C | SP4104 | 300 | 56.5 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 25,945 | 26,723 | Post | 7% | 1995 | 9,052 | 730 | $ 12.40 | 2030 | 36 | 2.58 | 32.02 |
| GM-4104-7 | C | SP4104 | 300 | 55.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 25,256 | 26,014 | Post | 7% | 1995 | 8,812 | 730 | $ 12.08 | 2030 | 36 | 2.58 | 31.17 |
| GM-4104-8 | C | SP4104 | 300 | 63.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 28,930 | 29,797 | Post | 7% | 1995 | 10,093 | 730 | $ 13.83 | 2030 | 36 | 2.58 | 35.70 |
| GM-4104-9 | C | SP4104 | 300 | 47.5 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 21,812 | 22,466 | Post | 7% | 1995 | 7,610 | 730 | $ 10.43 | 2030 | 36 | 2.58 | 26.92 |
| GM-4104-10 | C | SP4104 | 300 | 28.5 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 13,087 | 13,480 | Post | 7% | 1995 | 4,566 | 730 | $ 6.26 | 2030 | 36 | 2.58 | 16.15 |
| GM-4104-11 | C | SP4104 | 300 | 54.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 24,797 | 25,541 | Post | 7% | 1995 | 8,652 | 730 | $ 11.86 | 2030 | 36 | 2.58 | 30.60 |
| GM-WUEA-15-51 | C | WUEA | 150 | 54.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 21,655 | 22,304 | Post | 7% | 1995 | 5,764 | 730 | $ 7.90 | 2030 | 36 | 2.58 | 20.39 |
| GM-WUEA-11-27 | C | WUEA | 300 | 7.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 3,214 | 3,311 | Post | 7% | 1995 | 1,121 | 730 | $ 1.54 | 2030 | 36 | 2.58 | 3.97 |
| GM-4104-12 | C | SP4104 | 375 | 117.0 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 69,287 | 71,366 | Post | 7% | 1995 | 17,236 | 730 | $ 23.62 | 2030 | 36 | 2.58 | 60.96 |
| GM-WWTP40-1 | C | Alstonville WWTP | 375 | 721.5 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 427,272 | 440,090 | Post | 7% | 1995 | 106,288 | 730 | $ 145.65 | 2030 | 36 | 2.58 | 375.93 |
| GM-WWTP40-2 | C | Alstonville WWTP | 375 | 20.0 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 11,844 | 12,199 | Post | 7% | 1995 | 2,946 | 730 | $ 4.04 | 2030 | 36 | 2.58 | 10.42 |
| GM-WWTP40-3 | C | Alstonville WWTP | 375 | 202.0 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 119,624 | 123,213 | Post | 7% | 1995 | 29,758 | 730 | $ 40.78 | 2030 | 36 | 2.58 | 105.25 |
| GM-WWTP40-4 | C | Alstonville WWTP | 375 | 365.0 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 216,153 | 222,638 | Post | 7% | 1995 | 53,770 | 730 | $ 73.68 | 2030 | 36 | 2.58 | 190.18 |
| GM-WWTP40-5 | C | Alstonville WWTP | 375 | 229.0 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 135,614 | 139,682 | Post | 7% | 1995 | 33,735 | 730 | $ 46.23 | 2030 | 36 | 2.58 | 119.32 |
| GM-WWTP40-6 | C | Alstonville WWTP | 375 | 122.0 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 72,248 | 74,416 | Post | 7% | 1995 | 17,972 | 730 | $ 24.63 | 2030 | 36 | 2.58 | 63.57 |
| GM-WWTP40-7 | C | Alstonville WWTP | 375 | 568.5 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 336,666 | 346,766 | Post | 7% | 1995 | 83,748 | 730 | $ 114.76 | 2030 | 36 | 2.58 | 296.21 |
| GM-WWTP40-8 | C | Alstonville WWTP | 375 | 121.0 | 2016 | unplasticised poly vinyl chloride | 423 | 592 | 71,656 | 73,806 | Post | 7% | 1995 | 17,825 | 730 | $ 24.43 | 2030 | 36 | 2.58 | 63.05 |
| GM-4104-13 | C | SP4104 | 300 | 366.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 168,067 | 173,109 | Post | 7% | 1995 | 58,638 | 730 | $ 80.35 | 2030 | 36 | 2.58 | 207.40 |
| GM-4104-14 | C | SP4104 | 300 | 130.0 | 2011 | unplasticised poly vinyl chloride | 328 | 459 | 59,696 | 61,487 | Post | 7% | 1995 | 20,828 | 730 | $ 28.54 | 2030 | 36 | 2.58 | 73.67 |
| GM-WUEA-15-1 | C | WUEA | 225 | 38.5 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 38,346 | 39,497 | Post | 7% | 1995 | 10,207 | 730 | $ 13.99 | 2030 | 36 | 2.58 | 36.10 |
| GM-WUEA-15-2 | C | WUEA | 225 | 49.5 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 49,303 | 50,782 | Post | 7% | 1995 | 13,123 | 730 | $ 17.98 | 2030 | 36 | 2.58 | 46.41 |
| GM-WUEA-15-3 | C | WUEA | 225 | 35.5 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 35,358 | 36,419 | Post | 7% | 1995 | 9,411 | 730 | $ 12.90 | 2030 | 36 | 2.58 | 33.29 |
| GM-WUEA-15-4 | C | WUEA | 225 | 25.5 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 25,398 | 26,160 | Post | 7% | 1995 | 6,760 | 730 | $ 9.26 | 2030 | 36 | 2.58 | 23.91 |
| GM-WUEA-15-5 | C | WUEA | 225 | 60.0 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 59,761 | 61,553 | Post | 7% | 1995 | 15,907 | 730 | $ 21.80 | 2030 | 36 | 2.58 | 56.26 |
| GM-WUEA-15-6 | C | WUEA | 225 | 53.5 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 53,287 | 54,885 | Post | 7% | 1995 | 14,183 | 730 | $ 19.44 | 2030 | 36 | 2.58 | 50.17 |
| GM-WUEA-15-7 | C | WUEA | 225 | 36.5 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 36,354 | 37,445 | Post | 7% | 1995 | 9,676 | 730 | $ 13.26 | 2030 | 36 | 2.58 | 34.23 |
| GM-WUEA-15-8 | C | WUEA | 225 | 152.0 | 2015 | unplasticised poly vinyl chloride | 251 | 351 | 189,875 | 195,571 | Post | 7% | 1995 | 50,539 | 730 | $ 69.26 | 2030 | 36 | 2.58 | 178.75 |
| GM-WUEA-11-1 | C | WUEA | 225 | 34.5 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 34,362 | 35,393 | Post | 7% | 1995 | 11,989 | 730 | $ 16.43 | 2030 | 36 | 2.58 | 42.40 |

| Label | Area | PS Catchment | Diameter (mm) | Length (m) | Year | Material | Total Rate (2003$/m) | Total Rate (2010$/m) | Capital Cost (2010$) | Capital Cost (2011/12$ = 2010 price x 1.03) | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GM-WUEA-11-2 | C | WUEA | 225 | 47.0 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 46,812 | 48,217 | Post | 7% | 1995 | 16,333 | 730 | $ 22.38 | 2030 | 36 | 2.58 | 57.77 |
| GM-WUEA-11-3 | C | WUEA | 225 | 24.0 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 23,904 | 24,621 | Post | 7% | 1995 | 8,340 | 730 | $ 11.43 | 2030 | 36 | 2.58 | 29.50 |
| GM-WUEA-11-4 | C | WUEA | 225 | 23.0 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 22,908 | 23,595 | Post | 7% | 1995 | 7,993 | 730 | $ 10.95 | 2030 | 36 | 2.58 | 28.27 |
| GM-WUEA-11-5 | C | WUEA | 225 | 26.5 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 26,394 | 27,186 | Post | 7% | 1995 | 9,209 | 730 | $ 12.62 | 2030 | 36 | 2.58 | 32.57 |
| GM-WUEA-11-6 | C | WUEA | 225 | 21.5 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 21,414 | 22,057 | Post | 7% | 1995 | 7,471 | 730 | $ 10.24 | 2030 | 36 | 2.58 | 26.43 |
| GM-WUEA-11-7 | C | WUEA | 225 | 17.5 | 2011 | unplasticised poly vinyl chloride | 251 | 351 | 17,430 | 17,953 | Post | 7% | 1995 | 6,081 | 730 | $ 8.33 | 2030 | 36 | 2.58 | 21.51 |
| GM-WUEA-15-9 | C | WUEA | 200 | 139.5 | 2015 | unplasticised poly vinyl chloride | 237 | 332 | 197,395 | 203,317 | Post | 7% | 1995 | 52,541 | 730 | $ 72.00 | 2030 | 36 | 2.58 | 185.83 |
| GM-WUEA-11-8 | C | WUEA | 200 | 35.0 | 2011 | unplasticised poly vinyl chloride | 237 | 332 | 24,926 | 25,674 | Post | 7% | 1995 | 8,697 | 730 | $ 11.92 | 2030 | 36 | 2.58 | 30.76 |
| GM-WUEA-11-9 | C | WUEA | 200 | 64.0 | 2011 | unplasticised poly vinyl chloride | 237 | 332 | 45,579 | 46,947 | Post | 7% | 1995 | 15,902 | 730 | $ 21.79 | 2030 | 36 | 2.58 | 56.25 |
| GM-WUEA-11-10 | C | WUEA | 150 | 353.5 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 251,755 | 259,308 | Post | 7% | 1995 | 87,836 | 730 | $ 120.37 | 2030 | 36 | 2.58 | 310.67 |
| GM-WUEA-11-11 | C | WUEA | 150 | 135.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 96,144 | 99,028 | Post | 7% | 1995 | 33,544 | 730 | $ 45.97 | 2030 | 36 | 2.58 | 118.64 |
| GM-WUEA-11-12 | C | WUEA | 150 | 58.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 41,306 | 42,546 | Post | 7% | 1995 | 14,412 | 730 | $ 19.75 | 2030 | 36 | 2.58 | 50.97 |
| GM-WUEA-11-13 | C | WUEA | 150 | 21.5 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 15,312 | 15,771 | Post | 7% | 1995 | 5,342 | 730 | $ 7.32 | 2030 | 36 | 2.58 | 18.90 |
| GM-WUEA-15-52 | C | #N/A | 150 | 50.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 20,065 | 20,667 | Post | 7% | 1995 | 5,341 | 730 | $ 7.32 | 2030 | 36 | 2.58 | 18.89 |
| GM-WUEA-11-14 | C | WUEA | 150 | 12.5 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 8,902 | 9,169 | Post | 7% | 1995 | 3,106 | 730 | $ 4.26 | 2030 | 36 | 2.58 | 10.99 |
| GM-WUEA-15-10 | C | WUEA | 150 | 36.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 36,354 | 37,445 | Post | 7% | 1995 | 9,676 | 730 | $ 13.26 | 2030 | 36 | 2.58 | 34.23 |
| GM-WUEA-15-11 | C | WUEA | 150 | 34.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 34,362 | 35,393 | Post | 7% | 1995 | 9,146 | 730 | $ 12.53 | 2030 | 36 | 2.58 | 32.35 |
| GM-WUEA-15-12 | C | WUEA | 150 | 44.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 12,896 | 13,283 | Post | 7% | 1995 | 3,433 | 730 | $ 4.70 | 2030 | 36 | 2.58 | 12.14 |
| GM-WUEA-15-13 | C | WUEA | 150 | 18.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 5,216 | 5,373 | Post | 7% | 1995 | 1,388 | 730 | $ 1.90 | 2030 | 36 | 2.58 | 4.91 |
| GM-WUEA-15-14 | C | WUEA | 150 | 45.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 13,186 | 13,581 | Post | 7% | 1995 | 3,510 | 730 | $ 4.81 | 2030 | 36 | 2.58 | 12.41 |
| GM-WUEA-15-15 | C | WUEA | 150 | 28.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 8,114 | 8,358 | Post | 7% | 1995 | 2,160 | 730 | $ 2.96 | 2030 | 36 | 2.58 | 7.64 |
| GM-WUEA-15-16 | C | WUEA | 150 | 17.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 4,927 | 5,074 | Post | 7% | 1995 | 1,311 | 730 | $ 1.80 | 2030 | 36 | 2.58 | 4.64 |
| GM-WUEA-15-17 | C | WUEA | 150 | 35.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 10,288 | 10,597 | Post | 7% | 1995 | 2,738 | 730 | $ 3.75 | 2030 | 36 | 2.58 | 9.69 |
| GM-WUEA-15-18 | C | WUEA | 150 | 21.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 6,231 | 6,418 | Post | 7% | 1995 | 1,658 | 730 | $ 2.27 | 2030 | 36 | 2.58 | 5.87 |
| GM-WUEA-15-19 | C | WUEA | 150 | 55.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 16,084 | 16,566 | Post | 7% | 1995 | 4,281 | 730 | $ 5.87 | 2030 | 36 | 2.58 | 15.14 |
| GM-WUEA-15-20 | C | WUEA | 150 | 43.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 12,606 | 12,984 | Post | 7% | 1995 | 3,355 | 730 | $ 4.60 | 2030 | 36 | 2.58 | 11.87 |
| GM-WUEA-15-21 | C | WUEA | 150 | 48.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 14,055 | 14,477 | Post | 7% | 1995 | 3,741 | 730 | $ 5.13 | 2030 | 36 | 2.58 | 13.23 |
| GM-WUEA-15-22 | C | WUEA | 150 | 16.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 4,782 | 4,925 | Post | 7% | 1995 | 1,273 | 730 | $ 1.74 | 2030 | 36 | 2.58 | 4.50 |
| GM-WUEA-15-23 | C | WUEA | 150 | 60.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 17,388 | 17,910 | Post | 7% | 1995 | 4,628 | 730 | $ 6.34 | 2030 | 36 | 2.58 | 16.37 |
| GM-WUEA-15-24 | C | WUEA | 150 | 58.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 16,953 | 17,462 | Post | 7% | 1995 | 4,512 | 730 | $ 6.18 | 2030 | 36 | 2.58 | 15.96 |
| GM-WUEA-15-25 | C | WUEA | 150 | 23.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 6,810 | 7,015 | Post | 7% | 1995 | 1,813 | 730 | $ 2.48 | 2030 | 36 | 2.58 | 6.41 |
| GM-WUEA-15-26 | C | WUEA | 150 | 39.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 12,534 | 12,910 | Post | 7% | 1995 | 3,336 | 730 | $ 4.57 | 2030 | 36 | 2.58 | 11.80 |
| GM-WUEA-15-27 | C | WUEA | 150 | 24.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 9,357 | 9,638 | Post | 7% | 1995 | 2,491 | 730 | $ 3.41 | 2030 | 36 | 2.58 | 8.81 |
| GM-WUEA-15-28 | C | WUEA | 150 | 42.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 12,317 | 12,686 | Post | 7% | 1995 | 3,278 | 730 | $ 4.49 | 2030 | 36 | 2.58 | 11.60 |
| GM-WUEA-15-29 | C | WUEA | 150 | 38.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 11,012 | 11,343 | Post | 7% | 1995 | 2,931 | 730 | $ 4.02 | 2030 | 36 | 2.58 | 10.37 |
| GM-WUEA-15-30 | C | WUEA | 150 | 20.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 5,796 | 5,970 | Post | 7% | 1995 | 1,543 | 730 | $ 2.11 | 2030 | 36 | 2.58 | 5.46 |
| GM-WUEA-15-31 | C | WUEA | 150 | 13.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 3,767 | 3,880 | Post | 7% | 1995 | 1,003 | 730 | $ 1.37 | 2030 | 36 | 2.58 | 3.55 |
| GM-WUEA-15-32 | C | WUEA | 150 | 22.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 6,521 | 6,716 | Post | 7% | 1995 | 1,736 | 730 | $ 2.38 | 2030 | 36 | 2.58 | 6.14 |
| GM-WUEA-15-33 | C | WUEA | 150 | 25.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 7,390 | 7,612 | Post | 7% | 1995 | 1,967 | 730 | $ 2.70 | 2030 | 36 | 2.58 | 6.96 |
| GM-WUEA-15-34 | C | WUEA | 150 | 21.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 6,086 | 6,268 | Post | 7% | 1995 | 1,620 | 730 | $ 2.22 | 2030 | 36 | 2.58 | 5.73 |
| GM-WUEA-15-35 | C | WUEA | 150 | 23.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 6,810 | 7,015 | Post | 7% | 1995 | 1,813 | 730 | $ 2.48 | 2030 | 36 | 2.58 | 6.41 |
| GM-WUEA-15-36 | C | WUEA | 150 | 40.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 11,592 | 11,940 | Post | 7% | 1995 | 3,085 | 730 | $ 4.23 | 2030 | 36 | 2.58 | 10.91 |
| GM-WUEA-15-37 | C | WUEA | 150 | 28.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 8,114 | 8,358 | Post | 7% | 1995 | 2,160 | 730 | $ 2.96 | 2030 | 36 | 2.58 | 7.64 |
| GM-WUEA-15-38 | C | WUEA | 150 | 24.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 7,100 | 7,313 | Post | 7% | 1995 | 1,890 | 730 | $ 2.59 | 2030 | 36 | 2.58 | 6.68 |
| GM-WUEA-15-39 | C | WUEA | 150 | 48.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 48,306 | 49,756 | Post | 7% | 1995 | 12,858 | 730 | $ 17.62 | 2030 | 36 | 2.58 | 45.48 |
| GM-WUEA-15-40 | C | WUEA | 150 | 14.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 14,442 | 14,875 | Post | 7% | 1995 | 3,844 | 730 | $ 5.27 | 2030 | 36 | 2.58 | 13.60 |
| GM-WUEA-15-41 | C | WUEA | 150 | 49.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 48,804 | 50,269 | Post | 7% | 1995 | 12,990 | 730 | $ 17.80 | 2030 | 36 | 2.58 | 45.95 |
| GM-WUEA-15-42 | C | WUEA | 150 | 50.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 49,801 | 51,295 | Post | 7% | 1995 | 13,255 | 730 | $ 18.16 | 2030 | 36 | 2.58 | 46.88 |
| GM-WUEA-15-43 | C | WUEA | 150 | 45.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 45,318 | 46,678 | Post | 7% | 1995 | 12,062 | 730 | $ 16.53 | 2030 | 36 | 2.58 | 42.66 |
| GM-WUEA-15-44 | C | WUEA | 150 | 48.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 48,306 | 49,756 | Post | 7% | 1995 | 12,858 | 730 | $ 17.62 | 2030 | 36 | 2.58 | 45.48 |
| GM-WUEA-11-15 | C | WUEA | 150 | 23.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 22,908 | 23,595 | Post | 7% | 1995 | 7,993 | 730 | $ 10.95 | 2030 | 36 | 2.58 | 28.27 |
| GM-WUEA-11-16 | C | WUEA | 150 | 44.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 43,824 | 45,139 | Post | 7% | 1995 | 15,290 | 730 | $ 20.95 | 2030 | 36 | 2.58 | 54.08 |
| GM-WUEA-11-17 | C | WUEA | 150 | 60.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 59,761 | 61,553 | Post | 7% | 1995 | 20,850 | 730 | $ 28.57 | 2030 | 36 | 2.58 | 73.75 |
| GM-WUEA-11-18 | C | WUEA | 150 | 48.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 47,808 | 49,243 | Post | 7% | 1995 | 16,680 | 730 | $ 22.86 | 2030 | 36 | 2.58 | 59.00 |
| GM-WUEA-15-45 | C | WUEA | 150 | 21.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 6,086 | 6,268 | Post | 7% | 1995 | 1,620 | 730 | $ 2.22 | 2030 | 36 | 2.58 | 5.73 |
| GM-WUEA-15-46 | C | WUEA | 150 | 20.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 5,941 | 6,119 | Post | 7% | 1995 | 1,581 | 730 | $ 2.17 | 2030 | 36 | 2.58 | 5.59 |
| GM-WUEA-11-19 | C | WUEA | 150 | 58.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 57,769 | 59,502 | Post | 7% | 1995 | 20,155 | 730 | $ 27.62 | 2030 | 36 | 2.58 | 71.29 |
| GM-WUEA-11-20 | C | WUEA | 150 | 53.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 52,789 | 54,372 | Post | 7% | 1995 | 18,418 | 730 | $ 25.24 | 2030 | 36 | 2.58 | 65.14 |
| GM-WUEA-11-21 | C | WUEA | 150 | 50.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 49,801 | 51,295 | Post | 7% | 1995 | 17,375 | 730 | $ 23.81 | 2030 | 36 | 2.58 | 61.45 |
| GM-WUEA-11-22 | C | WUEA | 150 | 49.0 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 48,804 | 50,269 | Post | 7% | 1995 | 17,028 | 730 | $ 23.33 | 2030 | 36 | 2.58 | 60.23 |
| GM-WUEA-11-23 | C | WUEA | 150 | 60.5 | 2011 | unplasticised poly vinyl chloride | 207 | 290 | 60,259 | 62,066 | Post | 7% | 1995 | 21,024 | 730 | $ 28.81 | 2030 | 36 | 2.58 | 74.36 |
| GM-WUEA-15-47 | C | WUEA | 150 | 12.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 11,952 | 12,311 | Post | 7% | 1995 | 3,181 | 730 | $ 4.36 | 2030 | 36 | 2.58 | 11.25 |
| GM-WUEA-15-48 | C | WUEA | 150 | 22.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 21,912 | 22,570 | Post | 7% | 1995 | 5,832 | 730 | $ 7.99 | 2030 | 36 | 2.58 | 20.63 |
| GM-WUEA-15-49 | C | WUEA | 150 | 38.0 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 37,848 | 38,984 | Post | 7% | 1995 | 10,074 | 730 | $ 13.80 | 2030 | 36 | 2.58 | 35.63 |
| GM-WUEA-15-50 | C | WUEA | 150 | 60.5 | 2015 | unplasticised poly vinyl chloride | 207 | 290 | 60,259 | 62,066 | Post | 7% | 1995 | 16,039 | 730 | $ 21.98 | 2030 | 36 | 2.58 | 56.73 |
| GM-WWTP40-9 | E | Alstonville WWTP | 225 | 259.0 | 2016 | unplasticised poly vinyl chloride | 237 | 332 | 85,936 | 88,514 | Post | 7% | 1995 | 21,377 | 4,135 | $ 5.17 | 2030 | 36 | 2.58 | 13.34 |
| GM-WWTP40-10 | E | Alstonville WWTP | 225 | 43.0 | 2016 | unplasticised poly vinyl chloride | 237 | 332 | 14,267 | 14,695 | Post | 7% | 1995 | 3,549 | 4,135 | $ 0.86 | 2030 | 36 | 2.58 | 2.22 |
| GM-WWTP40-11 | E | Alstonville WWTP | 300 | 329.5 | 2016 | unplasticised poly vinyl chloride | 313 | 438 | 144,387 | 148,719 | Post | 7% | 1995 | 35,917 | 4,135 | $ 8.69 | 2030 | 36 | 2.58 | 22.42 |
| GM-WWTP40-12 | E | Alstonville WWTP | 300 | 662.5 | 2016 | unplasticised poly vinyl chloride | 313 | 438 | 290,308 | 299,017 | Post | 7% | 1995 | 72,216 | 4,135 | $ 17.46 | 2030 | 36 | 2.58 | 45.07 |
| GM-4006-1 | E | SP4006 | 300 | 312.0 | 2016 | unplasticised poly vinyl chloride | 313 | 438 | 136,718 | 140,820 | Post | 7% | 1995 | 34,010 | 4,135 | $ 8.22 | 2030 | 36 | 2.58 | 21.23 |
| GM-4006-2 | E | SP4006 | 225 | 381.0 | 2016 | unplasticised poly vinyl chloride | 237 | 332 | 126,416 | 130,208 | Post | 7% | 1995 | 31,447 | 4,135 | $ 7.60 | 2030 | 36 | 2.58 | 19.63 |
| GM-WWTP40-13 | E | Alstonville WWTP | 300 | 247.5 | 2016 | unplasticised poly vinyl chloride | 313 | 438 | 108,455 | 111,708 | Post | 7% | 1995 | 26,979 | 4,135 | $ 6.52 | 2030 | 36 | 2.58 | 16.84 |
| GM-WWTP40-14 | E | Alstonville WWTP | 225 | 60.0 | 2016 | unplasticised poly vinyl chloride | 237 | 332 | 19,908 | 20,505 | Post | 7% | 1995 | 4,952 | 4,135 | $ 1.20 | 2030 | 36 | 2.58 | 3.09 |
| GM-WWTP40-15 | E | Alstonville WWTP | 225 | 89.5 | 2016 | unplasticised poly vinyl chloride | 237 | 332 | 29,696 | 30,587 | Post | 7% | 1995 | 7,387 | 4,135 | $ 1.79 | 2030 | 36 | 2.58 | 4.61 |
| GM-WWTP40-16 | E | Alstonville WWTP | 150 | 261.0 | 2016 | unplasticised poly vinyl chloride | 195 | 273 | 71,253 | 73,391 | Post | 7% | 1995 | 17,725 | 4,135 | $ 4.29 | 2030 | 36 | 2.58 | 11.06 |
| GM-WWTP40-17 | E | Alstonville WWTP | 150 | 809.5 | 2016 | unplasticised poly vinyl chloride | 195 | 273 | 220,994 | 227,623 | Post | 7% | 1995 | 54,974 | 4,135 | $ 13.29 | 2030 | 36 | 2.58 | 34.31 |
| GM-WWTP40-18 | E | Alstonville WWTP | 225 | 80.5 | 2016 | unplasticised poly vinyl chloride | 237 | 332 | 26,710 | 27,511 | Post | 7% | 1995 | 6,644 | 4,135 | $ 1.61 | 2030 | 36 | 2.58 | 4.15 |
| GM-WWTP40-19 | E | Alstonville WWTP | 225 | 7.5 | 2016 | unplasticised poly vinyl chloride | 237 | 332 | 2,489 | 2,563 | Post | 7% | 1995 | 619 | 4,135 | $ 0.15 | 2030 | 36 | 2.58 | 0.39 |
| GM-4004-1 | E | SP4004 | 150 | 69.5 | 2016 | unplasticised poly vinyl chloride | 195 | 273 | 18,974 | 19,543 | Post | 7% | 1995 | 4,720 | 4,135 | $ 1.14 | 2030 | 36 | 2.58 | 2.95 |
| GM-4004-2 | E | SP4004 | 150 | 25.0 | 2016 | unplasticised poly vinyl chloride | 195 | 273 | 6,825 | 7,030 | Post | 7% | 1995 | 1,698 | 4,135 | $ 0.41 | 2030 | 36 | 2.58 | 1.06 |
| GM-4004-3 | E | Alstonville | 150 | 4.5 | 2016 | unplasticised poly vinyl chloride | 195 | 273 | 1,229 | 1,265 | Post | 7% | 1995 | 306 | 4,135 | $ 0.07 | 2030 | 36 | 2.58 | 0.19 |
| GM-5006-1 | A | SP5006 | 150 | 323.4 | 2011 | unplasticised poly vinyl chloride | 105 | 147 | 47,540 | 48,966 | Post | 7% | 1995 | 16,586 | 507 | $ 32.71 | 2025 | 31 | 2.31 | 75.63 |

**Existing RM**

| Area | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET |
|---|---|---|---|---|
| A | Wardell (100%) | 507 | 2025 | 2,590 |
| B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2030 | 823 |
| C | Alstonville STP (15% of STP capacity) | 730 | 2030 | 0 |
| E | Alstonville STP (85% of STP capacity) | 4,135 | 2030 | 742 |
| F | Ballina RWF (25% of capacity) | 3,272 | 2030 | 624 |
| G | Ballina RWF (25% of capacity) | 3,272 | 2030 | 0 |

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| Label | | Area | Diameter (mm) | Length (Unified) (m) | Actual Commissioning Year | Material | Total Rate 2003 ($/m) | Total Rate 2010 ($/m) | 2010 Cost | Capital Cost (2011/12$ = 2010 price x 1.03) | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM-1004 | FM-1004 | B | 225 | 2 | 1984 | Asbestos Cement | 224 | 313 | 626 | 645 | Pre | 3% | 1995 | 893 | 18,220 | $ 0.05 | 2030 | 36 | 1.60 | 0.08 |
| FM-1004 | FM-1004 | B | 250 | 163 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 54,312 | 55,941 | Pre | 3% | 1995 | 64,851 | 18,220 | $ 3.56 | 2030 | 36 | 1.60 | 5.70 |
| FM-1015 | FM-1015 | F | 225 | 1,598.00 | 2010 | unplasticised poly vinyl chloride | 224 | 313 | 500,387 | 515,399 | Post | 7% | 1995 | 186,804 | 3,272 | $ 57.10 | 2030 | 36 | 2.58 | 147.37 |
| FM-1021 | FM-1021 | B | 375 | 5 | 1987 | unplasticised poly vinyl chloride | 313 | 438 | 2,191 | 2,257 | Pre | 3% | 1995 | 2,859 | 18,220 | $ 0.16 | 2030 | 36 | 1.60 | 0.25 |
| FM-1025 | FM-1025 | B | 375 | 1,867.50 | 1987 | unplasticised poly vinyl chloride | 313 | 438 | 818,339 | 842,889 | Pre | 3% | 1995 | 1,067,746 | 18,220 | $ 58.60 | 2030 | 36 | 1.60 | 93.82 |
| FM-1026 | FM-1026 | B | 375 | 578.5 | 1987 | unplasticised poly vinyl chloride | 313 | 438 | 253,499 | 261,104 | Pre | 3% | 1995 | 330,758 | 18,220 | $ 18.15 | 2030 | 36 | 1.60 | 29.06 |
| FM-1028 | FM-1028 | B | 300 | 1,004.50 | 1995 | unplasticised poly vinyl chloride | 263 | 368 | 369,857 | 380,953 | Pre | 3% | 1995 | 380,953 | 18,220 | $ 20.91 | 2030 | 36 | 1.60 | 33.47 |
| FM-1029 | FM-1029 | F | 225 | 523 | 2010 | unplasticised poly vinyl chloride | 224 | 313 | 163,769 | 168,682 | Post | 7% | 1995 | 61,138 | 3,272 | $ 18.69 | 2030 | 36 | 2.58 | 48.23 |
| FM-1029 | FM-1029 | B | 63 | 9.5 | 1980 | Poly-ethylene | 143 | 200 | 1,904 | 1,961 | Pre | 3% | 1995 | 3,056 | 18,220 | $ 0.17 | 2030 | 36 | 1.60 | 0.27 |
| FM-1033 | FM-1033 | B | 150 | 8.5 | 1981 | Asbestos Cement | 183 | 256 | 2,172 | 2,237 | Pre | 3% | 1995 | 3,384 | 18,220 | $ 0.19 | 2030 | 36 | 1.60 | 0.30 |
| FM-1037 | FM-1037 | B | 150 | 9.5 | 1979 | unplasticised poly vinyl chloride | 183 | 256 | 2,427 | 2,500 | Pre | 3% | 1995 | 4,012 | 18,220 | $ 0.22 | 2030 | 36 | 1.60 | 0.35 |
| FM-1044 | FM-1044 | B | 300 | 68 | 1995 | unplasticised poly vinyl chloride | 263 | 368 | 25,038 | 25,789 | Pre | 3% | 1995 | 25,789 | 18,220 | $ 1.42 | 2030 | 36 | 1.60 | 2.27 |
| FM-1047 | FM-1047 | B | 150 | 5.5 | 2009 | unplasticised poly vinyl chloride | 183 | 256 | 1,405 | 1,447 | Post | 7% | 1995 | 561 | 18,220 | $ 0.03 | 2030 | 36 | 2.58 | 0.08 |
| FM-1048 | FM-1048 | F | 150 | 5 | 2009 | unplasticised poly vinyl chloride | 183 | 256 | 1,278 | 1,316 | Post | 7% | 1995 | 510 | 3,272 | $ 0.16 | 2030 | 36 | 2.58 | 0.40 |
| FM-1049 | FM-1049 | B | 375 | 5.5 | 1995 | unplasticised poly vinyl chloride | 313 | 438 | 2,410 | 2,482 | Pre | 3% | 1995 | 2,482 | 18,220 | $ 0.14 | 2030 | 36 | 1.60 | 0.22 |
| FM-1052 | FM-1052 | B | 152.4 | 7.5 | 1979 | unplasticised poly vinyl chloride | 183 | 256 | 1,916 | 1,974 | Pre | 3% | 1995 | 3,167 | 18,220 | $ 0.17 | 2030 | 36 | 1.60 | 0.28 |
| FM-1053 | FM-1053 | F | 150 | 449.5 | 2009 | unplasticised poly vinyl chloride | 183 | 256 | 114,847 | 118,293 | Post | 7% | 1995 | 45,876 | 3,272 | $ 14.02 | 2030 | 36 | 2.58 | 36.19 |
| FM-1053 | FM-1053 | B | 100 | 202 | 1985 | unplasticised poly vinyl chloride | 165 | 230 | 46,558 | 47,955 | Pre | 3% | 1995 | 64,448 | 18,220 | $ 3.54 | 2030 | 36 | 1.60 | 5.66 |
| FM-1061 | FM-1061 | F | 300 | 6.5 | 2009 | unplasticised poly vinyl chloride | 263 | 368 | 2,393 | 2,465 | Post | 7% | 1995 | 956 | 3,272 | $ 0.29 | 2030 | 36 | 2.58 | 0.75 |
| FM-1062 | FM-1062 | B | 63 | 155.5 | 1980 | Poly-ethylene | 143 | 200 | 31,167 | 32,102 | Pre | 3% | 1995 | 50,015 | 18,220 | $ 2.75 | 2030 | 36 | 1.60 | 4.39 |
| FM-1092 | FM-1092 | B | 250 | 319 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 106,291 | 109,480 | Pre | 3% | 1995 | 126,917 | 18,220 | $ 6.97 | 2030 | 36 | 1.60 | 11.15 |
| FM-1093 | FM-1093 | B | 100 | 380.5 | 1983 | unplasticised poly vinyl chloride | 165 | 230 | 87,700 | 90,331 | Pre | 3% | 1995 | 128,791 | 18,220 | $ 7.07 | 2030 | 36 | 1.60 | 11.32 |
| FM-1127 | FM-1127 | B | 150 | 1,110.50 | 1992 | Blue Brute | 183 | 256 | 283,733 | 292,245 | Pre | 3% | 1995 | 319,344 | 18,220 | $ 17.53 | 2030 | 36 | 1.60 | 28.06 |
| FM-413 | FM-413 | B | 250 | 134 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 44,649 | 45,988 | Pre | 3% | 1995 | 53,313 | 18,220 | $ 2.93 | 2030 | 36 | 1.60 | 4.68 |
| FM-507 | FM-507 | B | 450 | 65 | 1976 | unplasticised poly vinyl chloride | 435 | 609 | 39,615 | 40,804 | Pre | 3% | 1995 | 71,550 | 18,220 | $ 3.93 | 2030 | 36 | 1.60 | 6.29 |
| FM-517 | FM-517 | B | 200 | 28.5 | 2010 | unplasticised poly vinyl chloride | 195 | 273 | 7,781 | 8,014 | Post | 7% | 1995 | 2,905 | 18,220 | $ 0.16 | 2030 | 36 | 2.58 | 0.41 |
| FM-520 | FM-520 | B | 200 | 76.5 | 2010 | unplasticised poly vinyl chloride | 195 | 273 | 20,885 | 21,511 | Post | 7% | 1995 | 7,797 | 18,220 | $ 0.43 | 2030 | 36 | 2.58 | 1.10 |
| FM-522 | FM-522 | B | 375 | 25.5 | 1985 | Asbestos Cement | 313 | 438 | 11,174 | 11,509 | Pre | 3% | 1995 | 15,468 | 18,220 | $ 0.85 | 2030 | 36 | 1.60 | 1.36 |
| FM-524 | FM-524 | B | 150 | 623.5 | 1993 | unplasticised poly vinyl chloride | 183 | 256 | 159,304 | 164,083 | Pre | 3% | 1995 | 174,076 | 18,220 | $ 9.55 | 2030 | 36 | 1.60 | 15.30 |
| FM-526 | FM-526 | B | 450 | 336.5 | 1976 | unplasticised poly vinyl chloride | 435 | 609 | 205,086 | 211,238 | Pre | 3% | 1995 | 370,407 | 18,220 | $ 20.33 | 2030 | 36 | 1.60 | 32.55 |
| FM-527 | FM-527 | B | 200 | 38 | 2010 | unplasticised poly vinyl chloride | 195 | 273 | 10,374 | 10,685 | Post | 7% | 1995 | 3,873 | 18,220 | $ 0.21 | 2030 | 36 | 2.58 | 0.55 |
| FM-528 | FM-528 | B | 125 | 786 | 1982 | unplasticised poly vinyl chloride | 170 | 238 | 187,068 | 192,680 | Pre | 3% | 1995 | 282,957 | 18,220 | $ 15.53 | 2030 | 36 | 1.60 | 24.86 |
| FM-529 | FM-529 | B | 250 | 30.5 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 10,163 | 10,467 | Pre | 3% | 1995 | 12,135 | 18,220 | $ 0.67 | 2030 | 36 | 1.60 | 1.07 |
| FM-552 | FM-552 | B | 150 | 490.5 | 1981 | Asbestos Cement | 183 | 256 | 125,323 | 129,082 | Pre | 3% | 1995 | 195,249 | 18,220 | $ 10.72 | 2030 | 36 | 1.60 | 17.16 |
| FM-593 | FM-593 | F | 250 | 16 | 2009 | unplasticised poly vinyl chloride | 238 | 333 | 5,331 | 5,491 | Post | 7% | 1995 | 2,130 | 3,272 | $ 0.65 | 2030 | 36 | 2.58 | 1.68 |
| FM-595 | FM-595 | B | 63 | 778.5 | 1985 | unplasticised poly vinyl chloride | 143 | 200 | 156,037 | 160,718 | Pre | 3% | 1995 | 215,992 | 18,220 | $ 11.86 | 2030 | 36 | 1.60 | 18.98 |
| FM-606 | FM-606 | B | 150 | 6.50 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 1,661 | 1,711 | Post | 7% | 1995 | 620 | 18,220 | $ 0.03 | 2030 | 36 | 2.58 | 0.09 |
| FM-609 | FM-609 | B | 375 | 13 | 1995 | unplasticised poly vinyl chloride | 313 | 438 | 5,697 | 5,867 | Pre | 3% | 1995 | 5,867 | 18,220 | $ 0.32 | 2030 | 36 | 1.60 | 0.52 |
| FM-637 | FM-637 | B | 225 | 19.5 | 1981 | Asbestos Cement | 224 | 313 | 6,106 | 6,289 | Pre | 3% | 1995 | 9,513 | 18,220 | $ 0.52 | 2030 | 36 | 1.60 | 0.84 |
| FM-640 | FM-640 | B | 210.7 | 1,309.50 | 2010 | unplasticised poly vinyl chloride | 195 | 273 | 357,494 | 368,218 | Post | 7% | 1995 | 133,459 | 18,220 | $ 7.33 | 2030 | 36 | 2.58 | 18.91 |
| FM-641 | FM-641 | B | 150 | 45.5 | 1979 | unplasticised poly vinyl chloride | 183 | 256 | 11,625 | 11,974 | Pre | 3% | 1995 | 19,215 | 18,220 | $ 1.05 | 2030 | 36 | 1.60 | 1.69 |
| FM-642-1 | FM-642-1 | B | 150 | 262.5 | 1979 | unplasticised poly vinyl chloride | 183 | 256 | 67,069 | 69,081 | Pre | 3% | 1995 | 110,854 | 18,220 | $ 6.08 | 2030 | 36 | 1.60 | 9.74 |

| Label | | Area | Diameter (mm) | Length (Unified) (m) | Actual Commissioning Year | Material | Total Rate 2003 ($/m) | Total Rate 2010 ($/m) | 2010 Cost | Capital Cost (2011/12$ = 2010 price x 1.03) | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM-647-1 | FM-647-1 | B | 474 | 1,183.50 | 1976 | unplasticised poly vinyl chloride | 496 | 694 | 821,822 | 846,477 | Pre | 3% | 1995 | 1,484,303 | 18,220 | $ 81.47 | 2030 | 36 | 1.60 | 130.42 |
| FM-653 | FM-653 | B | 150 | 6 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 1,533 | 1,579 | Post | 7% | 1995 | 572 | 18,220 | $ 0.03 | 2030 | 36 | 2.58 | 0.08 |
| FM-659 | FM-659 | B | 150 | 18 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 4,599 | 4,737 | Post | 7% | 1995 | 1,717 | 18,220 | $ 0.09 | 2030 | 36 | 2.58 | 0.24 |
| FM-660 | FM-660 | B | 230 | 606 | 1981 | Asbestos Cement | 224 | 313 | 189,759 | 195,452 | Pre | 3% | 1995 | 295,638 | 18,220 | $ 16.23 | 2030 | 36 | 1.60 | 25.98 |
| FM-705 | FM-705 | B | 375 | 1,039.00 | 1985 | Asbestos Cement | 313 | 438 | 455,290 | 468,948 | Pre | 3% | 1995 | 630,228 | 18,220 | $ 34.59 | 2030 | 36 | 1.60 | 55.38 |
| FM-707 | FM-707 | B | 375 | 274.5 | 1985 | Asbestos Cement | 313 | 438 | 120,286 | 123,894 | Pre | 3% | 1995 | 166,504 | 18,220 | $ 9.14 | 2030 | 36 | 1.60 | 14.63 |
| FM-747 | FM-747 | B | 225 | 130 | 1981 | Asbestos Cement | 224 | 313 | 40,707 | 41,929 | Pre | 3% | 1995 | 63,421 | 18,220 | $ 3.48 | 2030 | 36 | 1.60 | 5.57 |
| FM-759 | FM-759 | B | 225 | 67 | 1981 | Asbestos Cement | 224 | 313 | 20,980 | 21,609 | Pre | 3% | 1995 | 32,686 | 18,220 | $ 1.79 | 2030 | 36 | 1.60 | 2.87 |
| FM-761 | FM-761 | B | 225 | 67 | 1981 | Asbestos Cement | 224 | 313 | 20,980 | 21,609 | Pre | 3% | 1995 | 32,686 | 18,220 | $ 1.79 | 2030 | 36 | 1.60 | 2.87 |
| FM-765 | FM-765 | B | 225 | 80.5 | 1981 | Asbestos Cement | 224 | 313 | 25,207 | 25,963 | Pre | 3% | 1995 | 39,272 | 18,220 | $ 2.16 | 2030 | 36 | 1.60 | 3.45 |
| FM-771 | FM-771 | B | 225 | 110.5 | 1981 | Asbestos Cement | 224 | 313 | 34,601 | 35,639 | Pre | 3% | 1995 | 53,908 | 18,220 | $ 2.96 | 2030 | 36 | 1.60 | 4.74 |
| FM-779 | FM-779 | B | 225 | 208.5 | 1981 | Asbestos Cement | 224 | 313 | 65,288 | 67,247 | Pre | 3% | 1995 | 101,717 | 18,220 | $ 5.58 | 2030 | 36 | 1.60 | 8.94 |
| FM-780 | FM-780 | B | 225 | 387.5 | 1981 | Asbestos Cement | 224 | 313 | 121,339 | 124,979 | Pre | 3% | 1995 | 189,042 | 18,220 | $ 10.38 | 2030 | 36 | 1.60 | 16.61 |
| FM-818 | FM-818 | F | 300 | 62.5 | 2009 | unplasticised poly vinyl chloride | 263 | 368 | 23,013 | 23,703 | Post | 7% | 1995 | 9,192 | 3,272 | $ 2.81 | 2030 | 36 | 2.58 | 7.25 |
| FM-820 | FM-820 | F | 225 | 54.5 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 17,066 | 17,578 | Post | 7% | 1995 | 6,817 | 3,272 | $ 2.08 | 2030 | 36 | 2.58 | 5.38 |
| FM-822 | FM-822 | F | 300 | 97.5 | 2009 | unplasticised poly vinyl chloride | 263 | 368 | 35,900 | 36,976 | Post | 7% | 1995 | 14,340 | 3,272 | $ 4.38 | 2030 | 36 | 2.58 | 11.31 |
| FM-824 | FM-824 | F | 225 | 95.5 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 29,904 | 30,801 | Post | 7% | 1995 | 11,945 | 3,272 | $ 3.65 | 2030 | 36 | 2.58 | 9.42 |
| FM-825 | FM-825 | F | 300 | 448 | 2009 | unplasticised poly vinyl chloride | 263 | 368 | 164,954 | 169,902 | Post | 7% | 1995 | 65,891 | 3,272 | $ 20.14 | 2030 | 36 | 2.58 | 51.98 |
| FM-826 | FM-826 | F | 300 | 280 | 2009 | unplasticised poly vinyl chloride | 263 | 368 | 103,096 | 106,189 | Post | 7% | 1995 | 41,182 | 3,272 | $ 12.59 | 2030 | 36 | 2.58 | 32.49 |
| FM-827 | FM-827 | F | 225 | 596.5 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 186,784 | 192,388 | Post | 7% | 1995 | 74,611 | 3,272 | $ 22.80 | 2030 | 36 | 2.58 | 58.86 |
| FM-828 | FM-828 | F | 225 | 116.5 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 36,480 | 37,574 | Post | 7% | 1995 | 14,572 | 3,272 | $ 4.45 | 2030 | 36 | 2.58 | 11.50 |
| FM-871 | FM-871 | B | 200 | 368 | 2010 | unplasticised poly vinyl chloride | 195 | 273 | 100,464 | 103,478 | Post | 7% | 1995 | 37,505 | 18,220 | $ 2.06 | 2030 | 36 | 2.58 | 5.31 |
| FM-872 | FM-872 | B | 200 | 389 | 2010 | unplasticised poly vinyl chloride | 195 | 273 | 106,197 | 109,383 | Post | 7% | 1995 | 39,645 | 18,220 | $ 2.18 | 2030 | 36 | 2.58 | 5.62 |
| FM-873 | FM-873 | B | 250 | 284 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 94,629 | 97,468 | Pre | 3% | 1995 | 112,992 | 18,220 | $ 6.20 | 2030 | 36 | 1.60 | 9.93 |
| FM-874 | FM-874 | B | 250 | 390.5 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 130,115 | 134,018 | Pre | 3% | 1995 | 155,364 | 18,220 | $ 8.53 | 2030 | 36 | 1.60 | 13.65 |
| FM-875 | FM-875 | B | 375 | 286.5 | 1987 | unplasticised poly vinyl chloride | 313 | 438 | 125,544 | 129,311 | Pre | 3% | 1995 | 163,807 | 18,220 | $ 8.99 | 2030 | 36 | 1.60 | 14.39 |
| FM-876 | FM-876 | B | 375 | 428 | 1987 | unplasticised poly vinyl chloride | 313 | 438 | 187,550 | 193,176 | Pre | 3% | 1995 | 244,710 | 18,220 | $ 13.43 | 2030 | 36 | 1.60 | 21.50 |
| FM-881 | FM-881 | F | 100 | 183 | 2009 | unplasticised poly vinyl chloride | 165 | 230 | 42,179 | 43,444 | Post | 7% | 1995 | 16,848 | 3,272 | $ 5.15 | 2030 | 36 | 2.58 | 13.29 |
| FM-882 | FM-882 | F | 100 | 118.5 | 2009 | unplasticised poly vinyl chloride | 165 | 230 | 27,313 | 28,132 | Post | 7% | 1995 | 10,910 | 3,272 | $ 3.33 | 2030 | 36 | 2.58 | 8.61 |
| FM-896 | FM-896 | F | 225 | 130.5 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 40,864 | 42,090 | Post | 7% | 1995 | 16,323 | 3,272 | $ 4.99 | 2030 | 36 | 2.58 | 12.88 |
| FM-900 | FM-900 | F | 225 | 124.5 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 38,985 | 40,155 | Post | 7% | 1995 | 15,573 | 3,272 | $ 4.76 | 2030 | 36 | 2.58 | 12.29 |
| FM-901 | FM-901 | B | 375 | 279.5 | 1985 | Asbestos Cement | 313 | 438 | 122,477 | 126,151 | Pre | 3% | 1995 | 169,537 | 18,220 | $ 9.31 | 2030 | 36 | 1.60 | 14.90 |
| FM-902 | FM-902 | B | 375 | 253.5 | 1985 | Asbestos Cement | 313 | 438 | 111,084 | 114,416 | Pre | 3% | 1995 | 153,766 | 18,220 | $ 8.44 | 2030 | 36 | 1.60 | 13.51 |
| FM-905 | FM-905 | B | 250 | 223 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 74,304 | 76,533 | Pre | 3% | 1995 | 88,722 | 18,220 | $ 4.87 | 2030 | 36 | 1.60 | 7.80 |
| FM-907 | FM-907 | B | 250 | 188.5 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 62,808 | 64,692 | Pre | 3% | 1995 | 74,996 | 18,220 | $ 4.12 | 2030 | 36 | 1.60 | 6.59 |
| FM-909 | FM-909 | B | 250 | 181 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 60,309 | 62,118 | Pre | 3% | 1995 | 72,012 | 18,220 | $ 3.95 | 2030 | 36 | 1.60 | 6.33 |
| FM-911 | FM-911 | B | 250 | 113.5 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 37,818 | 38,953 | Pre | 3% | 1995 | 45,157 | 18,220 | $ 2.48 | 2030 | 36 | 1.60 | 3.97 |
| FM-912 | FM-912 | B | 250 | 34 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 11,329 | 11,669 | Pre | 3% | 1995 | 13,527 | 18,220 | $ 0.74 | 2030 | 36 | 1.60 | 1.19 |
| FM-921 | FM-921 | B | 250 | 74.5 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 24,823 | 25,568 | Pre | 3% | 1995 | 29,640 | 18,220 | $ 1.63 | 2030 | 36 | 1.60 | 2.60 |
| FM-922 | FM-922 | B | 100 | 5.5 | 1985 | unplasticised poly vinyl chloride | 165 | 230 | 1,268 | 1,306 | Pre | 3% | 1995 | 1,755 | 18,220 | $ 0.10 | 2030 | 36 | 1.60 | 0.15 |
| FM-923 | FM-923 | B | 250 | 90.5 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 30,155 | 31,059 | Pre | 3% | 1995 | 36,006 | 18,220 | $ 1.98 | 2030 | 36 | 1.60 | 3.16 |
| FM-924 | FM-924 | B | 150 | 4.5 | 1979 | unplasticised poly vinyl chloride | 183 | 256 | 1,150 | 1,184 | Pre | 3% | 1995 | 1,900 | 18,220 | $ 0.10 | 2030 | 36 | 1.60 | 0.17 |
| FM-925 | FM-925 | B | 250 | 194 | 1990 | unplasticised poly vinyl chloride | 238 | 333 | 64,641 | 66,580 | Pre | 3% | 1995 | 77,184 | 18,220 | $ 4.24 | 2030 | 36 | 1.60 | 6.78 |
| FM-927 | FM-927 | B | 150 | 7 | 1993 | unplasticised poly vinyl chloride | 183 | 256 | 1,789 | 1,842 | Pre | 3% | 1995 | 1,954 | 18,220 | $ 0.11 | 2030 | 36 | 1.60 | 0.17 |
| FM-932 | FM-932 | B | 450 | 19.5 | 1976 | unplasticised poly vinyl chloride | 435 | 609 | 11,885 | 12,241 | Pre | 3% | 1995 | 21,465 | 18,220 | $ 1.18 | 2030 | 36 | 1.60 | 1.89 |
| FM-940 | FM-940 | B | 150 | 122 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 31,171 | 32,106 | Post | 7% | 1995 | 11,637 | 18,220 | $ 0.64 | 2030 | 36 | 2.58 | 1.65 |
| FM-941 | FM-941 | B | 150 | 207 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 52,889 | 54,475 | Post | 7% | 1995 | 19,744 | 18,220 | $ 1.08 | 2030 | 36 | 2.58 | 2.80 |
| FM-942 | FM-942 | B | 150 | 91.5 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 23,378 | 24,080 | Post | 7% | 1995 | 8,728 | 18,220 | $ 0.48 | 2030 | 36 | 2.58 | 1.24 |
| FM-943 | FM-943 | B | 150 | 65 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 16,608 | 17,106 | Post | 7% | 1995 | 6,200 | 18,220 | $ 0.34 | 2030 | 36 | 2.58 | 0.88 |
| FM-945 | FM-945 | B | 150 | 105.5 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 26,955 | 27,764 | Post | 7% | 1995 | 10,063 | 18,220 | $ 0.55 | 2030 | 36 | 2.58 | 1.43 |
| FM-947 | FM-947 | B | 150 | 73.5 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 18,779 | 19,343 | Post | 7% | 1995 | 7,011 | 18,220 | $ 0.38 | 2030 | 36 | 2.58 | 0.99 |
| FM-948 | FM-948 | B | 150 | 87.5 | 2010 | unplasticised poly vinyl chloride | 183 | 256 | 22,356 | 23,027 | Post | 7% | 1995 | 8,346 | 18,220 | $ 0.46 | 2030 | 36 | 2.58 | 1.18 |
| FM-951 | FM-951 | B | 225 | 103.5 | 1981 | Asbestos Cement | 224 | 313 | 32,409 | 33,382 | Pre | 3% | 1995 | 50,493 | 18,220 | $ 2.77 | 2030 | 36 | 1.60 | 4.44 |

| Label | | Area | Diameter (mm) | Length (Unified) (m) | Actual Commissioning Year | Material | Total Rate 2003 ($/m) | Total Rate 2010 ($/m) | 2010 Cost | Capital Cost (2011/12$ = 2010 price x 1.03) | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FM-952 | FM-952 | B | 225 | 151.5 | 1981 | Asbestos Cement | 224 | 313 | 47,440 | 48,863 | Pre | 3% | 1995 | 73,910 | 18,220 | $ 4.06 | 2030 | 36 | 1.60 | 6.49 |
| FM-969 | FM-969 | B | 375 | 5.5 | 1985 | Asbestos Cement | 313 | 438 | 2,410 | 2,482 | Pre | 3% | 1995 | 3,336 | 18,220 | $ 0.18 | 2030 | 36 | 1.60 | 0.29 |
| FM-973 | FM-973 | F | 100 | 144 | 2009 | unplasticised poly vinyl chloride | 165 | 230 | 33,190 | 34,186 | Post | 7% | 1995 | 13,258 | 3,272 | $ 4.05 | 2030 | 36 | 2.58 | 10.46 |
| FM-974 | FM-974 | F | 152.4 | 19.5 | 2009 | unplasticised poly vinyl chloride | 183 | 256 | 4,982 | 5,132 | Post | 7% | 1995 | 1,990 | 3,272 | $ 0.61 | 2030 | 36 | 2.58 | 1.57 |
| FM-976 | FM-976 | F | 300 | 596 | 2009 | unplasticised poly vinyl chloride | 263 | 368 | 219,447 | 226,031 | Post | 7% | 1995 | 87,659 | 3,272 | $ 26.79 | 2030 | 36 | 2.58 | 69.15 |
| FM-978 | FM-978 | F | 225 | 604 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 189,133 | 194,807 | Post | 7% | 1995 | 75,549 | 3,272 | $ 23.09 | 2030 | 36 | 2.58 | 59.60 |
| FM-978 | FM-978 | B | 150 | 9 | 1983 | unplasticised poly vinyl chloride | 183 | 256 | 2,300 | 2,368 | Pre | 3% | 1995 | 3,377 | 18,220 | $ 0.19 | 2030 | 36 | 1.60 | 0.30 |
| FM-983 | FM-983 | F | 225 | 133 | 2009 | unplasticised poly vinyl chloride | 224 | 313 | 41,647 | 42,896 | Post | 7% | 1995 | 16,636 | 3,272 | $ 5.08 | 2030 | 36 | 2.58 | 13.12 |
| FM-988 | FM-988 | B | 63 | 2.5 | 1985 | unplasticised poly vinyl chloride | 143 | 200 | 501 | 516 | Pre | 3% | 1995 | 694 | 18,220 | $ 0.04 | 2030 | 36 | 1.60 | 0.06 |
| FM-907 | | E | 150 | 2.5 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 641 | 660 | Pre | 3% | 1995 | 887 | 4,135 | $ 0.21 | 2030 | 36 | 1.60 | 0.34 |
| FM-887 | | E | 100 | 4 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 851 | 877 | Pre | 3% | 1995 | 1,178 | 4,135 | $ 0.28 | 2030 | 36 | 1.60 | 0.46 |
| FM-1076 | | E | 150 | 4 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 1,025 | 1,056 | Pre | 3% | 1995 | 1,419 | 4,135 | $ 0.34 | 2030 | 36 | 1.60 | 0.55 |
| FM-905 | | E | 50 | 4 | 1985 | unplasticised poly vinyl chloride | *121* | 169.4 | 678 | 698 | Pre | 3% | 1995 | 938 | 4,135 | $ 0.23 | 2030 | 36 | 1.60 | 0.36 |
| FM-888 | | E | 100 | 6 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 1,277 | 1,315 | Pre | 3% | 1995 | 1,767 | 4,135 | $ 0.43 | 2030 | 36 | 1.60 | 0.68 |
| FM-901 | | E | 150 | 6.5 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 1,665 | 1,715 | Pre | 3% | 1995 | 2,305 | 4,135 | $ 0.56 | 2030 | 36 | 1.60 | 0.89 |
| FM-893 | | E | 100 | 7 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 1,490 | 1,534 | Pre | 3% | 1995 | 2,062 | 4,135 | $ 0.50 | 2030 | 36 | 1.60 | 0.80 |
| FM-220 | | E | 100 | 7 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 1,490 | 1,534 | Pre | 3% | 1995 | 2,062 | 4,135 | $ 0.50 | 2030 | 36 | 1.60 | 0.80 |
| FM-895 | | E | 150 | 7.5 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 1,922 | 1,979 | Pre | 3% | 1995 | 2,660 | 4,135 | $ 0.64 | 2030 | 36 | 1.60 | 1.03 |
| FM-900 | | E | 50 | 7.5 | 1985 | unplasticised poly vinyl chloride | *121* | 169.4 | 1,271 | 1,309 | Pre | 3% | 1995 | 1,759 | 4,135 | $ 0.43 | 2030 | 36 | 1.60 | 0.68 |
| FM-899 | | E | 50 | 8 | 1985 | unplasticised poly vinyl chloride | *121* | 169.4 | 1,355 | 1,396 | Pre | 3% | 1995 | 1,876 | 4,135 | $ 0.45 | 2030 | 36 | 1.60 | 0.73 |
| FM-206 | | E | 150 | 8 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 2,050 | 2,111 | Pre | 3% | 1995 | 2,837 | 4,135 | $ 0.69 | 2030 | 36 | 1.60 | 1.10 |
| FM-227 | | E | 100 | 8 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 1,702 | 1,753 | Pre | 3% | 1995 | 2,357 | 4,135 | $ 0.57 | 2030 | 36 | 1.60 | 0.91 |
| FM-223 | | E | 150 | 9.5 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 2,434 | 2,507 | Pre | 3% | 1995 | 3,369 | 4,135 | $ 0.81 | 2030 | 36 | 1.60 | 1.30 |
| FM-225 | | E | 152.4 | 10 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 2,562 | 2,639 | Pre | 3% | 1995 | 3,546 | 4,135 | $ 0.86 | 2030 | 36 | 1.60 | 1.37 |
| FM-228 | | E | 100 | 10 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 2,128 | 2,192 | Pre | 3% | 1995 | 2,946 | 4,135 | $ 0.71 | 2030 | 36 | 1.60 | 1.14 |
| FM-1073 | | E | 150 | 11 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 2,818 | 2,903 | Pre | 3% | 1995 | 3,901 | 4,135 | $ 0.94 | 2030 | 36 | 1.60 | 1.51 |
| FM-911 | | E | 100 | 15 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 3,192 | 3,288 | Pre | 3% | 1995 | 4,418 | 4,135 | $ 1.07 | 2030 | 36 | 1.60 | 1.71 |
| FM-902 | | E | 150 | 19 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 4,868 | 5,014 | Pre | 3% | 1995 | 6,738 | 4,135 | $ 1.63 | 2030 | 36 | 1.60 | 2.61 |
| FM-579 | | E | 50 | 42 | 1985 | unplasticised poly vinyl chloride | *121* | 169.4 | 7,115 | 7,328 | Pre | 3% | 1995 | 9,849 | 4,135 | $ 2.38 | 2030 | 36 | 1.60 | 3.81 |
| FM-891 | | E | 32 | 52.5 | 1985 | unplasticised poly vinyl chloride | *105.5* | 147.7 | 7,754 | 7,987 | Pre | 3% | 1995 | 10,734 | 4,135 | $ 2.60 | 2030 | 36 | 1.60 | 4.16 |
| FM-582 | | E | 150 | 60 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 15,372 | 15,833 | Pre | 3% | 1995 | 21,278 | 4,135 | $ 5.15 | 2030 | 36 | 1.60 | 8.24 |
| FM-209 | | E | 32 | 77 | 1985 | unplasticised poly vinyl chloride | *105.5* | 147.7 | 11,373 | 11,714 | Pre | 3% | 1995 | 15,743 | 4,135 | $ 3.81 | 2030 | 36 | 1.60 | 6.09 |
| FM-205 | | E | 50 | 118.5 | 1985 | unplasticised poly vinyl chloride | *121* | 169.4 | 20,074 | 20,676 | Pre | 3% | 1995 | 27,787 | 4,135 | $ 6.72 | 2030 | 36 | 1.60 | 10.76 |
| FM-224 | | E | 150 | 140 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 35,868 | 36,944 | Pre | 3% | 1995 | 49,650 | 4,135 | $ 12.01 | 2030 | 36 | 1.60 | 19.22 |
| FM-1070 | | E | 50 | 206.5 | 1985 | unplasticised poly vinyl chloride | *121* | 169.4 | 34,981 | 36,031 | Pre | 3% | 1995 | 48,422 | 4,135 | $ 11.71 | 2030 | 36 | 1.60 | 18.75 |
| FM-219 | | E | 38 | 270.5 | 1985 | unplasticised poly vinyl chloride | *113.56* | 158.984 | 43,005 | 44,295 | Pre | 3% | 1995 | 59,529 | 4,135 | $ 14.40 | 2030 | 36 | 1.60 | 23.05 |
| FM-578 | | E | 100 | 279 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 59,371 | 61,152 | Pre | 3% | 1995 | 82,184 | 4,135 | $ 19.87 | 2030 | 36 | 1.60 | 31.82 |
| FM-687 | | E | 150 | 297.5 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 76,220 | 78,506 | Pre | 3% | 1995 | 105,506 | 4,135 | $ 25.51 | 2030 | 36 | 1.60 | 40.85 |
| FM-229 | | E | 100 | 321 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 68,309 | 70,358 | Pre | 3% | 1995 | 94,555 | 4,135 | $ 22.87 | 2030 | 36 | 1.60 | 36.61 |
| FM-1081 | | E | 100 | 456.5 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 97,143 | 100,057 | Pre | 3% | 1995 | 134,469 | 4,135 | $ 32.52 | 2030 | 36 | 1.60 | 52.06 |
| FM-1069 | | E | 100 | 596.5 | 1985 | unplasticised poly vinyl chloride | *152* | 212.8 | 126,935 | 130,743 | Pre | 3% | 1995 | 175,708 | 4,135 | $ 42.49 | 2030 | 36 | 1.60 | 68.02 |
| FM-581 | | E | 150 | 669 | 1985 | unplasticised poly vinyl chloride | *183* | 256.2 | 171,398 | 176,540 | Pre | 3% | 1995 | 237,255 | 4,135 | $ 57.37 | 2030 | 36 | 1.60 | 91.85 |
| FM-207 | | E | 80 | 2,942.00 | 1985 | unplasticised poly vinyl chloride | *139.6* | 195.44 | 574,984 | 592,234 | Pre | 3% | 1995 | 795,913 | 4,135 | $ 192.47 | 2030 | 36 | 1.60 | 308.13 |
| FM-602 | | A | 150 | 6.5 | 1993 | unplasticised poly vinyl chloride | *183* | 256.2 | 1,665 | 1,715 | Pre | 3% | 1995 | 1,820 | 507 | $ 3.59 | 2025 | 31 | 1.50 | 5.40 |
| FM-1102 | | A | 100 | 7.5 | 1993 | unplasticised poly vinyl chloride | *152* | 212.8 | 1,596 | 1,644 | Pre | 3% | 1995 | 1,744 | 507 | $ 3.44 | 2025 | 31 | 1.50 | 5.18 |
| FM-1100 | | A | 200 | 10.5 | 1993 | unplasticised poly vinyl chloride | *203* | 284.2 | 2,984 | 3,074 | Pre | 3% | 1995 | 3,261 | 507 | $ 6.43 | 2025 | 31 | 1.50 | 9.68 |
| FM-1098 | | A | 150 | 13 | 1993 | unplasticised poly vinyl chloride | *183* | 256.2 | 3,331 | 3,431 | Pre | 3% | 1995 | 3,639 | 507 | $ 7.18 | 2025 | 31 | 1.50 | 10.80 |
| FM-1149 | | A | 150 | 48.5 | 1993 | unplasticised poly vinyl chloride | *183* | 256.2 | 12,426 | 12,798 | Pre | 3% | 1995 | 13,578 | 507 | $ 26.78 | 2025 | 31 | 1.50 | 40.30 |
| FM-1103 | | A | 100 | 255 | 1993 | unplasticised poly vinyl chloride | *152* | 212.8 | 54,264 | 55,892 | Pre | 3% | 1995 | 59,296 | 507 | $ 116.95 | 2025 | 31 | 1.50 | 176.00 |
| FM-1068 | | A | 100 | 315.5 | 1993 | unplasticised poly vinyl chloride | *152* | 212.8 | 67,138 | 69,153 | Pre | 3% | 1995 | 73,364 | 507 | $ 144.70 | 2025 | 31 | 1.50 | 217.75 |
| FM-1099 | | A | 150 | 375.5 | 1993 | unplasticised poly vinyl chloride | *183* | 256.2 | 96,203 | 99,089 | Pre | 3% | 1995 | 105,124 | 507 | $ 207.34 | 2025 | 31 | 1.50 | 312.02 |
| FM-191 | | A | 200 | 785 | 1993 | unplasticised poly vinyl chloride | *203* | 284.2 | 223,097 | 229,790 | Pre | 3% | 1995 | 243,784 | 507 | $ 480.84 | 2025 | 31 | 1.50 | 723.57 |
| FM-190 | | A | 200 | 1181.5 | 1993 | unplasticised poly vinyl chloride | *203* | 284.2 | 335,782 | 345,856 | Pre | 3% | 1995 | 366,918 | 507 | $ 723.70 | 2025 | 31 | 1.50 | 1089.05 |
| RM-3107-1 | | B | 250 | 15 | 2010 | DICL | 238 | 333 | 4998 | 5,148 | Post | 7% | 1995 | 1,866 | 18,220 | $ 0.10 | 2030 | 36 | 2.58 | 0.26 |
| RM-3107-2 | | B | 200 | 158.5 | 2010 | DICL | 195 | 273 | 43271 | 44,569 | Post | 7% | 1995 | 16,154 | 18,220 | $ 0.89 | 2030 | 36 | 2.58 | 2.29 |
| RM-3107-3 | | B | 200 | 104 | 2010 | DICL | 195 | 273 | 28392 | 29,244 | Post | 7% | 1995 | 10,599 | 18,220 | $ 0.58 | 2030 | 36 | 2.58 | 1.50 |
| RM-3115-1 | | B | 100 | 258.5 | 2010 | DICL | 165 | 230 | 59581 | 61,368 | Post | 7% | 1995 | 22,243 | 18,220 | $ 1.22 | 2030 | 36 | 2.58 | 3.15 |
| RM-3115-2 | | B | 150 | 16 | 2010 | DICL | 183 | 256 | 4088 | 4,211 | Post | 7% | 1995 | 1,526 | 18,220 | $ 0.08 | 2030 | 36 | 2.58 | 0.22 |

^ Italicised rates indicate cost basis = Trunk Mains, rather than Rising Mains

**Future RM**

| Area | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET |
|---|---|---|---|---|
| A | Wardell (100%) | 507 | 2025 | 0 |
| B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2030 | 40 |
| C | Alstonville STP (15% of STP capacity) | 730 | 2030 | 208 |
| E | Alstonville STP (85% of STP capacity) | 4,135 | 2030 | 15 |
| F | Ballina RWF (25% of capacity) | 3,272 | 2030 | 425 |
| G | Ballina RWF (25% of capacity) | 3,272 | 2030 | 475 |

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| Label | Area | PS Catchment | Diameter (mm) | Length (m) | Year to be commissioned | Material | Total Rate (2003$/m) | Total Rate (2010$/m) | 2010 Cost | Year Commissioned | Capital Cost (2011/12$) | Pre or Post 1996 asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RM-2101-1 | B | SP2101 | 375 | 505 | 2012 | DICL | 313 | 438 | $ 221,291 | 2012 | 227,930 | Post | 7% | 1995 | 72,157 | 18,220 | $ 3.96 | 2030 | 36 | 2.58 | 10.22 |
| RM-PSNNC-1 | B | PS New North Creek | 150 | 595 | 2020 | DICL | 183 | 256 | $ 152,023 | 2020 | 156,583 | Post | 7% | 1995 | 28,850 | 18,220 | $ 1.58 | 2030 | 36 | 2.58 | 4.09 |
| RM-PSNNC-2 | B | PS New North Creek | 150 | 24 | 2020 | DICL | 183 | 256 | $ 6,132 | 2020 | 6,316 | Post | 7% | 1995 | 1,164 | 18,220 | $ 0.06 | 2030 | 36 | 2.58 | 0.16 |
| RM-3001-1 | B | SP3001 | 250 | 382.5 | 2015 | DICL | 238 | 333 | $ 127,449 | 2015 | 131,272 | Post | 7% | 1995 | 33,923 | 18,220 | $ 1.86 | 2030 | 36 | 2.58 | 4.81 |
| RM-2401-1 | F | SP2401 | 150 | 480.00 | 2016 | DICL | 183 | 256 | $ 122,640 | 2016 | 126,319 | Post | 7% | 1995 | 30,508 | 3,272 | $ 9.32 | 2030 | 36 | 2.58 | 24.07 |
| RM-SPNB2-1 | B | SPNB2 | 150 | 7.5 | 2015 | DICL | 183 | 256 | $ 1,916 | 2015 | 1,974 | Post | 7% | 1995 | 510 | 18,220 | $ 0.03 | 2030 | 36 | 2.58 | 0.07 |
| RM-SPNB2-2 | B | SPNB2 | 150 | 997 | 2015 | DICL | 183 | 256 | $ 254,734 | 2015 | 262,376 | Post | 7% | 1995 | 67,803 | 18,220 | $ 3.72 | 2030 | 36 | 2.58 | 9.61 |
| RM-3001-3 | B | SP3001 | 250 | 121 | 2015 | DICL | 238 | 333 | $ 40,317 | 2015 | 41,527 | Post | 7% | 1995 | 10,731 | 18,220 | $ 0.59 | 2030 | 36 | 2.58 | 1.52 |
| RM-3001-4 | B | SP3001 | 250 | 129.5 | 2015 | DICL | 238 | 333 | $ 43,149 | 2015 | 44,444 | Post | 7% | 1995 | 11,485 | 18,220 | $ 0.63 | 2030 | 36 | 2.58 | 1.63 |
| RM-3001-5 | B | SP3001 | 250 | 139.5 | 2015 | DICL | 238 | 333 | $ 46,481 | 2015 | 47,876 | Post | 7% | 1995 | 12,372 | 18,220 | $ 0.68 | 2030 | 36 | 2.58 | 1.75 |
| RM-3001-6 | B | SP3001 | 250 | 68 | 2015 | DICL | 238 | 333 | $ 22,658 | 2015 | 23,337 | Post | 7% | 1995 | 6,031 | 18,220 | $ 0.33 | 2030 | 36 | 2.58 | 0.85 |
| RM-3001-7 | B | SP3001 | 250 | 69 | 2015 | DICL | 238 | 333 | $ 22,991 | 2015 | 23,681 | Post | 7% | 1995 | 6,119 | 18,220 | $ 0.34 | 2030 | 36 | 2.58 | 0.87 |
| RM-3001-8 | B | SP3001 | 250 | 86.5 | 2015 | DICL | 238 | 333 | $ 28,822 | 2015 | 29,686 | Post | 7% | 1995 | 7,672 | 18,220 | $ 0.42 | 2030 | 36 | 2.58 | 1.09 |
| RM-3001-9 | B | SP3001 | 250 | 73 | 2015 | DICL | 238 | 333 | $ 24,324 | 2015 | 25,053 | Post | 7% | 1995 | 6,474 | 18,220 | $ 0.36 | 2030 | 36 | 2.58 | 0.92 |
| RM-3001-10 | B | SP3001 | 250 | 230 | 2015 | DICL | 238 | 333 | $ 76,636 | 2015 | 78,935 | Post | 7% | 1995 | 20,398 | 18,220 | $ 1.12 | 2030 | 36 | 2.58 | 2.89 |
| RM-WUEA-1 | C | Wollongbar | 150 | 8.5 | 2011 | DICL | *195* | 273 | $ 2,321 | 2011 | 2,390 | Post | 7% | 1995 | 810 | 730 | $ 1.11 | 2030 | 36 | 2.58 | 2.86 |
| RM-WUEA-2 | C | Wollongbar | 150 | 25.5 | 2011 | DICL | *195* | 273 | $ 6,962 | 2011 | 7,170 | Post | 7% | 1995 | 2,429 | 730 | $ 3.33 | 2030 | 36 | 2.58 | 8.59 |
| RM-WUEA-3 | C | Wollongbar | 300 | 740.0 | 2020 | DICL | *283* | 396.2 | $ 293,188 | 2020 | 301,984 | Post | 7% | 1995 | 55,640 | 730 | $ 76.25 | 2030 | 36 | 2.58 | 196.80 |
| RM-4106-1 | E | Wollongbar | 100 | 103.5 | 2011 | DICL | *164* | 229.6 | $ 23,764 | 2011 | 24,477 | Post | 7% | 1995 | 8,291 | 4,135 | $ 2.00 | 2030 | 36 | 2.58 | 5.17 |
| RM-4106-2 | E | Wollongbar | 100 | 204.5 | 2011 | DICL | 164 | 229.6 | $ 46,953 | 2011 | 48,362 | Post | 7% | 1995 | 16,382 | 4,135 | $ 3.96 | 2030 | 36 | 2.58 | 10.22 |
| RM-PS6-20-1 | G | Cura B PS6 North | 450 | 52 | 2020 | DICL | 435 | 609 | $ 31,692 | 2020 | 32,643 | Post | 7% | 1995 | 6,014 | 3,272 | $ 1.84 | 2030 | 36 | 2.58 | 4.74 |
| RM-PS6-20-2 | G | Cura B PS6 North | 450 | 3,700.00 | 2020 | DICL | 435 | 609 | $ 2,255,027 | 2020 | 2,322,677 | Post | 7% | 1995 | 427,951 | 3,272 | $ 130.80 | 2030 | 36 | 2.58 | 337.61 |
| RM-PS6-20-3 | G | Cura B PS6 North | 450 | 1,456.50 | 2020 | DICL | 435 | 609 | $ 887,688 | 2020 | 914,319 | Post | 7% | 1995 | 168,462 | 3,272 | $ 51.49 | 2030 | 36 | 2.58 | 132.90 |
| FM-1013 | F | | 300 | 1597 | 2013 | DICL | 263 | 368 | $ 588,015 | 2013 | 605,656 | Post | 7% | 1995 | 179,192 | 3,272 | $ 54.77 | 2030 | 36 | 2.58 | 141.36 |
| FM-1027 | F | | 300 | 522 | 2013 | DICL | 263 | 368 | $ 192,200 | 2013 | 197,966 | Post | 7% | 1995 | 58,571 | 3,272 | $ 17.90 | 2030 | 36 | 2.58 | 46.21 |
| FM-1031 | F | | 300 | 1085.5 | 2013 | DICL | 263 | 368 | $ 399,681 | 2013 | 411,672 | Post | 7% | 1995 | 121,799 | 3,272 | $ 37.23 | 2030 | 36 | 2.58 | 96.09 |
| FM-1032 | F | | 200 | 1097.5 | 2013 | DICL | 195 | 273 | $ 299,618 | 2013 | 308,606 | Post | 7% | 1995 | 91,305 | 3,272 | $ 27.91 | 2030 | 36 | 2.58 | 72.03 |
| FM-894 | F | | 300 | 138 | 2013 | DICL | 263 | 368 | $ 50,812 | 2013 | 52,336 | Post | 7% | 1995 | 15,484 | 3,272 | $ 4.73 | 2030 | 36 | 2.58 | 12.22 |
| FM-898 | F | | 300 | 121.5 | 2013 | DICL | 263 | 368 | $ 44,736 | 2013 | 46,078 | Post | 7% | 1995 | 13,633 | 3,272 | $ 4.17 | 2030 | 36 | 2.58 | 10.75 |
| FM-981 | F | | 300 | 130.5 | 2013 | DICL | 263 | 368 | $ 48,050 | 2013 | 49,492 | Post | 7% | 1995 | 14,643 | 3,272 | $ 4.48 | 2030 | 36 | 2.58 | 11.55 |
| RM-2402-15-1 | F | | 225 | 42 | 2013 | DICL | 224 | 313 | $ 13,152 | 2013 | 13,546 | Post | 7% | 1995 | 4,008 | 3,272 | $ 1.22 | 2030 | 36 | 2.58 | 3.16 |
| FM-986 | F | | 300 | 6 | 2013 | DICL | 263 | 368 | $ 2,209 | 2013 | 2,275 | Post | 7% | 1995 | 673 | 3,272 | $ 0.21 | 2030 | 36 | 2.58 | 0.53 |
| FM-988 | F | | 300 | 30.5 | 2013 | DICL | 263 | 368 | $ 11,230 | 2013 | 11,567 | Post | 7% | 1995 | 3,422 | 3,272 | $ 1.05 | 2030 | 36 | 2.58 | 2.70 |
| FM-990 | F | | 300 | 16 | 2013 | DICL | 263 | 368 | $ 5,891 | 2013 | 6,068 | Post | 7% | 1995 | 1,795 | 3,272 | $ 0.55 | 2030 | 36 | 2.58 | 1.42 |
| RM-2402-20-1 | F | | 300 | 35.5 | 2013 | DICL | 263 | 368 | $ 13,071 | 2013 | 13,463 | Post | 7% | 1995 | 3,983 | 3,272 | $ 1.22 | 2030 | 36 | 2.58 | 3.14 |

^ Italicised rates indicate cost basis = Trunk Mains, rather than Rising Mains

**Existing SPSs (those contributing to captial charge)**

| Area | STP Catchment | Correpsondin g Capacity of System (sum of % of plant capacity noted) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET |
|---|---|---|---|---|
| A | Wardell (100%) | 507 | 2025 | 2,607 |
| B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2030 | 288 |
| C | Alstonville STP (15% of STP capacity) | 730 | 2030 | 716 |
| E | Alstonville STP (85% of STP capacity) | 4,135 | 2030 | 196 |
| F | Ballina RWF (25% of capacity) | 3,272 | 2030 | 160 |
| G | Ballina RWF (25% of capacity) | 3,272 | 2030 | 0 |

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| Label | Area | Design Flow (L/s) Or Storage (kL) if design head=0 | Design Head (m) | Year Commissioned | Capital Cost (2011/12$ = 2010 cost x 1.03) | Pre or Post 1996 asset | Discount Rate | Effective Actual Commissioning Year* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP2101 | B | 110 | 31 | 1976 | $ 246,327 | Pre | 3% | 1995 | 239,152 | 18,220 | $ 13.13 | 2030 | 36 | 1.60 | 21.01 |
| SP2111 | B | 6.5 | 5 | 1985 | $ 25,508 | Pre | 3% | 1995 | 24,765 | 18,220 | $ 1.36 | 2030 | 36 | 1.60 | 2.18 |
| SP2218 Elkorn (Ferngrove) | B | 70 | 27 | 2010 | $ 460,911 | Post | 7% | 1995 | 167,055 | 18,220 | $ 9.17 | 2030 | 36 | 2.58 | 23.67 |
| SP2404 | F | 12 | 35 | 2009 | $ 524,505 | Post | 7% | 1995 | 203,412 | 3,272 | $ 62.17 | 2030 | 36 | 2.58 | 160.47 |
| SP3002 | B | 21 | 13 | 1981 | $ 142,293 | Pre | 3% | 1995 | 138,148 | 18,220 | $ 7.58 | 2030 | 36 | 1.60 | 12.14 |
| SP3114 | B | 13.5 | 12 | 0 | $ 41,005 | Pre | 3% | 1995 | 39,811 | 18,220 | $ 2.19 | 2030 | 36 | 1.60 | 3.50 |
| SP4002 | E | 2.82 | 2 | 1974 | $ 245,140 | Pre | 3% | 1995 | 238,000 | 4,135 | $ 57.55 | 2030 | 36 | 1.60 | 92.14 |
| SP4102 | C | 17 | 40 | 1975 | $ 335,986 | Pre | 3% | 1995 | 326,200 | 730 | $ 447.00 | 2030 | 36 | 1.60 | 715.61 |
| SP4106 | E | 0.8 | 25 | 1989 | $ 275,422 | Pre | 3% | 1995 | 267,400 | 4,135 | $ 64.66 | 2030 | 36 | 1.60 | 103.52 |
| SP5001 | A | 6 | 7.5 | 2005 | $ 210,532 | Post | 7% | 1995 | 107,024 | 507 | $ 211.09 | 2025 | 31 | 2.31 | 488.02 |
| SP5002 | A | 31 | 14.5 | 2005 | $ 323,008 | Post | 7% | 1995 | 164,201 | 507 | $ 323.87 | 2025 | 31 | 2.31 | 748.74 |
| SP5005 | A | 9 | 9 | 2005 | $ 210,532 | Post | 7% | 1995 | 107,024 | 507 | $ 211.09 | 2025 | 31 | 2.31 | 488.02 |
| SP5006 | A | 43 | 33.5 | 2005 | $ 380,688 | Post | 7% | 1995 | 193,522 | 507 | $ 381.70 | 2025 | 31 | 2.31 | 882.44 |
| SP3107 | B | 34 | 49 | 2010 | $ 411,503 | Post | 7% | 1995 | 149,148 | 18,220 | $ 8.19 | 2030 | 36 | 2.58 | 21.13 |
| SP3115 | B | 13.5 | 12 | 2010 | $ 87,313 | Post | 7% | 1995 | 31,646 | 18,220 | $ 1.74 | 2030 | 36 | 2.58 | 4.48 |
| Pumps requiring emergency storage: | | | | | | | | | | | | | | | |
| SP3001 | B | 127 | 0 | 2010 | $ 835,940 | Post | 7% | 1995 | 302,983 | 18,220 | $ 16.63 | 2030 | 36 | 2.58 | 42.92 |
| SP3002 | B | 89 | 0 | 2010 | $ 574,381 | Post | 7% | 1995 | 208,182 | 18,220 | $ 11.43 | 2030 | 36 | 2.58 | 29.49 |
| SP3101 | B | 64 | 0 | 2010 | $ 478,296 | Post | 7% | 1995 | 173,357 | 18,220 | $ 9.51 | 2030 | 36 | 2.58 | 24.56 |
| SP3102 | B | 6 | 0 | 2010 | $ 108,516 | Post | 7% | 1995 | 39,331 | 18,220 | $ 2.16 | 2030 | 36 | 2.58 | 5.57 |
| SP3107 | B | 34 | 0 | 2010 | $ 299,379 | Post | 7% | 1995 | 108,509 | 18,220 | $ 5.96 | 2030 | 36 | 2.58 | 15.37 |
| SP3110 | B | 273 | 0 | 2010 | $ 1,595,689 | Post | 7% | 1995 | 578,351 | 18,220 | $ 31.74 | 2030 | 36 | 2.58 | 81.93 |

**Capital Works - Future Sewage Pump Stations (those contributing to capital charge)**

| Area | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET |
|---|---|---|---|---|
| A | Wardell (100%) | 507 | 2025 | 0 |
| B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2030 | 289 |
| C | Alstonville STP (15% of STP capacity) | 730 | 2030 | 2,963 |
| E | Alstonville STP (85% of STP capacity) | 4,135 | 2030 | 633 |
| F | Ballina RWF (25% of capacity) | 3,272 | 2030 | 92 |
| G | Ballina RWF (25% of capacity) | 3,272 | 2030 | 0 |

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| LABEL | Area | Item | DESIGN_Q/Size | DESIGN_H | STREET | COMMENTS | TYPE | PUMP_LAB | Pump Cost ($2011/12 = 2010 cost x1.03) | YEAR | Costing Storage (kL) | Discount Rate | Effective Actual Commissioning Year* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP2112 | B | Pump | 22 | 14 | WESTLANDS DRIVE | Upgrade Capacity | Upgrade | SP2112_2011_Upgrade | 95,036 | 2011 | Pump | 7% | 1995 | 32,192 | 18,220 | $ 1.77 | 2030 | 36 | 2.58 | 4.56 |
| SP2201 | B | Pump | 22 | 32 | NORTH CREEK ROAD (CA | Diversion through to Ballina STP through Ferngrove | Upgrade | SP2201_Existing_Pump Definition | 116,486 | 2030 | Pump | 7% | 1995 | 10,910 | 18,220 | $ 0.60 | 2030 | 36 | 2.58 | See note 1 |
| SP2202 | B | Pump | 7 | 20 | RACECOURSE ROAD (NO. | Upgrade capacity | Upgrade | SP2202_2011_Upgrade | 25,508 | 2011 | Pump | 7% | 1995 | 8,641 | 18,220 | $ 0.47 | 2030 | 36 | 2.58 | 1.22 |
| SP2217 | B | Pump | 35 | 19 | NORTH CREEK ROAD - N | Diversion back to Ballina STP | Upgrade | SP North Ballina | 116,486 | 2015 | Pump | 7% | 1995 | 30,102 | 18,220 | $ 1.65 | 2030 | 36 | 2.58 | 4.26 |
| SP2301 | B | Pump | 206 | 37 | ANGELS BEACH DRIVE ( | Upgrade Capacity | Upgrade | SP2301_2011_Upgrade | 741,555 | 2011 | Pump | 7% | 1995 | 251,190 | 18,220 | $ 13.79 | 2030 | 36 | 2.58 | 35.59 |
| SP2317 | B | Pump | 26 | 21 | SILVER GULL DRIVE (A | Upgrade Capacity | Upgrade | SP2317_2011_Upgrade | 116,486 | 2011 | Pump | 7% | 1995 | 39,458 | 18,220 | $ 2.17 | 2030 | 36 | 2.58 | 5.59 |
| SP2401 | B | Pump | 34 | 60 | Cumbalum Way | Upgrade Capacity | Upgrade | SP2401_2015_Upgrade | 216,461 | 2015 | Pump | 7% | 1995 | 55,938 | 18,220 | $ 3.07 | 2030 | 36 | 2.58 | 7.92 |
| SP2402 | F | Pump | 125 | 15 | PERKINS CLOSE | Upgrade to accomodate Precinct A and Ballina Heights | Upgrade | SP2402_upgrade | 216,461 | 2020 | Pump | 7% | 1995 | 39,883 | 3,272 | $ 12.19 | 2030 | 36 | 2.58 | 31.46 |
| SP3001 | B | Pump | 121 | 60 | BRYON STREET (LENNOX | Upgrade Capacity | Replace | SP3001_2011_Upgrade | 2,080,125 | 2011 | Pump | 7% | 1995 | 704,610 | 18,220 | $ 38.67 | 2030 | 36 | 2.58 | 99.82 |
| SP3101 | B | Pump | 21 | 52 | SKENNARS HEAD ROAD | Upgrade Capacity | Upgrade | SP3101_2015_Upgrade | 142,293 | 2015 | Pump | 7% | 1995 | 36,771 | 18,220 | $ 2.02 | 2030 | 36 | 2.58 | 5.21 |
| SP3102 | B | Pump | 4 | 35 | TARA DOWNS | Upgrade Capacity | Upgrade | SP3102_2015_Upgrade | 41,005 | 2015 | Pump | 7% | 1995 | 10,597 | 18,220 | $ 0.58 | 2030 | 36 | 2.58 | 1.50 |
| SP3110 | B | Pump | 233 | 55 | BOMBORA PLACE | Upgrade Capacity | Upgrade | SP3110_2015_Upgrade | 1,006,731 | 2015 | Pump | 7% | 1995 | 260,158 | 18,220 | $ 14.28 | 2030 | 36 | 2.58 | 36.86 |
| SPNB2 | B | Pump | 25 | 15 | New Development NB2 - NEW 03/03/2011 | New NB2 development catchment SPS | New | SPNB2 | 248,034 | 2015 | Pump | 7% | 1995 | 64,097 | 18,220 | $ 3.52 | 2030 | 36 | 2.58 | 9.08 |
| PS New North Creek | B | Storage | 95 | | North Creek Road | Emergency Storage for new pump station | New | PS New North Creek assumed | 645,986 | 2021 | 100 | 7% | 1995 | 111,236 | 18,220 | $ 6.11 | 2030 | 36 | 2.58 | 15.76 |
| SP Angles Beach | B | Storage | 166 | | New Development | Emergency Storage for new pump station | New | SP Angels Beach_New_Pump | 1,037,740 | 2016 | 170 | 7% | 1995 | 250,628 | 18,220 | $ 13.76 | 2030 | 36 | 2.58 | 35.51 |
| SP2402 | F | Storage | 32 | | | Additional Emergency Storage Required | Additional | | 299,379 | 2015 | 40 | 7% | 1995 | 77,365 | 3,272 | $ 23.65 | 2030 | 36 | 2.58 | 61.03 |
| SPNB2 | B | Storage | 102 | | New Development NB2 | Emergency Storage for new pump station | New | SPNB2 | 724,020 | 2015 | 110 | 7% | 1995 | 187,100 | 18,220 | $ 10.27 | 2030 | 36 | 2.58 | 26.51 |
| PMP-SP-NHS1 | C | Pump | 65.0 | 40.0 | New Road - WUEA Development | New - Stage 2 for Development | Upgrade | PMP-SP-NHS1_Upgrade 2020 | 291,336 | 2020 | Pump | 7% | 1995 | 53,678 | 730 | $ 73.56 | 2030 | 36 | 2.58 | 189.86 |
| PMP-SP-NHS1_Interim | C | Pump | 25.0 | 48.0 | New Road - WUEA Development | New - Stage 1 for Development | New | PMP-SP-NHS1_2011 | *2,075,495* | 2011 | Pump | 7% | 1995 | 703,042 | 730 | $ 963.40 | 2030 | 36 | 2.58 | 2486.61 |
| SP4001U | E | Pump | 15.0 | 4.0 | Cawley Close | Pump Upgrade | Upgrade | SP4001_Upgrade 2011 | 25,508 | 2016 | Pump | 7% | 1995 | 6,161 | 4,135 | $ 1.49 | 2030 | 36 | 2.58 | 3.85 |
| SP4004U | E | Pump | 29.0 | 42.0 | Granada Pde | Pump Upgrade | Upgrade | SP4004_Upgrade 2011 | 172,202 | 2016 | Pump | 7% | 1995 | 41,589 | 4,135 | $ 10.06 | 2030 | 36 | 2.58 | 25.96 |
| SP4106U | E | Pump | 12.0 | 15.0 | Kayes Lane | Pump Upgrade | Upgrade | SP4106_Upgrade 2011 | 95,036 | 2011 | Pump | 7% | 1995 | 32,192 | 4,135 | $ 7.78 | 2030 | 36 | 2.58 | 20.09 |
| SP4001 | E | Storage | 114.0 | | Cawley Cls (Alst.High School). Dependent on ET all | Upgrade Capacity | | | 773,417 | 2011 | 120 | 7% | 1995 | 261,983 | 4,135 | $ 63.35 | 2030 | 36 | 2.58 | 163.52 |
| SP4003 | E | Storage | 38.0 | | Cedar Crt (Oceanview) | Upgrade Capacity | | | 299,379 | 2011 | 40 | 7% | 1995 | 101,410 | 4,135 | $ 24.52 | 2030 | 36 | 2.58 | 63.30 |
| SP4004 | E | Storage | 93.0 | | Granaga Pde (Panorama) | Upgrade Capacity | | | 645,986 | 2011 | 100 | 7% | 1995 | 218,818 | 4,135 | $ 52.92 | 2030 | 36 | 2.58 | 136.58 |
| SP4106 | E | Storage | 162.0 | | Kays Lane (Russellton) | Upgrade Capacity | | | 1,037,740 | 2011 | 170 | 7% | 1995 | 351,519 | 4,135 | $ 85.01 | 2030 | 36 | 2.58 | 219.41 |
| SP4102 | C | Storage | 24.0 | | Central Park Dve (Sharwood) | Upgrade Capacity | | | 239,432 | 2011 | 30 | 7% | 1995 | 81,104 | 730 | $ 111.14 | 2030 | 36 | 2.58 | 286.86 |
| SP5006 | A | Storage | 7.0 | | Richmond St | Upgrade Capacity | | | 108,516 | 2030 | 10 | 7% | 1995 | 10,164 | 507 | $ 20.05 | 2025 | 31 | 2.31 | See note 1 |

Note 1 - Where assets are planned at or after the full-take up year (defined by year the area's STP reaches capacity), they are excluded from this DSP, following consultation with NOW.

^ The italicised cost for the Interim WUEA PS is based on actual construction costs, with mark-up to 2011/12 cost basis (rather than using reference rates), as is the basis of other pump stations.

**Recycled Infrastructure**

| Area | STP Catchment | Total load on system (ET Count) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET |
|---|---|---|---|---|
| A | Wardell (100%) | 507 | 2,025 | 0 |
| B | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 2,030 | 730 |
| C | Alstonville STP (15% of STP capacity) | 730 | 2,030 | 0 |
| E | Alstonville STP (85% of STP capacity) | 4,135 | 2,030 | 0 |
| F | Ballina RWF (25% of capacity) | 3,272 | 2,030 | 829 |
| G | Ballina RWF (25% of capacity) | 3,272 | 2,030 | 750 |

Note basis of 'system' is based on the wastewater treatment capacity as the recycled water infrastructure is seen as an improvement on the WW system

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

Pipes

| Label | Priced by PWD? | Service area | Area | Length | Material | Diameter | Pipe Base Rate 2003 ($/m) | Construction Difficulty | Row Ref for diameter | Construction Difficulty Rate 2003 ($/m) | Total Rate 2003 ($/m) | Total Rate 2011/2012 ($/m = 2010 rate x1.03) | Total Cost 2011/2012 ($) | Date of Construction | Pre or Post 1996 Asset | Discount Rate | Effective Year of Commissioning (Financial year starting)* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RWP11 | PWD | North Ballina | B | 52.94 | PVC | 200 | 130 | High | 5 | 120 | 250 | 758 | 40152 | 2012 | Post | 7% | 1995 | 12,711 | 18,220 | $ 0.70 | 2030 | 36 | 2.58 | 1.80 |
| RWP13 | PWD | North Ballina | B | 281.14 | PVC | 200 | 130 | High | 5 | 120 | 250 | 758 | 213229 | 2012 | Post | 7% | 1995 | 67,503 | 18,220 | $ 3.70 | 2030 | 36 | 2.58 | 9.56 |
| RWP15 | PWD | Ballina Island | B | 161.26 | PVC | 200 | 130 | High | 5 | 120 | 250 | 758 | 122307 | 2012 | Post | 7% | 1995 | 38,719 | 18,220 | $ 2.13 | 2030 | 36 | 2.58 | 5.49 |
| RWP25 | PWD | Ballina Island, Lennox Head | B | 5469.53 | PVC | 300 | 210 | | | 0 | 210 | 758 | 4148332 | 2012 | Post | 7% | 1995 | 1,313,256 | 18,220 | $ 72.08 | 2030 | 36 | 2.58 | 186.04 |
| RWP27 | PWD | Ballina Heights | F | 262.11 | PVC | 350 | 243 | | | 0 | 243.3333333 | 758 | 198796 | 2015 | Post | 7% | 1995 | 51,373 | 3,272 | $ 15.70 | 2030 | 36 | 2.58 | 40.53 |
| RWP29 | PWD | Ballina Heights | F | 971.21 | PVC | 200 | 130 | | | 0 | 130 | 758 | 736608 | 2015 | Post | 7% | 1995 | 190,354 | 3,272 | $ 58.18 | 2030 | 36 | 2.58 | 150.17 |
| RWP31 | PWD | Ballina Heights | F | 352.14 | PVC | 200 | 130 | | | 0 | 130 | 758 | 267078 | 2012 | Post | 7% | 1995 | 84,550 | 3,272 | $ 25.84 | 2030 | 36 | 2.58 | 66.70 |
| RWP33 | PWD | Ballina Heights | F | 300.36 | PVC | 200 | 130 | | | 0 | 130 | 758 | 227806 | 2012 | Post | 7% | 1995 | 72,118 | 3,272 | $ 22.04 | 2030 | 36 | 2.58 | 56.89 |
| RWP37 | | CURA B | G | 3098.96 | PVC | 250 | 170 | | | 0 | 170 | 245 | 759679 | 2020 | Post | 7% | 1995 | 139,970 | 3,272 | $ 42.78 | 2030 | 36 | 2.58 | 110.42 |
| RWP39 | | CURA B | G | 1737.95 | PVC | 500 | 400 | | | 0 | 400 | 577 | 1002450 | 2020 | Post | 7% | 1995 | 184,701 | 3,272 | $ 56.45 | 2030 | 36 | 2.58 | 145.71 |
| RWP41 | PWD | Ballina Heights | F | 179.6 | PVC | 100 | 70 | | | 0 | 70 | 758 | 136217 | 2012 | Post | 7% | 1995 | 43,123 | 3,272 | $ 13.18 | 2030 | 36 | 2.58 | 34.02 |
| RWP45 | PWD | Lennox Head | B | 743.4 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 150580 | 2012 | Post | 7% | 1995 | 47,670 | 18,220 | $ 2.62 | 2030 | 36 | 2.58 | 6.75 |
| RWP47 | PWD | Lennox Head | B | 240.32 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 48678 | 2012 | Post | 7% | 1995 | 15,410 | 18,220 | $ 0.85 | 2030 | 36 | 2.58 | 2.18 |
| RWP49 | PWD | Lennox Head | B | 601.12 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 121760 | 2012 | Post | 7% | 1995 | 38,546 | 18,220 | $ 2.12 | 2030 | 36 | 2.58 | 5.46 |
| RWP51 | PWD | Lennox Head | B | 312.42 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 63282 | 2012 | Post | 7% | 1995 | 20,034 | 18,220 | $ 1.10 | 2030 | 36 | 2.58 | 2.84 |
| RWP53 | PWD | Lennox Head | B | 138.21 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 27995 | 2012 | Post | 7% | 1995 | 8,863 | 18,220 | $ 0.49 | 2030 | 36 | 2.58 | 1.26 |
| RWP55 | | Lennox Head | B | 270.75 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 353 | 95653 | 2020 | Post | 7% | 1995 | 17,624 | 18,220 | $ 0.97 | 2030 | 36 | 2.58 | 2.50 |
| RWP57 | | Lennox Head | B | 232.46 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 353 | 82126 | 2020 | Post | 7% | 1995 | 15,132 | 18,220 | $ 0.83 | 2030 | 36 | 2.58 | 2.14 |
| RWP59 | | Lennox Head | B | 543.72 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 353 | 192091 | 2020 | Post | 7% | 1995 | 35,393 | 18,220 | $ 1.94 | 2030 | 36 | 2.58 | 5.01 |
| RWP61 | | Lennox Head | B | 444.12 | PVC | 200 | 130 | Moderate | 5 | 60 | 190 | 274 | 121680 | 2020 | Post | 7% | 1995 | 22,419 | 18,220 | $ 1.23 | 2030 | 36 | 2.58 | 3.18 |
| RWP63 | | Lennox Head | B | 355.22 | PVC | 200 | 130 | Moderate | 5 | 60 | 190 | 274 | 97323 | 2020 | Post | 7% | 1995 | 17,932 | 18,220 | $ 0.98 | 2030 | 36 | 2.58 | 2.54 |
| RWP65 | | Lennox Head | B | 708.87 | PVC | 200 | 130 | Moderate | 5 | 60 | 190 | 274 | 194216 | 2020 | Post | 7% | 1995 | 35,784 | 18,220 | $ 1.96 | 2030 | 36 | 2.58 | 5.07 |
| RWP67 | | Lennox Head | B | 414.9 | PVC | 200 | 130 | Moderate | 5 | 60 | 190 | 274 | 113674 | 2020 | Post | 7% | 1995 | 20,944 | 18,220 | $ 1.15 | 2030 | 36 | 2.58 | 2.97 |
| RWP69 | | Lennox Head | B | 513.07 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 216 | 110977 | 2020 | Post | 7% | 1995 | 20,447 | 18,220 | $ 1.12 | 2030 | 36 | 2.58 | 2.90 |
| RWP71 | | Lennox Head | B | 601.45 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 216 | 130094 | 2020 | Post | 7% | 1995 | 23,970 | 18,220 | $ 1.32 | 2030 | 36 | 2.58 | 3.40 |
| RWP73 | | Fig Tree Hill | B | 531.14 | PVC | 150 | 105 | | | 0 | 105 | 151 | 80420 | 2020 | Post | 7% | 1995 | 14,817 | 18,220 | $ 0.81 | 2030 | 36 | 2.58 | 2.10 |
| RWP75 | | Lennox Head | B | 688.55 | PVC | 200 | 130 | Moderate | 5 | 60 | 190 | 274 | 188649 | 2020 | Post | 7% | 1995 | 34,758 | 18,220 | $ 1.91 | 2030 | 36 | 2.58 | 4.92 |
| RWP77 | | Lennox Head | B | 1061.49 | PVC | 100 | 70 | Moderate | 3 | 30 | 100 | 144 | 153067 | 2020 | Post | 7% | 1995 | 28,202 | 18,220 | $ 1.55 | 2030 | 36 | 2.58 | 4.00 |
| RWP79 | | Lennox Head | B | 328.18 | PVC | 200 | 130 | Moderate | 5 | 60 | 190 | 274 | 89915 | 2020 | Post | 7% | 1995 | 16,567 | 18,220 | $ 0.91 | 2030 | 36 | 2.58 | 2.35 |
| RWP81 | | Lennox Head | B | 1149.52 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 216 | 248641 | 2020 | Post | 7% | 1995 | 45,812 | 18,220 | $ 2.51 | 2030 | 36 | 2.58 | 6.49 |
| RWP83 | PWD | Lennox Head | B | 88.14 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 17853 | 2012 | Post | 7% | 1995 | 5,652 | 18,220 | $ 0.31 | 2030 | 36 | 2.58 | 0.80 |
| RWP85 | PWD | Lennox Head | B | 300.61 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 203 | 60890 | 2012 | Post | 7% | 1995 | 19,276 | 18,220 | $ 1.06 | 2030 | 36 | 2.58 | 2.73 |
| RWP87 | PWD | Lennox Head | B | 308.95 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 203 | 62579 | 2012 | Post | 7% | 1995 | 19,811 | 18,220 | $ 1.09 | 2030 | 36 | 2.58 | 2.81 |
| RWP89 | PWD | Lennox Head | B | 232.9 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 203 | 47175 | 2012 | Post | 7% | 1995 | 14,934 | 18,220 | $ 0.82 | 2030 | 36 | 2.58 | 2.12 |
| RWP91 | PWD | Lennox Head | B | 286.74 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 203 | 58081 | 2012 | Post | 7% | 1995 | 18,387 | 18,220 | $ 1.01 | 2030 | 36 | 2.58 | 2.60 |
| RWP93 | PWD | Lennox Head | B | 445.05 | PVC | 100 | 70 | Moderate | 3 | 30 | 100 | 203 | 90147 | 2012 | Post | 7% | 1995 | 28,538 | 18,220 | $ 1.57 | 2030 | 36 | 2.58 | 4.04 |
| RWP95 | PWD | Skenners Head | B | 71.34 | PVC | 100 | 70 | | | 0 | 70 | 203 | 14450 | 2012 | Post | 7% | 1995 | 4,575 | 18,220 | $ 0.25 | 2030 | 36 | 2.58 | 0.65 |
| RWP97 | PWD | Lennox Head | B | 823.67 | PVC | 100 | 70 | Moderate | 3 | 30 | 100 | 203 | 166839 | 2012 | Post | 7% | 1995 | 52,817 | 18,220 | $ 2.90 | 2030 | 36 | 2.58 | 7.48 |
| RWP99 | PWD | Lennox Head | B | 413.6 | PVC | 100 | 70 | Moderate | 3 | 30 | 100 | 203 | 83777 | 2012 | Post | 7% | 1995 | 26,522 | 18,220 | $ 1.46 | 2030 | 36 | 2.58 | 3.76 |
| RWP101 | PWD | Skenners Head | B | 450.49 | PVC | 100 | 70 | | | 0 | 70 | 203 | 91249 | 2012 | Post | 7% | 1995 | 28,887 | 18,220 | $ 1.59 | 2030 | 36 | 2.58 | 4.09 |
| RWP105 | PWD | Lennox Head | B | 540.26 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 203 | 109432 | 2012 | Post | 7% | 1995 | 34,644 | 18,220 | $ 1.90 | 2030 | 36 | 2.58 | 4.91 |
| RWP107 | PWD | East Ballina | B | 654.9 | PVC | 150 | 105 | Moderate | 4 | 45 | 150 | 203 | 132653 | 2012 | Post | 7% | 1995 | 41,995 | 18,220 | $ 2.30 | 2030 | 36 | 2.58 | 5.95 |
| RWP110 | | Lennox Head | B | 822.46 | PVC | 200 | 130 | Moderate | 5 | 60 | 190 | 274 | 225338 | 2012 | Post | 7% | 1995 | 71,336 | 18,220 | $ 3.92 | 2030 | 36 | 2.58 | 10.11 |
| RWP112 | | CURA B | G | 133.81 | PVC | 250 | 170 | | | 0 | 170 | 245 | 32802 | 2020 | Post | 7% | 1995 | 6,044 | 3,272 | $ 1.85 | 2030 | 36 | 2.58 | 4.77 |
| RWP114 | PWD | North Ballina | B | 68.57 | PVC | 200 | 130 | High | 5 | 120 | 250 | 758 | 52007 | 2012 | Post | 7% | 1995 | 16,464 | 18,220 | $ 0.90 | 2030 | 36 | 2.58 | 2.33 |
| RWP116 | PWD | Lennox Head | B | 66.35 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 13440 | 2012 | Post | 7% | 1995 | 4,255 | 18,220 | $ 0.23 | 2030 | 36 | 2.58 | 0.60 |
| RWP118 | PWD | Ballina Heights | F | 114.35 | PVC | 300 | 210 | | | 0 | 210 | 758 | 86728 | 2015 | Post | 7% | 1995 | 22,412 | 3,272 | $ 6.85 | 2030 | 36 | 2.58 | 17.68 |
| RWP120 | PWD | Lennox Head | B | 795.1 | PVC | 250 | 170 | Moderate | 6 | 75 | 245 | 203 | 161052 | 2012 | Post | 7% | 1995 | 50,985 | 18,220 | $ 2.80 | 2030 | 36 | 2.58 | 7.22 |

* Actual Commissioning Year assumed to be paired with Sewerage scheme, as recycled water system seen as improvement to WW system

Reservoirs

| Label (ID) | Catchment | Service area | Service area | Capacity (ML) | Capacity (ML) | Reference rate (2003/04$) | Pre/Post 1996 | Asset Division between Service areas | Capital Cost (2011/12$) | Year Commissioned | Year of Renewal | Discount rate | Effective Commissioning Year* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take up Period | ROI | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOTE: Ballina Heights reservoir is listed twice to distribute the asset value between the two areas it services, it is still the same single facility | | | | | | | | | | | | | | | | | | | | |
| Ballina Heights Reservoir - RWR1 | | Ballina Island, North Ballina | B | 3.5 | 3.5 | External Figure | Post | 0.44 | 1,093,953 | 2012 | 2112 | 7% | 1995 | 346,318 | 18,220 | 19.01 | 2030 | 36 | 2.58 | 49.06 |
| Ballina Heights Reservoir - RWR1 | | Cura A & Ballina Heights | F | 3.5 | 3.5 | External Figure | Post | 0.56 | 1,402,547 | 2012 | 2112 | 7% | 1995 | 444,010 | 3,272 | 135.71 | 2030 | 36 | 2.58 | 350.28 |
| Kings Court Tank - RWR3 | | Lennox Head | B | 0.17 | 0.2 | External Figure | Post | 1 | 720,000 | 2016 | 2116 | 7% | 1995 | 173,889 | 18,220 | 9.54 | 2030 | 36 | 2.58 | 24.63 |
| Ross Lane Reservoir - RWR2 | | Cura B | G | 2.8 | 3 | 1636663.756 | Post | 1 | 2,073,277 | 2017 | 2117 | 7% | 1995 | 467,966 | 3,272 | 143.03 | 2030 | 36 | 2.58 | 369.18 |
| Lennox Head Reservoir - RWR4 | | Lennox Head | B | 2.7 | 3 | 1636663.756 | Post | 1 | 2,073,277 | 2014 | 2114 | 7% | 1995 | 573,278 | 18,220 | 31.47 | 2030 | 36 | 2.58 | 81.21 |

Pumps

| Description | Label (ID) | Service area | Service area | Flow | kW | Reference rate (2007/08$) | Pre/Post 1996 | Head | Capital Cost (2011/12$) | Year Commissioned | Year of Renewal | Discount rate | Effective Commissioning Year* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | $/ET | Year of Full Take up | Take up Period | ROI | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cura A Booster Pump | RWRBP2 | Cura A & Ballina Heights | F | 19.99 | 10 | External Figure | Post | 30 | 194,165 | 2015 | 2115 | 7% | 1995 | 50,176 | 3,272 | 15.34 | 2030 | 36 | 2.58 | 39.58 |
| Ballina Recycled Water Scheme | RWRSP1 | North Ballina | B | 90 | 145 | 777502.6111 | Post | 103 | 875,086 | 2012 | 2112 | 7% | 1995 | 277,030 | 18,220 | 15.21 | 2030 | 36 | 2.58 | 39.25 |
| Lennox Head Recycled Water Scheme | RWRBP1 | Lennox Head | B | 160 | 240 | External Figure | Post | 95 | 952,000 | 2012 | 2112 | 7% | 1995 | 301,379 | 18,220 | 16.54 | 2030 | 36 | 2.58 | 42.70 |

| Label (ID) | Catchment | Service area | Service area | Plant Type | Capacity (ML/d) | Reference rate (2007/08$) | Pre/Post 1996 | Asset Division between Service areas | Capital Cost (2011/12$) | actual Commissioned | Year of Renewal | Discount rate | Effective Commissioning Year* | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | $/ET | Year of Full Take up | Take up Period | ROI | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NOTE: Ballina RWP is listed 3 times to distribute the asset value between the three areas it services, it is still the same single facility | | | | | | | | | | | | | | | | | | | | |
| Ballina RWP | | CURA A, Ballina Heights | F | | | External Figure | Post | 0.32 | 290,983 | 2012 | 2082 | 7% | 1995 | 92,118 | 3,272 | 28.16 | 2030 | 36 | 2.58 | 72.67 |
| Ballina RWP | | CURA B | G | | | | | 0.53 | 478,646 | 2012 | 2082 | 7% | 1995 | 151,527 | 3,272 | 46.31 | 2030 | 36 | 2.58 | 119.54 |
| Ballina RWP | | Ballina Island | B | | | | | 0.15 | 140,371 | 2012 | 2082 | 7% | 1995 | 44,438 | 18,220 | 2.44 | 2030 | 36 | 2.58 | 6.30 |
| Lennox Head RWP | | | B | | | External Figure | Post | 1 | 3,430,000 | 2012 | 2082 | 7% | 1995 | 1,085,850 | 18,220 | 59.60 | 2030 | 36 | 2.58 | 153.83 |

* Actual Commissioning Year assumed to be paired with Sewerage scheme, as recycled water system seen as improvement to WW system

**Future STW Upgrades**

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| Area | Inc. Areas | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Total load on system (ET Count) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET - STW FW | |
|---|---|---|---|---|---|---|---|
| A | Wardell | Wardell (100%) | 507 | 529 | 2025 | $ 755 | |
| B | Ballina Island, EB, WB, NB, Skenners Head, Lennox Head | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 18,140 | 2030 | $ 1,117.51 | <-- Area B uses weighted average based on share of population |
| C | WUEA | Alstonville STP (15% of STP capacity) | 730 | 780 | 2030 | $ 40 | supported by Lennox Head vs Ballina RWF |
| E | Alst. Industr, Alstonville, Wollongbar | Alstonville STP (85% of STP capacity) | 4,135 | 4,122 | 2030 | $ 40 | |
| F | Cura A, Ballina Heights | Ballina RWF (25% of capacity) | 3,272 | 3,162 | 2030 | $ 2,509 | |
| G | Cura B | Ballina RWF (25% of capacity) | 3,272 | 3,146 | 2030 | $ 2,509 | |

| Service area | STP Catchment | Component | Development area | Capital Cost (2011/12$ = 2010 cost x 1.03) | Year of Construction | Discount Rate | Effective Year of Commissioning (Financial year starting) | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| **Ballina RWF Catchment Area** | *Ballina RWF* | Upgrade - All stages completed simultaneously | B, F and G | $ 37,409,600 | 2011/2012 | 7% | 1995 | $ 12,671,926 | 13,087 | $ 968.28 | 2030 | 36 | 2.58 | $ 2,499 |
| | *Ballina RWF* | Final upgrade, Membrane replacement (as per advice on 31/7/14) | B, F and G | $ 500,000 | 2029/2030 | 7% | 1995 | $ 50,110 | 13,087 | $ 3.83 | 2030 | 36 | 2.58 | $ 10 |
| | | | | | | | | | | | | | | |
| **Lennox STW Catchment Area** | *Lennox Head STP* | Lennox Head RWF - Ultimate Upgrade | B | $ 4,635,000 | 2011/12 | 7% | 1995 | $ 1,570,035 | 11,676 | $ 134.47 | 2030 | 36 | 2.58 | $ 347 |
| | | | | | Note the 2010/11 upgrade of Lennox Head RWF is now on the exsting STW table | | | | | | | | | |
| **Alstonville STP Catchment Area** | *Alstonville STP* | Biosolids Management | C & E | $ 288,400 | 2015/2016 | 7% | 1995 | $ 74,528 | 4,865 | $ 15.32 | 2030 | 36 | 2.58 | $ 40 |
| | | | | | | | | | | | | | | |
| **Wardell STP Catchment Area** | *Wardell STP* | Additional 1750EP IDEA Tank - Stage 1 | A | $ 240,334 | 2019/20 | 7% | 1995 | $ 47,381 | 507 | $ 93.45 | 2030 | 36 | 2.58 | $ 241 |
| **Wardell STP Catchment Area** | *Wardell STP* | Additional 1750EP IDEA Tank - Stage 2 | A | $ 240,334 | 2020/21 | 7% | 1995 | $ 44,281 | 507 | $ 87.34 | 2030 | 36 | 2.58 | $ 225 |
| **Wardell STP Catchment Area** | *Wardell STP* | Additional 1750EP IDEA Tank - Stage 3 | A | $ 240,334 | 2021/22 | 7% | 1995 | $ 41,384 | 507 | $ 81.63 | 2030 | 36 | 2.58 | $ 211 |
| **Wardell STP Catchment Area** | *Wardell STP* | UV Disinfection System Upgrade | A | $ 72,100 | 2018/19 | 7% | 1995 | $ 15,209 | 507 | $ 30.00 | 2030 | 36 | 2.58 | $ 77 |

**Existing STWs**

Basis of "Existing" = commissioning year up to 2010/2011. "Future" = all later years. Existing and Future calculations follow the same methodology, and so moving assets between the Existing & Future tables will not alter the overall charge per area

| Area | Inc. Areas | STP Catchment | Correpsonding Capacity of System (sum of % of plant capacity noted) | Total load on system (ET Count) | Year when capacity is taken up, or 2040 (default 30 years) | Capital Charge per ET - STW FW | |
|---|---|---|---|---|---|---|---|
| A | Wardell | Wardell (100%) | 507 | 529 | 2025 | $ 11,699 | |
| B | Ballina Island, EB, WB, NB, Skenners Head, Lennox Head | Lennox Head STP (100%) and Ballina RWF (50%) | 18,220 | 18,140 | 2030 | $ 2,153 | <-- Area B uses weighted average based on share of population supported by Lennox Head vs Ballina RWF |
| C | WUEA | Alstonville STP (15% of STP capacity) | 730 | 780 | 2030 | $ 4,401 | |
| E | Alst. Industr, Alstonville, Wollongbar | Alstonville STP (85% of STP capacity) | 4,135 | 4,122 | 2030 | $ 4,401 | |
| F | Cura A, Ballina Heights | Ballina RWF (25% of capacity) | 3,272 | 3,162 | 2030 | $ - | <-- No pre-existing asset costs for areas F & G; costs of Ballina RWF included on Future STW page |
| G | Cura B | Ballina RWF (25% of capacity) | 3,272 | 3,146 | 2030 | $ - | <-- No pre-existing asset costs for areas F & G; costs of Ballina RWF included on Future STW page |

| Component (Served by) | Development area | Capital Cost (2011/12$ = 2010 cost x 1.03) | Year Commissioned | Discount Rate | Effective Year of Commissioning (Financial year starting) | PV (1995/96) of Capital Cost (2011/2012) | Total Service ET (total at treatment plant) | Capital cost per ET (2011/2012$) | Year of Full Take up (Financial year starting) | Take Up Period | ROI Factor | Capital Charge ($/ET) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Wardell STP | A | $ 2,937,487 | 1997 | 7% | 1995 | $ 2,565,715 | 507 | $ 5,060.58 | 2025 | 31 | 2.31 | $ 11,699 |
| | | | | | | | | | | | | |
| Lennox Head STP | B | $ 15,543,243 | 1982 | 3% | 1995 | $ 22,825,776 | 11,676 | $ 1,954.93 | 2030 | 36 | 1.60 | $ 3,130 |
| Lennox Head STP 2010/11 upgrade | B | $ 2,678,000 | 2010 | 7% | 1995 | $ 970,630 | 11,676 | $ 83.13 | 2030 | 36 | 2.58 | $ 215 |
| | | | | | | | | | | | | |
| Ballina STP | B, F and G | Decommissioned | | | | | | | | | | |
| | | | | | | | | | | | | |
| Alstonville STP | C and E | $ 9,950,942 | 1985 | 3% | 1995 | $ 13,373,234 | 4,865 | $ 2,748.87 | 2030 | 36 | 1.60 | $ 4,401 |
| | | | | | | | | | | | | |

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