

# **Appendices**

# **CUSTOMER SERVICE PLAN**

**Water and Sewer Group**

June 2018



## DOCUMENT CONTROL

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## **1. MAPS OF SUPPLY AREAS**

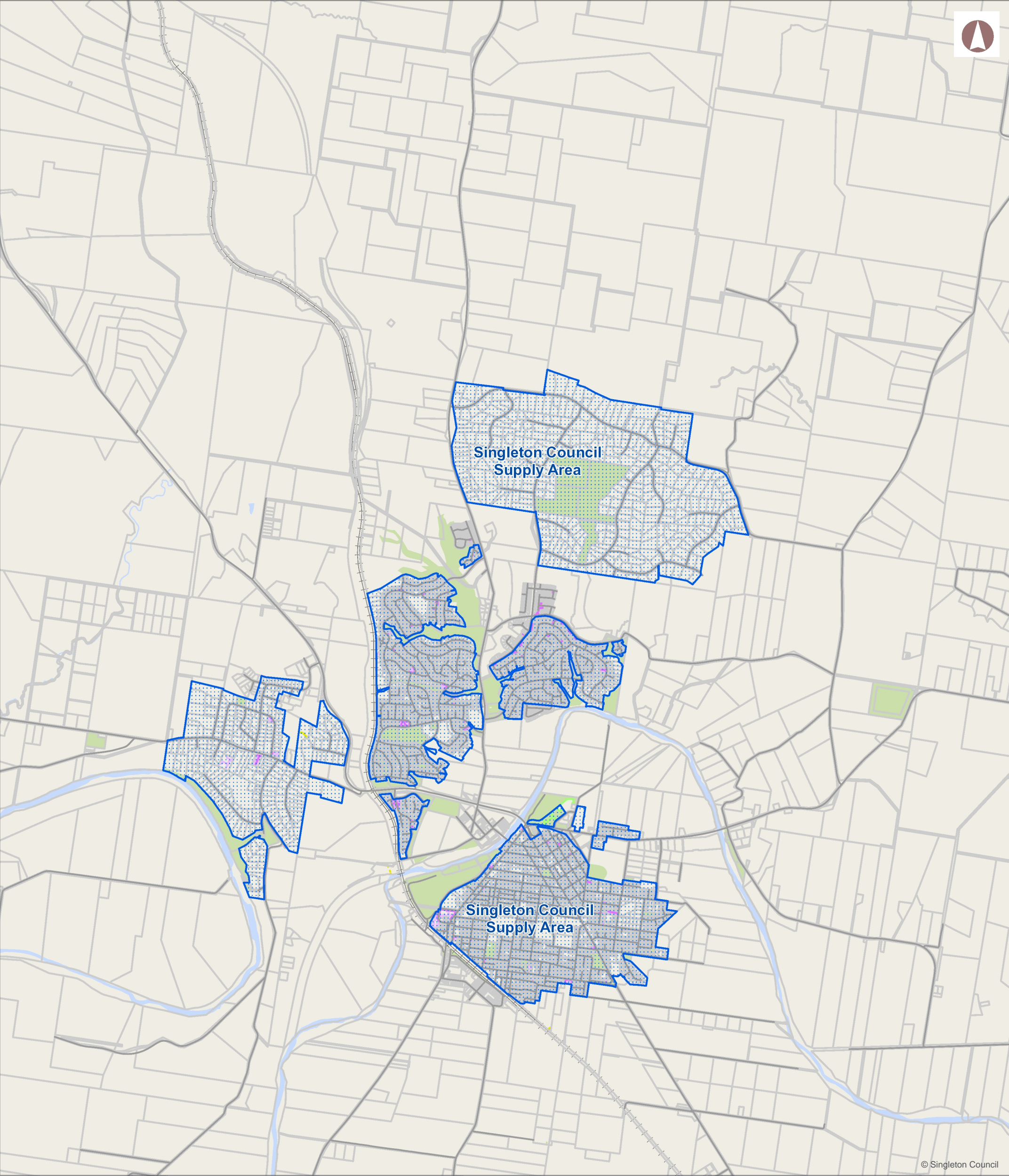
### **1.1. WATER SUPPLY AREAS**

Following are mapped representations of the Council's water supply area for;

1. Singleton Supply Area
2. Whittingham Supply Area
3. Mt Thorley Supply Area
4. Jerrys Plains Supply Area
5. Broke Supply Area



# Singleton Council - Water Supply Area - Town



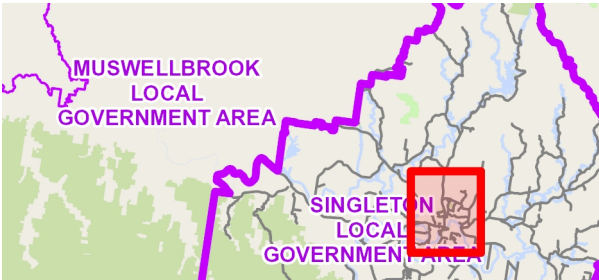
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2.0 0 1.02 2.0 Kilometers

Date: 29-Mar-2018  
Projection: GDA\_1994\_MGA\_Zone\_56

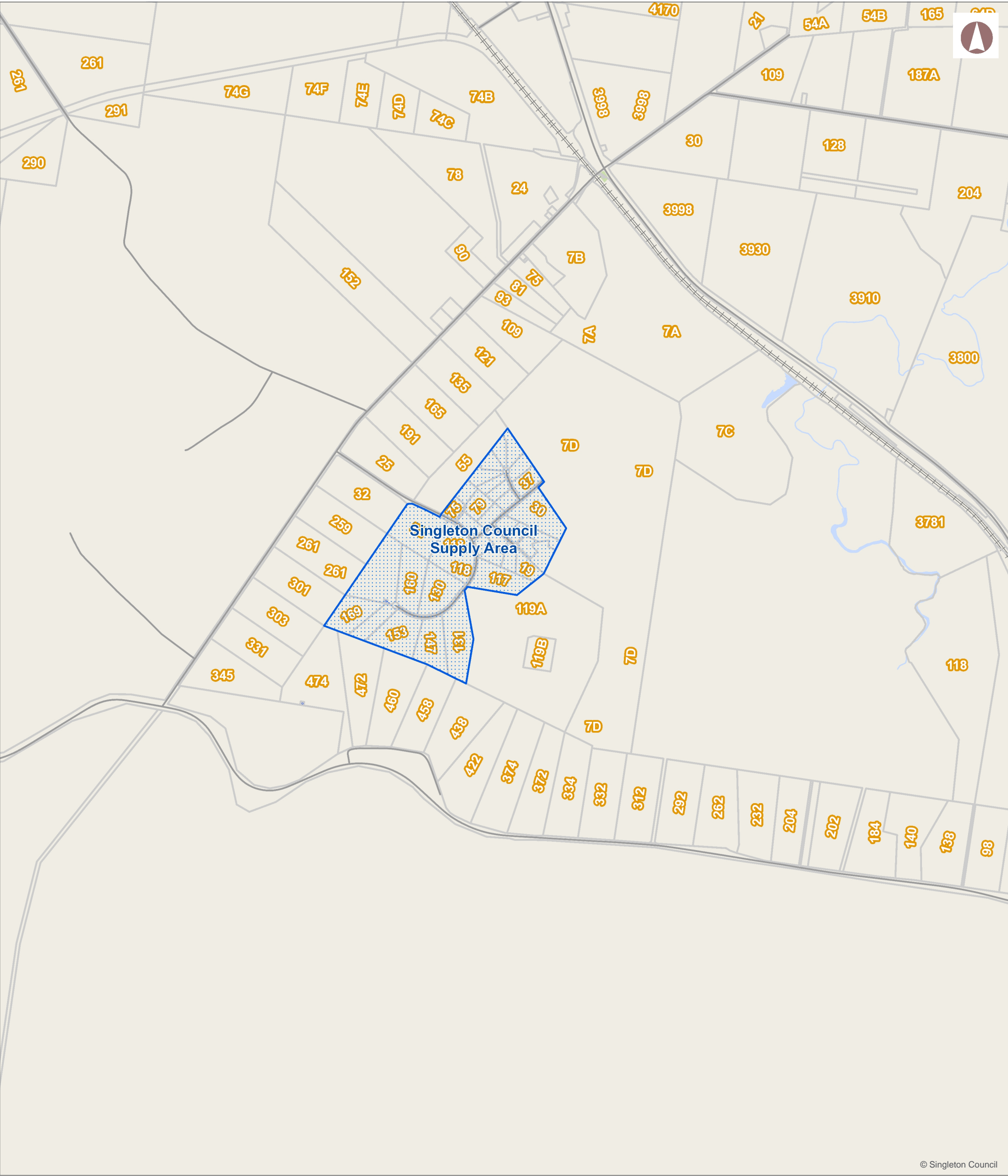
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# Singleton Council - Water Supply Area - Whittingham



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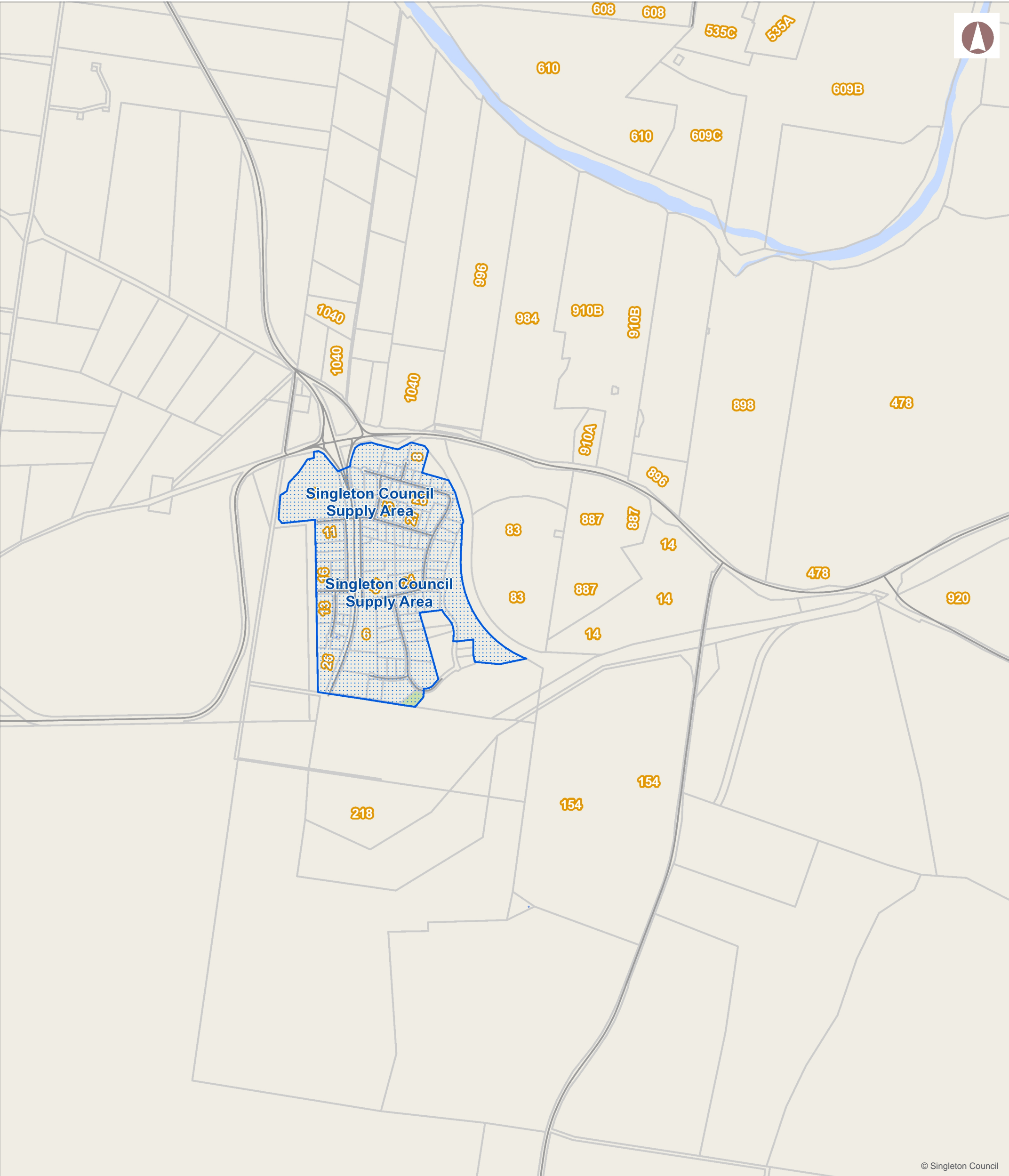
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# Singleton Council - Water Supply Area - Mt Thorley



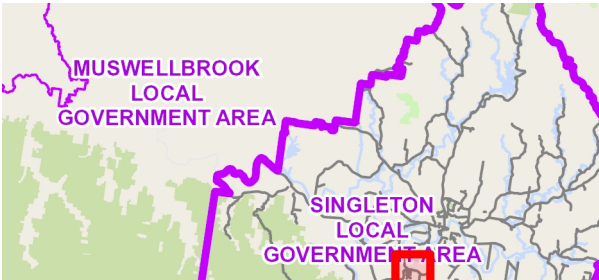
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Date: 29-Mar-2018  
Projection: GDA\_1994\_MGA\_Zone\_56

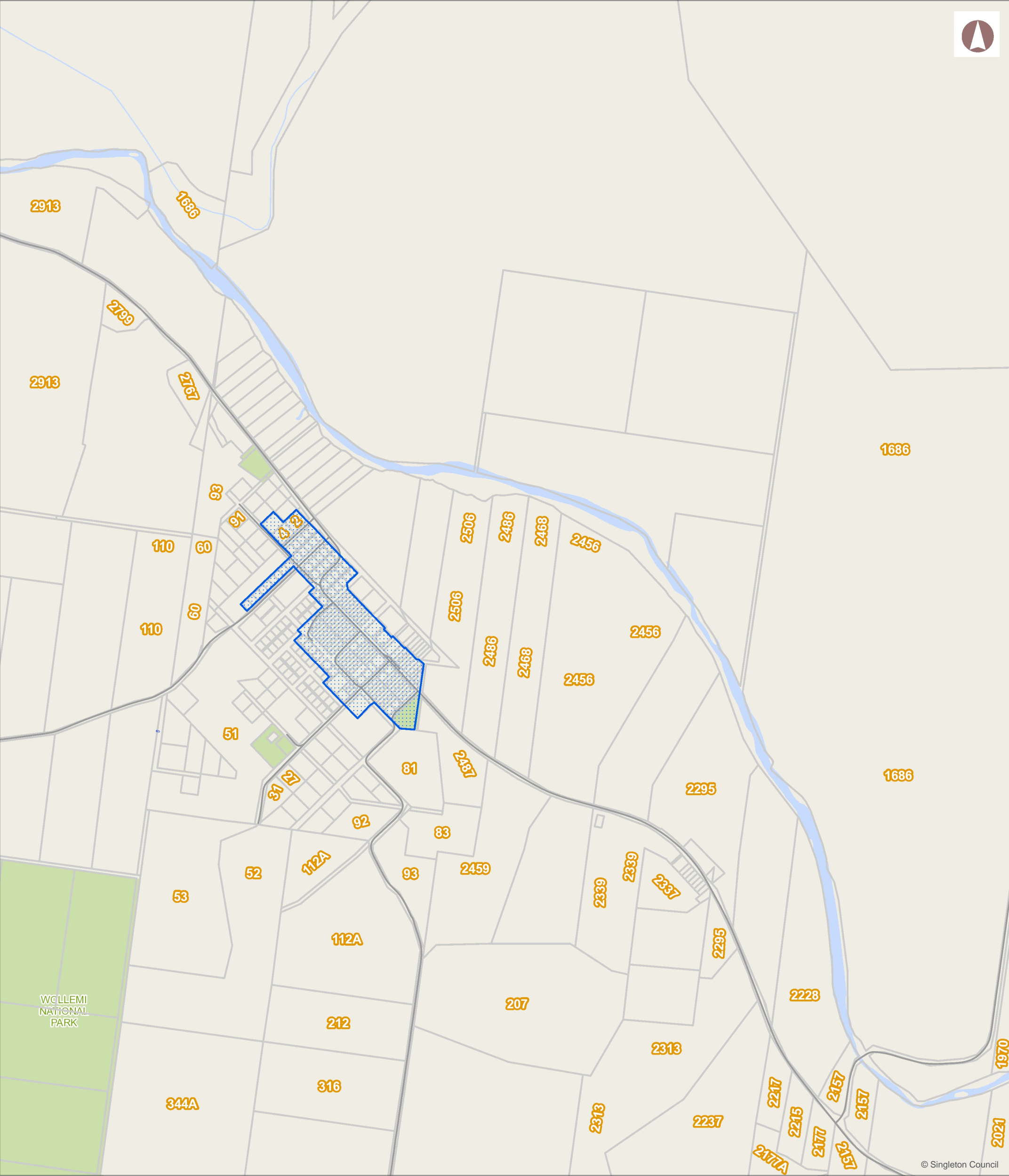
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# Singleton Council - Water Supply Area - Jerrys Plains



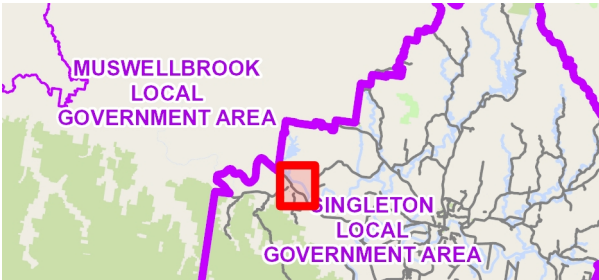
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1.0 0 0.51 1.0 Kilometers

Date: 29-Mar-2018  
Projection: GDA\_1994\_MGA\_Zone\_56

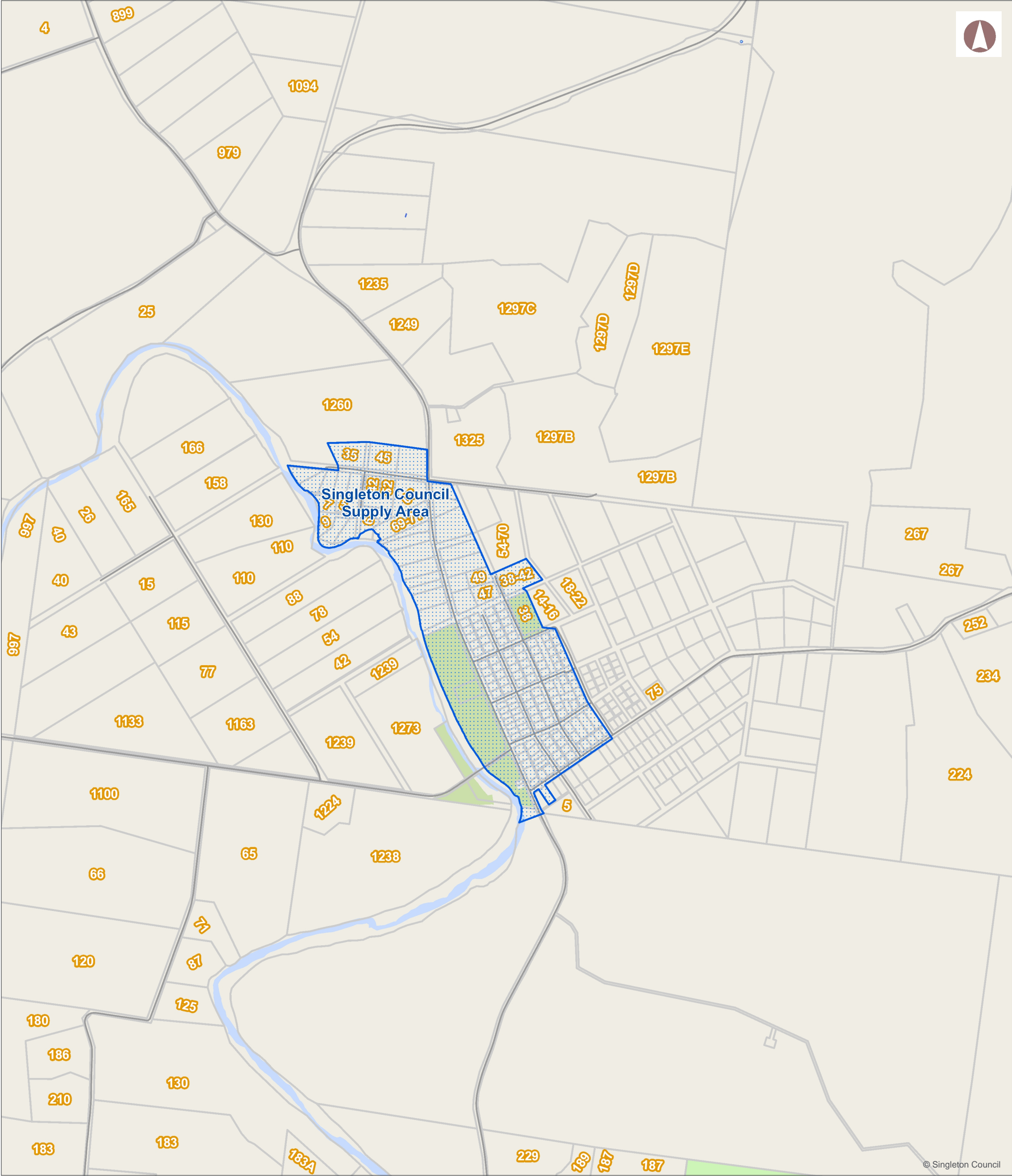
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# Water Supply Area - Broke

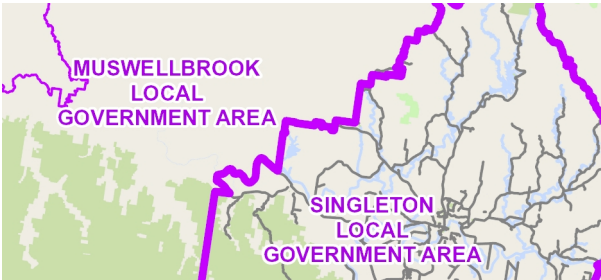


0.9 0 0.46 0.9 Kilometers

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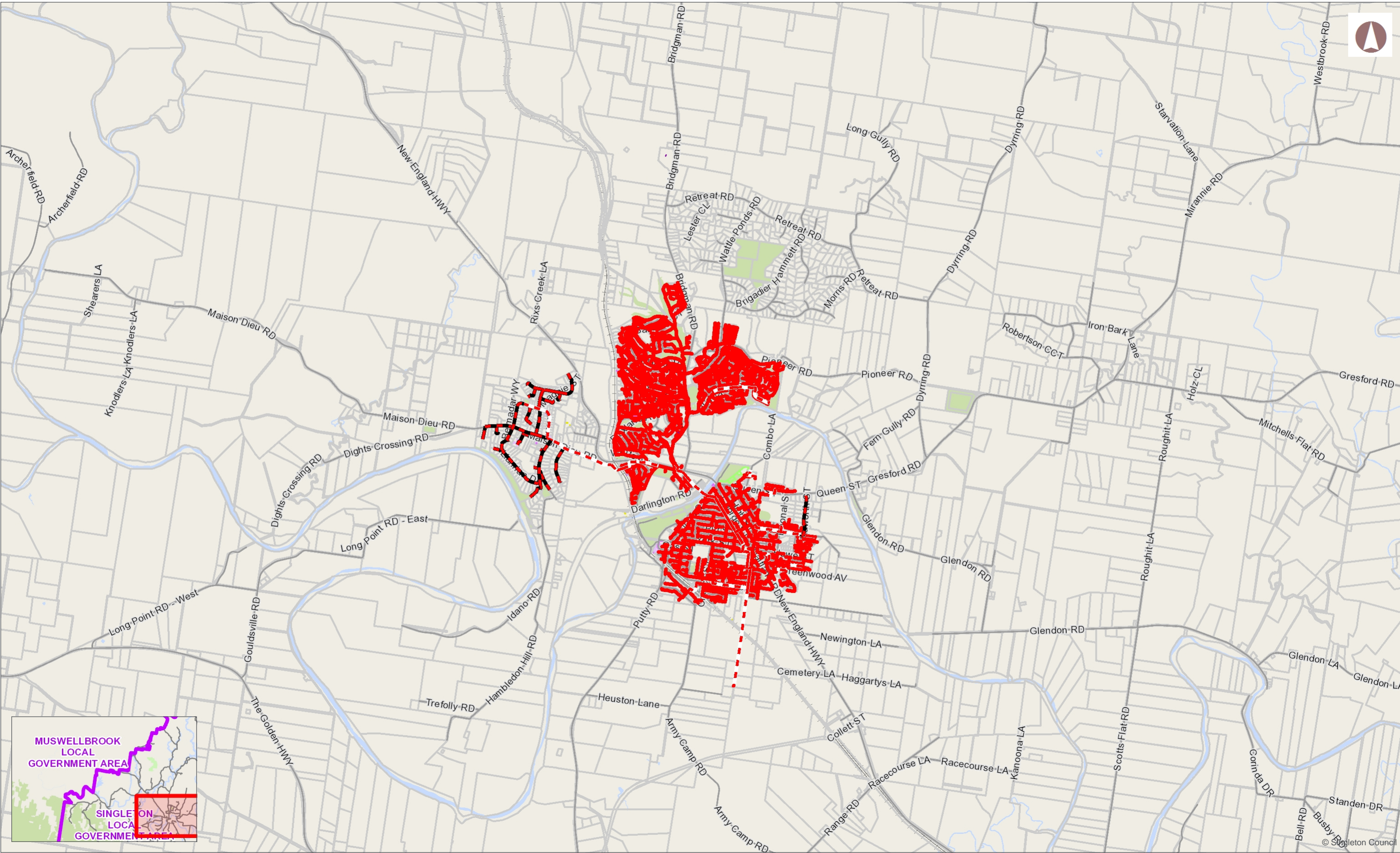


## **1.2. SEWER SUPPLY AREAS**

The following is a mapped representations of the Council's sewer supply area for Singleton.



# Sewer Supply Area



Date: 03-Apr-2018  
Projection: GDA\_1994\_MGA\_Zone\_56

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## 2. CUSTOMER SERVICE STANDARDS

### 2.1. CUSTOMER SERVICE STANDARDS – WATER SUPPLY SERVICE

The following table outlines the Customer Service standards for the essential service aspect of the Council Water Supply Service. The target, priority and response times indicated are for Potable Supply Customers only and do not extend to those special customers on specific agreements. Targets are set on an annual basis and are based on the median result of other similar Council's for each performance measure. Water Supply Response and Repair Timeframes and Priority Details are available in Table 3.

**Appendix Table 1: Water Supply Customer Service Standards**

Standards	Description	Target	Priority	Comments	Benchmark
Drinking water pressure to boundary	<p>Provide between 12 metres and 90 metres head of water in the reticulation system. The minimum water pressure is based on minimum firefighting requirements and the maximum pressure protects Council and house plumbing from bursting.</p> <p>The minimum drinking water pressure provided by Council will fill a standard 9 L bucket in 1.5 mins.</p>	95% of all residential properties during summer whilst conveying a minimum of 6 L/min	2	Section 2 Our Services	Industry standard
Extent of unplanned drinking water interruptions, including their number, duration and cause (e.g. water main breaks).	<p>An unplanned water supply interruption occurs when a property is without a service due to any cause. This excludes the following:</p> <ul style="list-style-type: none"> <li>• Property service connection interruptions (unless the burst or leak requires the main to be shut down for repairs which affect multiple customers)</li> <li>• Interruptions that cause some reduction to the service but where normal activities are still possible</li> <li>• Planned interruptions except where the customer has not received notification.</li> </ul>	<ul style="list-style-type: none"> <li>• C15 – Unplanned interruption duration &lt; 120 mins</li> <li>• C10 – &lt; 4 water service complaints per 1,000 properties</li> <li>• A8 – &lt; 12 main breaks per 100km of water main</li> <li>• C17 – &lt; 32 unplanned</li> </ul>	1	Section 2 Our Services Section 5 Your Rights and Responsibilities	<p>National Performance Benchmarking Report</p> <ul style="list-style-type: none"> <li>• C15 – Average Duration of unplanned interruptions water in minutes</li> <li>• C10 – Water Service, complaints no. per 1000 properties</li> <li>• A8 – Water main breaks no. per 100 km of water main</li> <li>• C17 – Average frequency of unplanned interruptions</li> </ul>



Standards	Description	Target	Priority	Comments	Benchmark
		interruption per 1,000 properties			– water no. per 1,000 properties
Time for restoration of water service – unplanned interruptions	Restoration occurs where all interrupted connections are restored to normal service.	<ul style="list-style-type: none"> <li>• A8 – &lt; 12 main breaks per 100km of water main</li> <li>• C15 – Unplanned interruption duration &lt; 120 mins</li> </ul>	1	Section 2 Our Services Section 5 Your Rights and Responsibilities	National Performance Benchmarking Report <ul style="list-style-type: none"> <li>• A8 – Water main breaks no. per 100 km of water main</li> <li>• C15 – Average Duration of unplanned interruptions water in minutes</li> </ul>
Notification for planned water service interruptions	<ul style="list-style-type: none"> <li>• Provide notice, where possible, via doorknocking/letter box drops, social media, Council's website and/or variable message board.</li> <li>• If interruption will be less than four hours, notice via doorknocking will only be given to those customers who are put at extreme inconvenience.</li> <li>• Provide alternative water supplies, where possible, through temporary connections and/or emergency bottled drinking water for outages predicted to be greater than 8 hours.</li> <li>• Prioritise notification and resumption of supply to Critical and Extremely Critical Customers (e.g. dialysis patients)</li> </ul>	N/A	2	Section 2 Our Services Section 4 Our Rights and Responsibilities	Industry standard
Drinking water quality and/or complaints*	Supply drinking water in the reticulated system which meet the Australian Drinking Water Guidelines and minimise the number of water quality complaints resulting from operational practices.	<ul style="list-style-type: none"> <li>• H3 – 100% of the service population for which population microbiological compliance is achieved</li> <li>• C9 – &lt; 3 water quality complaints per 1,000 properties</li> </ul>	2	Section 2 Our Services Section 4 Our Rights and Responsibilities	National Performance Benchmarking Report <ul style="list-style-type: none"> <li>• H3 - % of population where microbiological compliance was achieved</li> <li>• C9 – Water quality complaints per 1,000 properties</li> </ul>



Standards	Description	Target	Priority	Comments	Benchmark
Water for firefighting	Properties connected to the town water supply receive potable water at a guaranteed level of service and meets the NSW Brigade requirements for firefighting in accordance with AS2419. Council has committed to progressively replacing sub 100mm water mains to provide the minimum firefighting pressure by 2030.	Available in all area urban areas**	N/A	Section 2 Our Services Section 4 Our Rights and Responsibilities	N/A
Consumption restrictions	The adopted consumption trigger levels are aimed at ensuring that Singleton is affected by water restrictions for less than 10% of the time and no more than 5 times per 100 years. Restrictions are only applied when severe water shortages are evident. There are six categories of restrictions (1 – low level restrictions to 6 – emergency restrictions), each with an increasing impact on consumption, in accordance with the current Drought Management Plan. Restrictions will be widely advertised to ensure total awareness by all customers.	No more than 5 times per 100 years	1	Section 2 Our Services Section 4 Our Rights and Responsibilities	N/A
Water connection and meter	Installation of water tapping and connection	20 working days***	N/A	Section 2 Our Services Section 4 Our Rights and Responsibilities	N/A
	Supply and installation of meter on existing water connection	20 working days***			

\* Excludes non-potable supply including Glennies Creek Trunk Water Main and Mount Thorley Raw Water Scheme

\*\* Excludes water mains less than 100mm consistent with Clause 142 of the *Local Government (General) Regulations, 2005 (NSW)* (for example downtown Singleton and water supply to the Abattoir).and Jerrys Plains Water Supply Scheme.

\*\*\* From the time of payment of all outstanding fees as quoted



## 2.2. CUSTOMER SERVICE STANDARDS – SEWER SUPPLY SERVICE

The following table outlines the Customer Service standards for the essential service aspect of the Council Sewer Supply Service. Targets are set on an annual basis and are based on the median result of other similar Council's for each performance measure. Sewer Supply Response and Repair Timeframes and Priority Details are available in Table 4.

**Appendix Table 2: Sewer Supply Customer Service Standards**

Standards	Description	Target	Priority*	Comments	Benchmark
Sewerage overflows to customer properties.	Sewerage overflows to customer properties may occur either as a result of onsite plumbing or offsite sewerage issues. Customers are advised in the first instance to contact their plumber to determine if their system is blocked by tree roots, wet wipes etc. If the plumber identifies the issue is with the sewerage system, Council will reimburse the plumber/customer for the work and undertake rectification. Most overflows occur during wet weather periods as a result of high inflow/infiltration of stormwater to the sewer system. The system is designed to cater for limited inflows, events greater than this (ie widespread flooding) are excluded.	<ul style="list-style-type: none"> <li>• A14 – &lt; 38 Sewerage main breaks and chokers per 100 km of sewer main</li> </ul>	1	Section 2 Our Services Section 4 Our Rights and Responsibilities Section 5 Your rights and responsibilities	National Performance Benchmarking Report <ul style="list-style-type: none"> <li>• A14 – Sewerage main breaks and chokers per 100 km of sewer main</li> </ul>
Sewer odour complaints	Sewer odour complaints can be generated as a consequence of a range of shortcomings with operational maintenance of the system. Action is taken to minimise the disruption from such occurring.	<ul style="list-style-type: none"> <li>• 21 – &lt; 0.9 odour complaints per 1,000 properties</li> </ul>	2	Section 2 Our Services Section 4 Our Rights and Responsibilities Section 5 Your rights and responsibilities	NSW Triple Bottom Line Sewerage Performance <ul style="list-style-type: none"> <li>• 21 – Odour Complaints per 1,000 properties</li> </ul>
Effluent quality from Sewage Treatment Plant	To meet and ensure ongoing compliance with licence regulations by the EPA for the operation of the Sewage Treatment Plants (STPs).	<ul style="list-style-type: none"> <li>• E5 – &gt; 98% of sewage volume treated compliant with EPA licence</li> </ul>	N/A	Section 2 Our Services	National Performance Benchmarking <ul style="list-style-type: none"> <li>• E4 – Percentage of sewage volume treated was compliant (%)</li> </ul>



Standards	Description	Target	Priority*	Comments	Benchmark
Sewer and pressure sewer connection	Connection of property to Council's sewer system. This is typically undertaken by the Developer or plumber.	20 working days*	N/A	Section 2 Our Services Section 5 Your rights and responsibilities	N/A
	Installation and connection of pressure sewer system and connection to Council's sewer system.	20 working days*			

\* From the time of payment of all outstanding fees as quoted



## 2.3. RESPONSE AND REPAIR TIMEFRAMES AND PRIORITY DETAILS – WATER SUPPLY SERVICE

The following table outlines the Water Supply Response and Repair Timeframes and Priority Details for the essential service aspect of the Council Water Supply Service.

**Appendix Table 3: Water Response and Repair Timeframes and Priority Details**

	Priority 1	Priority 2	Priority 3	Priority 4
<b>Definition</b>	A complete failure to maintain continuity of quality of supply to large number of customers or a critical user at a critical time. Traffic or safety hazard.	Partial failure to maintain continuity of supply to a small group of customers or a critical user at a non-critical time.	Failure to maintain continuity or quality of supply to a single customer.	Known fault, non-urgent minor problem or complaint which can be dealt with at a time convenient to the customer and Council
<b>Typical cause</b>	<ul style="list-style-type: none"> <li>• Pump station failure</li> <li>• Water Treatment Plant malfunction</li> <li>• Valve failure</li> <li>• Major water main or service break</li> <li>• No water</li> <li>• Stop cock faulty (flooding house – urgent shutdown required)</li> <li>• Suspected waterborne illness (potable water supplies)</li> </ul>	<ul style="list-style-type: none"> <li>• Minor main break</li> <li>• Leaking main</li> <li>• Partial valve failure</li> <li>• Poor pressure</li> <li>• Leak causing a safety/traffic issue,</li> <li>• Stop cock faulty (need to be shut off supply today)</li> <li>• Water hammer (where only turning off the stop cock stops the hammer)</li> <li>• Asset location – plant and machinery on-site</li> </ul>	<ul style="list-style-type: none"> <li>• Minor leak from main or service line (not causing safety/traffic issue)</li> <li>• Partial failure of connections</li> <li>• Minor leak from a hydrant point</li> <li>• Water hammer (stops when taps are turned off)</li> <li>• Asset locations – no plant or machinery on-site</li> <li>• Install temporary service</li> <li>• Dirty water (colour/odour/taste)</li> </ul>	<ul style="list-style-type: none"> <li>• Faulty water meter</li> <li>• Damaged meter (unable to read)</li> <li>• Missing/faulty Stop cock (no work being carried out)</li> <li>• Service disconnection or downsize</li> <li>• Faulty valve or hydrant</li> </ul>
<b>Typical effects</b>	<ul style="list-style-type: none"> <li>• Major property damage</li> <li>• Water Treatment Plant output diminished</li> <li>• Personal risk to public health</li> <li>• Significant depletion of service reservoir</li> <li>• Major environmental impact</li> </ul>	<ul style="list-style-type: none"> <li>• Minor property damage</li> <li>• Minor environmental impact</li> </ul>	<ul style="list-style-type: none"> <li>• No property and/or minor environmental impact</li> </ul>	<ul style="list-style-type: none"> <li>• No property impact or financial disadvantage to the customer</li> </ul>



	Priority 1	Priority 2	Priority 3	Priority 4
	<ul style="list-style-type: none"> <li>• Reduced water supply to Critical Water Supply Customers</li> </ul>			
<b>Response time</b>	Within 1 hour (business hours) Within 2 hours (after hours)	Within 2 hours (business hours) Within 3 hours (after hours)	Within 24 hours	Within 72 hours
<b>Fault repair (ie asset functioning and back in service) objective</b>	Within 5 hours	Within 24 hours	Within 24 hours	Within 5 business days
<b>Surface reinstatement and clean-up completion if applicable</b>	Within 10 business days	Within 10 business days	Within 10 business days	Within 10 business days



## 2.4. RESPONSE AND REPAIR TIMEFRAMES AND PRIORITY DETAILS – SEWER SUPPLY SERVICE

The following table outlines the Sewer Supply Response and Repair Timeframes and Priority Details for the essential service aspect of the Council Sewer Supply Service.

**Appendix Table 4: Sewer Response and Repair Timeframes and Priority Details**

	Priority 1	Priority 2	Priority 3	Priority 4
<b>Definition</b>	<ul style="list-style-type: none"> <li>• A complete failure to contain sewage within the system or any problem affecting customers or a critical user at a critical time</li> <li>• Traffic or safety hazard</li> </ul>	A minor failure to contain sewage within the sewer system or any problem affecting multiple customers	A minor failure to contain sewage affecting a single property	A minor problem, request or complaint which can be dealt with at a time convenient to the customer and Council
<b>Typical cause</b>	<ul style="list-style-type: none"> <li>• Manhole overflowing</li> <li>• Pump station failure</li> <li>• Broken gravity/rising main</li> <li>• Missing manhole lids</li> <li>• Break, collapse, choke overloading the system and extended wet weather</li> <li>• Subsidence causing immediate danger</li> <li>• Sewerage Treatment Plant critical alarms</li> </ul>	<ul style="list-style-type: none"> <li>• Cracked pipe or partial blockage of the sewer</li> <li>• Pump station fault,</li> <li>• Partial sewer blockage</li> <li>• Subsistence causing danger,</li> <li>• Asset location – plant and machinery onsite</li> </ul>	<ul style="list-style-type: none"> <li>• Sudden extra hydraulic load which backs up but then clears itself</li> <li>• Partial main line choke</li> <li>• Partial house service choke</li> <li>• Broken junction connection</li> <li>• Minor subsistence</li> <li>• Sewer odour not occurring now</li> <li>• Noisy or odorous manhole</li> <li>• Noisy or odorous pump station</li> <li>• Asset location</li> </ul>	<ul style="list-style-type: none"> <li>• Pump station/manhole noisy (not causing major concern to customer's peace and quiet)</li> <li>• Planned work</li> <li>• System investigation</li> <li>• Adjustment to manholes</li> </ul>
<b>Typical effects</b>	<ul style="list-style-type: none"> <li>• Personal injury or risk to public health</li> <li>• Surcharge to overflow in dry weather</li> <li>• Surcharge or overflow wet weather</li> <li>• Surcharge inside a building</li> </ul>	<ul style="list-style-type: none"> <li>• Surcharge outside a building, not posing a health risk</li> <li>• Minor property damage</li> <li>• Minor environmental impact, ie odour problems</li> </ul>	<ul style="list-style-type: none"> <li>• Minor surcharge</li> <li>• Slow moving toilet flush</li> <li>• Minimal or environmental impact</li> </ul>	<ul style="list-style-type: none"> <li>• Minor inconvenience or disruption</li> </ul>



	Priority 1	Priority 2	Priority 3	Priority 4
	<ul style="list-style-type: none"> <li>• Surcharge outside a building, if posing a health risk</li> <li>• Major property damage eg subsidence</li> <li>• Major environmental impact</li> </ul>			
<b>Response time</b>	Within 1 hour (business hours) Within 2 hours (after hours)	Within 2 hours (business hours) Within 3 hours (after hours)	Within 24 hours of a normal working day	Within 5 business days
<b>Fault repair (ie asset functioning and back in service) objective</b>	Within 5 hours	Within 24 hours of a normal working day	Within 48 hours of a normal working day	Within 5 business days
<b>Surface reinstatement and clean-up completion if applicable</b>	Within 10 business days	Within 10 business days	Within 10 business days	Within 10 business days



### 3. TARGETS AND BENCHMARKING

Everything we do is measured to ensure that Council stays focussed on the core services we provide. It is important that as many of those services are benchmarked to ensure that areas for improvement are identified early.

It is also important that customers get a realistic, accurate and comprehensive suite of results by which they can measure the performance of their water utility. Council does this through two main reporting mechanisms with targets and results outlined within this appendix; National Performance Reporting and DoI – Water Benchmarking Reporting.

These results are issued annually and updated as they become available but time lags occur to the issue of the Customer Service Plan beyond the control of Council.

Benchmarking is undertaken against broad targets across three reporting means. In respect of State performance, the targets are generally:

- < less than average
- > Greater than average
- <> no benchmark (see below)

Where the symbol <> is shown, this indicates that no benchmark target can be reasonably set as significant factors beyond the control of a utility impact on any comparative result.

Positive performance by Council is shaded in green.

#### 3.1. NATIONAL PERFORMANCE REPORTING – NON MAJOR UTILITIES – >4,000 <10,000 PROPERTIES

The National Performance Reporting is a comprehensive, comparative performance report, unique for Australia in scale and scope. The National Performance Reporting requires that data results are independently audited every four years and only Utilities that achieve full compliance with the audit are contained within the benchmarking results.

There is always a time lag in publication of the data with the annual results promulgated in late April of each year.

The results below are related to the Customer Service Plan and include a range of indicators with strong links to customer responsiveness. The full reporting suite of Indicators can be found through the Bureau of Meteorology website.

Note – The Indicators highlighted and shown within the table below are linked by a prefix (**A** = Assets, **W** = Water Resources, **C** = Customers, **E** = Environment, **P** = Pricing, **F** = Finance and **H** = Public Health) to reflect the 7 Indicators across a suite of approximately 150 water industry benchmark performance measures.



**Appendix Table 5: National Performance Report – Indicators – 2015/2016**

Section and Target	Indicator	Singleton Council Result	Median Result (<4,000 >10,000)
<b>Water Resources</b> (Partial Indicator of Customer Responsiveness to Demand Management Initiatives)			
< Average Result	<b>W12</b> Average annual residential water supplied (kL/property)	258	248
<b>Assets</b> (Partial indicator of Customer service through the condition of the sewerage network)			
< Average Result	<b>A8</b> Water Main Breaks (Number per 100km of water main)	9	12
< Average Result	<b>A11</b> Real Losses of Water (Litres per service connection per day)	60	80
< Average Result	<b>A14</b> Sewerage Main Breaks and chokes (Number per 100km of sewer main)	45	38
<b>Customers</b> (Direct indicator of Customer service performance across a range of core functions of a utility)			
< Average Result	<b>C9</b> Water Quality Complaints (Number per 1000 properties)	1	3
< Average Result	<b>C10</b> Water Service Complaints (Number per 1000 properties)	23	4
< Average Result	<b>C11</b> Sewerage Service Complaints (Number per 1000 properties)	14	5
< Average Result	<b>C13</b> Total Water and Sewerage Complaints (Number per 1000 properties)	39	34
< Average Result	<b>C15</b> Average duration of an unplanned interruption – water (Minutes)	330	120
< Average Result	<b>C16</b> Average sewerage interruption (minutes)	116	108
< Average Result	<b>C17</b> Average frequency of unplanned interruptions – water (Number per 1000 properties)	32	32
<>	<b>C18</b> Customers to which restrictions applied for non-payment of water bill (Number per 1000 properties)	0	
<>	<b>C19</b> Customers to which legal actions applied for non-payment of water bill (Number per 1000 properties)	63	
<b>Environment</b> (Partial Indicator of customer service as environmental performance is an important cost driver for the water utility with respect to both capital and operating costs. These costs translate to the charges levied for the utility services)			
> Average Result	<b>E4</b> Percent of sewage volume treated that was compliant (%)	100	98
	<b>E6</b> Public disclosure of sewage treatment plant performance (yes/no).	Yes	Yes
> Average Result	<b>E8</b> Percent of bio-solids reused (%)	0	



Section and Target	Indicator	Singleton Council Result	Median Result (<4,000 >10,000)
< Average Result	<b>E12</b> Total net greenhouse gas emissions (net tonnes CO <sub>2</sub> – equivalents per 1000 properties)	310	390
< Average Result	<b>E13</b> Sewer overflows reported to the environmental regulator (per 100 km of main)	0.7	0.9
<b>Pricing</b> <i>(Tariff structures and pricing are a direct indicator of customer service as it relates to the affordability of the services supplied by a Water Utility and the effect of demand management initiatives)</i>			
< Average Result	<b>P3</b> Typical Residential Bill – Water (\$)	501	658
< Average Result	<b>P6</b> Typical Residential Bill – Sewerage (\$)	495	651
< Average Result	<b>P8</b> Typical Residential bill – Water and Sewer (\$)	996	1224
<b>Finance</b> <i>(The financial performance of a utility is an important indicator of customer service ensuring the long term sustainability of the business with adequate capital expenditure and low operating costs)</i>			
< Average Result	F11 Operating Cost – Water (\$/property)	470	518
< Average Result	F12 Operating Cost – Sewer (\$/property)	328	447
< Average Result	F13 Combined Operating Cost – Water and Sewer (\$/property)	798	965
> Average Result	F16 Total Capital Expenditure – Water and Sewer (\$000s)	892	493
> Average Result	F28 Capital Expenditure – Water Supply (\$/property)	652	212
> Average Result	F29 Capital Expenditure - Sewer (\$/property)	240	186
> Average Result	F19 Economic real rate of return – Water (%)	5.0	2.0
> Average Result	F19 Economic real rate of return – Sewerage (%)	3.3	1.5
<b>Public Health</b> <i>(Direct Indicator of customer service)</i>			
<>	H1 Water Quality Guidelines	ADWG	ADWG
> Average Result	H3 % of population where microbiological compliance was achieved	100	100
<>	H7 Public disclosure of drinking water performance (yes/no)	Yes	Yes



### 3.2. DOI WATER – PERFORMANCE MONITORING AND BENCHMARKING REPORT <10,000 PROPERTIES

The NSW Water Supply & Sewerage Benchmarking Report and Performance Monitoring Report discloses the full suite of NSW water supply and sewerage performance indicators and benchmarking data for all NSW urban water utilities. The reports are in two volumes and are publically available. The reports disclose the key performance indicators for the NSW utilities together with the overall state-wide performance.

The annual results are promulgated in May each year and contain a Triple Bottom Line (TBL) Report of the water and sewer performance. A copy of the TBL is shown at the end of this Appendix.

The results below as related to the Customer Service Plan from the TBL are the latest available at the time of release of the Customer Service Plan. It should be noted that the Statewide Median Result reflects all 105 NSW Local Government Water Utilities ranging in size from 200 to 71,000 (water) and 69,780 (sewer) connected properties. The full reporting suite of indicators can be found through the DoI – Water's website [www.dpi.nsw.gov.au](http://www.dpi.nsw.gov.au).

Council achieved 100% compliance with implementation of NSW Best Practice Management Framework in 2015/2016.

**Appendix Table 6: Water Supply Performance 2015/2016**

Section	Indicator	Singleton Council	State Median
<b>Utility - Characteristics</b>	<b>4</b> New residences connected to water supply (%)	0.9	1.0
	<b>9</b> Renewals expenditure (% of current replacement cost of system assets)	1.0	0.6
	<b>10</b> Employees per 1000 properties	1.5	1.5
<b>Social - Health</b>	<b>18</b> Water Supply Coverage (% of Urban Population with reticulated water supply)	98.4	99.2
<b>Environmental – Natural Resources</b>	<b>35</b> Energy Consumption per megalitre (kilowatt hours)	186	660
<b>Economic – Finance</b>	<b>42</b> Current replacement cost per assessment (\$)	8,400	17,400
	<b>44</b> Return on assets – Water (%)	6.9	1.7
	<b>47</b> Loan payment per property – Water (\$)	0	11
<b>Economic - Efficiency</b>	<b>48</b> Operating cost (OMA) per 100km of main (\$'000)	1,260	1.120
	<b>50</b> Operating cost (OMA) per kilolitre (cents)	83	120
	<b>51</b> Management cost (\$/property)	160	148
	<b>52</b> Treatment cost (\$/property)	174	59
	<b>54</b> Energy cost (\$/property)	22	17
	<b>55</b> Water main cost (\$/property)	61	71



**Appendix Table 7: Sewerage Supply Performance 2015/2016**

Section	Indicator	Singleton Council	State Median
<b>Utility - Characteristics</b>	<b>4</b> New residences connected to sewerage (%)	0.8	1.2
	<b>7</b> Renewals expenditure (% of current replacement cost of system assets)	1.2	0.5
	<b>8</b> Employees per 1000 properties	1.9	1.7
<b>Social – Charges</b>	<b>14</b> Non-residential sewer usage charge (c/kl)	170	159
<b>Social – Health</b>	<b>16</b> sewerage Coverage (% of Urban Population with reticulated sewer service)	95.3	97.8
<b>Social – Service Levels</b>	<b>21</b> Odour complaints per 1000 properties	0.7	0.9
<b>Environmental – Natural Resources</b>	<b>30</b> Energy Consumption per megalitre (kilowatt hours/ML)	683	810
<b>Environmental - Performance</b>	<b>37a</b> Sewer Overflows (per 100km of main)	15	14
<b>Economic – Finance</b>	<b>46a</b> Return on assets – Sewerage (%)	5.4	1.8
	<b>48a</b> Loan payment per property – Sewerage (\$)	0	83
<b>Economic - Efficiency</b>	<b>49</b> Operating cost (OMA) per 100km of main (\$'000)	1,240	1,700
	<b>51</b> Operating cost (OMA) per kilolitre (cents)	176	208
	<b>52</b> Management cost (\$/property)	129	164
	<b>53</b> Treatment cost (\$/property)	92	159
	<b>54</b> Pumping out costs (\$/property)	21	59
	<b>55</b> Energy cost (\$/property)	26	34
	<b>56</b> Sewer main cost (\$/property)	86	51



### 3.3. WATER SUPPLY PERFORMANCE – TRIPLE BOTTOM LINE

#### Singleton Council TBL Water Supply Performance 2015-16

**WATER SUPPLY SYSTEM** - Singleton Council serves a population of 19,200 (6,740 connected properties). Water is drawn from the Hunter River and Glennies Creek to supply Singleton. The water supply network comprises 1 direct filtration works (30 ML/d), 12 service reservoirs (28 ML), 9 pumping stations, 30 ML/d delivery capacity into the distribution system, 100 km of transfer and trunk mains and 173 km of reticulation. 73% of water supplied is potable and 27% nonpotable.

**BPM IMPLEMENTATION** - Singleton Council achieved 100% implementation of the outcomes required by the NSW BPM Framework, however, Council needs to finish preparing the 30-year IWCW Strategy, Financial Plan and Report in accordance with the July 2014 IWCW Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)) to maintain 100% BPM Implementation.

**PERFORMANCE** - The 2016-17 typical residential bill was \$535 which was less than the statewide median of \$625 (Indicator 14). The economic real rate of return was 5% which was greater than the statewide median (Indicator 43). The operating cost (OMA) per property was \$470 which was close to the statewide median of \$440 (Indicator 49). Water quality complaints were less than the statewide median of 3 (Indicator 25). Compliance with ADWG was achieved for microbiological water quality (100% of the population, 1 of 1 zones compliant), chemical water quality and physical water quality. The chlorination system failed to operate on 1 day. The treatment system failed to operate on 40 days. Singleton Council reported no water supply public health incidents. Council has a risk-based Drinking Water Management System (DWMS) and had 0 days of water restrictions. Current replacement cost of system assets was \$60M (\$8,400 per assessment). Cash and investments were \$33M and revenue was \$7.9M (excluding capital works grants).

IMPLEMENTATION OF OUTCOMES REQUIRED BY THE NSW BEST-PRACTICE MANAGEMENT (BPM) FRAMEWORK					
(1) Complete Current Strategic Business Plan & Financial Plan	YES	(3) Sound water conservation implemented	YES		
(2) (2a) Pricing - Full Cost Recovery, without significant cross subsidies	Yes	(4) Sound drought management implemented	YES		
(2b,2c) Pricing - Appropriate Residential Charges	Yes	(5) Complete performance reporting (by 15 September)	YES		
(2d) Pricing - Appropriate Non-residential Charges	Yes	(6) Integrated water cycle management strategy	YES*		
(2e) Pricing - DSP with Commercial Developer Charges	Yes	IMPLEMENTATION OF ALL OUTCOMES		100%	

TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS				RESULT	RANKING		MEDIANS		
NWI No.					Size Group 2	All LWUs	Statewide	National	
				Col 1	Col 2	Col 3	Col 4	Col 5	
UTILITY	CHARACTERISTICS	C1 1	Population served: 19,200	(Number of assessments: 7,100)					
		C4 2	Number of connected properties:	Council is within Size Group 2: ( 4,001 to 10,000 properties)	6,740				
		3	Residential connected properties	% of total	88			91	
		4	New residences connected to water supply	%	0.9	2	3	1.0	
		A3 5	Properties served	prop/km	27			33	34
		6	Rainfall	% median annual rainfall	102	3	3	104	
		W11 7	Total urban water supplied at master meters	ML	3,770			6,900	9,770
		8	Peak week to average consumption	%	176	3	4	142	
		9	Renewals expenditure	% CRC	1.0	2	2	0.6	
		10	Employees	per 1,000 prop	1.5	2	2	1.5	
SOCIAL	CHARGES & BILLS	P1	Residential tariff structure for 2016-17: inclining block; independent of land value; access charge \$135.5						
		P1.3 12a	Residential water usage charge for 2015-16 for usage <450 kL	c/kL (2015-16)	135	4	4	228	190
		12	Residential water usage charge for 2016-17 for usage <450 kL	c/kL (2016-17)	155	4	4	230	
		P3 14a	Typical residential bill for 2015-16	\$/assessment (2015-16)	501	1	1	601	623
		14	Typical residential bill for 2016-17	\$/assessment (2016-17)	535	1	1	625	
		15	Typical developer charge for 2016-17	\$/ET (2016-17)	5,550	4	3	5,600	
		F4 16	Residential revenue from usage charges	% residential bills	75	3	2	73	66
		F5 17	Revenue - Water	\$/prop	1,180	2	2	928	921
	HEALTH	18	Water Supply Coverage (% of Urban Population with reticulated WS)	% of population	98.4	2	2	99.2	
		H4 19b	% population with chemical compliance	% of population	100	1	1	100	
		H3 20a	% population with microbiological compliance	% of population	100	1	1	100	100
	SERVICE LEVELS	C9 25	Water quality complaints	per 1,000 prop	1	3	3	3	2
		C10 26	Water service complaints	per 1,000 prop	23	4	4	4	0.5
		C17 27	Incidence of unplanned interruptions	per 1,000 prop	32	5	4	32	90
		A8 30	Number of water main breaks	per 100km main	9	3	2	9	13
		32	Total days lost	%	4.5	4	4	3.5	
ENVIRON- MENTAL	NATURAL RESOURCE MANAGEMENT	W12 33	Average annual residential water supplied - STATEWIDE result	kL/prop	258	4	3	162	181
		33a	Average annual residential water supplied - COASTAL LWUs	kL/prop	258	5	5	155	
		A10 34	Real losses (leakage)	L/connection/day	60	2	2	70	76
		35	Energy consumption	kWh/ML	186	1	1	660	
		E12 36a	Net greenhouse gas emissions - WS & Sge	t CO2 eq per 1,000 prop	310	2	2	390	402
ECONOMIC	FINANCE	42	Current replacement cost	\$/assessment	8,400	5	5	17,400	
		F17 43	Economic real rate of return - Water	%	5.0	1	1	2.3	2.8
		44	Return on assets - Water	%	6.9	1	1	1.7	
		F22 45	Net Debt to equity - WS & Sge	%	-37	5	5	-3	7
		F23 46	Interest cover - WS & Sge	>100	1	1	34	2	
		47	Loan payment - Water	\$/prop	0	3	3	11	
		F24 47b	Net profit after tax - WS & Sge	\$/000	5,420	1	1	3,800	9300
	EFFICIENCY	48	Operating cost (OMA) per 100km of main	\$/000	1,260	3	3	1,120	
		F11 49	Operating cost (OMA) per property - Note 8	\$/prop	470	1	2	440	485
		50	Operating cost (OMA) per kilolitre	c/kL	83	2	2	120	
		51	Management cost	\$/prop	160	2	3	148	
		52	Treatment cost	\$/prop	174	5	4	59	
		53	Pumping cost	\$/prop	28	2	2	28	
		54	Energy cost	\$/prop	22	2	3	17	
		55	Water main cost	\$/prop	61	2	2	71	
		F28 56	Capital Expenditure	\$/prop	652	1	1	212	193

#### NOTES:

- Col 2 rankings are on a % of LWUs basis - best reveals performance compared to LWUs in a similar Size Group (ie. Result in Col 1 is compared with LWUs in Size Group 2).
- Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all NSW LWUs (ie. Result in Col 1 is compared with all NSW LWUs).
- Col 4 (Statewide Median) is on a % of connected properties basis- best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller LWUs).
- Col 5 (National Median) is the median value for the 75 utilities reporting water supply performance in the National Performance Report 2015-16 ([www.bom.gov.au](http://www.bom.gov.au)).
- LWUs are required to annually review key projections & actions in the later of their IWCW Strategy and financial plan and their Strategic Business Plan and to annually 'roll forward', review and update their 30-year total asset management plan (TAMP) and 30-year financial plan.
- 2016-17 Non-res tariff: Access Chg based on Meter Size\* (eg. 40mm \$594.85), Two Part: Usage Chg 160c/kL.
- Non-residential water supplied was 38% of potable water supplied (excluding non-revenue water).
- Non-residential revenue was 34% of annual rates and charges. This indicates fair pricing of services between the residential and non-residential sectors.
- Operating cost (OMA/ property) was \$470. Components were: management (\$160), operation (\$212), maintenance (\$48), energy (\$22) & chemical (\$20).
- Rehabilitations included 1.2% of water mains, 0.76% of service connections and 2.2% of water meters. Renewals expenditure was \$233,000/100km of main.
- Singleton Council has 5 fully qualified water treatment operators who meet the requirements of the National Certification Framework.





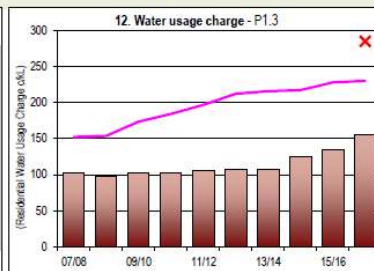
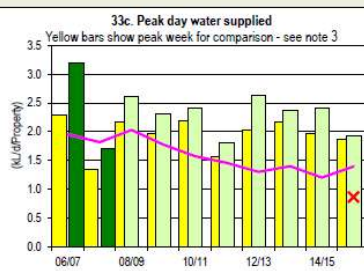
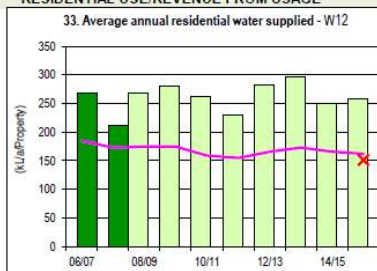
Singleton Council

TBL Water Supply Performance (page 2)

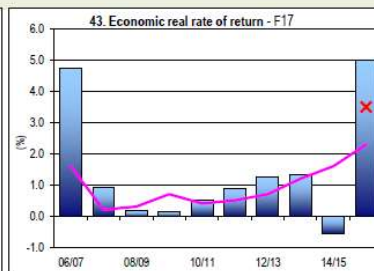
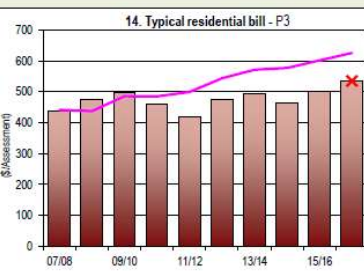
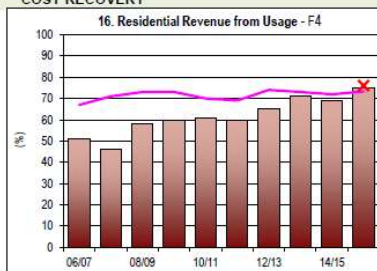
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(Results shown for 10 years together with Statewide Median and 2015-16 Top 20%)

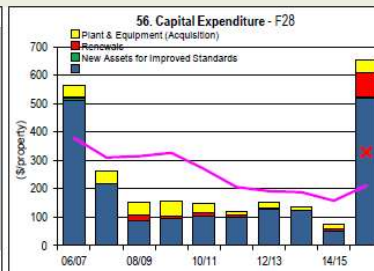
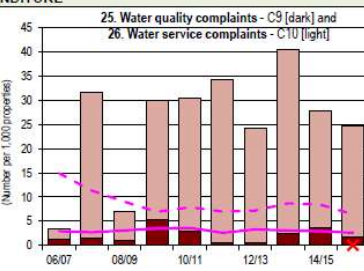
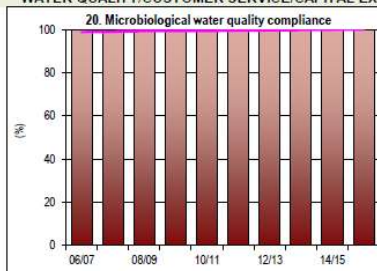
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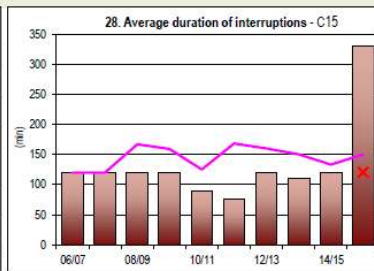
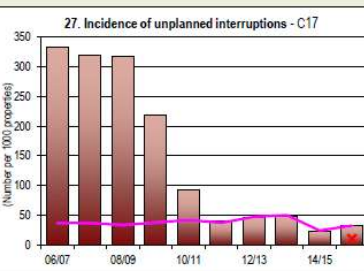
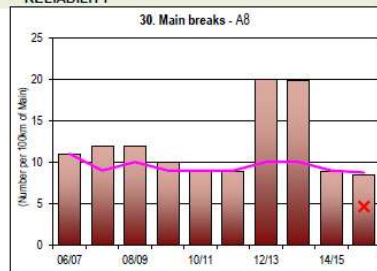
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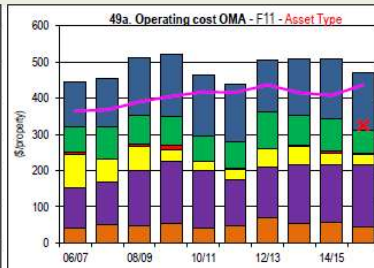
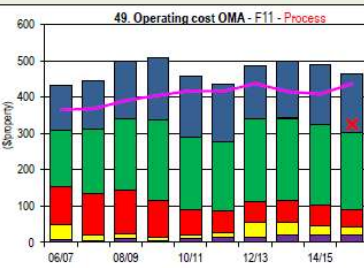
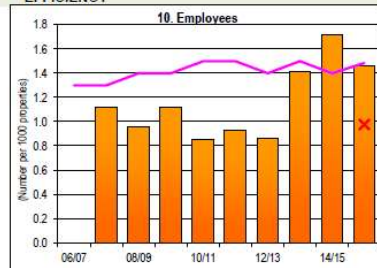
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RELIABILITY

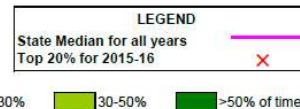


EFFICIENCY



NOTES:

- Costs are in Jan 2016\$ except for graphs 12 and 14, which are in Jan 2017\$.
- Microbiological water quality compliance up to 2010-11 was on the basis of 2004 NHMRC/NRMMC Australian Drinking Water Guidelines (ADWG) and for 2011-12 to 2015-16 compliance was on the basis of the 2011 ADWG.
- Indicator 33c - Yellow bars show Peak Week Water Supplied for comparison with Peak Day Water Supplied shown in green.
- Indicators 33 and 33c - Green shading of bars shows % of time Drought Water Restrictions applied in each year.





## 3.4. SEWERAGE PERFORMANCE – TRIPLE BOTTOM LINE

### Singleton Council TBL Sewerage Performance 2015-16

**SEWERAGE SYSTEM** - Singleton Council serves a population of 16,100 (5,710 connected properties) and has 1 sewage treatment works providing secondary treatment. The system comprises 20,000 EP treatment capacity (Intermittent Extended Aeration (Activated Sludge)), 15 pumping stations (30 ML/d), 26 km of rising mains and 126 km of gravity trunk mains and reticulation. No effluent was recycled. Singleton Council has a Pollution Incident Response Management Plan (PIRMP) for their sewage treatment works.

**BPM IMPLEMENTATION** - Singleton Council achieved 100% implementation of the outcomes required by the NSW BPM Framework, however, Council needs to finish preparing the 30-year IWC Strategy, Financial Plan and Report in accordance with the July 2014 IWC Check List ([www.water.nsw.gov.au](http://www.water.nsw.gov.au)) to maintain 100% BPM Implementation.

**PERFORMANCE** - Residential growth for 2015-16 was 0.8% which is lower than the statewide median. The 2016-17 typical residential bill was \$510 which was much less than the statewide median of \$718 (Indicator 12). The economic real rate of return was similar to the statewide median (indicator 46). The operating cost per property (OMA) was \$328 which was much less than the statewide median of \$470 (Indicator 50). Sewage odour complaints were less than the statewide median of 0.9 (Indicator 21). Singleton Council reported no public health incidents. 1 of 1 sewage treatment works were compliant at all times. Council complied with the requirements of the environmental regulator for effluent discharge. The current replacement cost of system assets was \$73M (\$12,200 per assessment), cash and investments were \$21M and revenue was \$3.9M (excluding capital works grants). Council paid a dividend of \$0.177M.

IMPLEMENTATION OF OUTCOMES REQUIRED BY THE NSW BEST-PRACTICE MANAGEMENT (BPM) FRAMEWORK			
(1) Complete current strategic business plan & financial plan	YES	(2e) Pricing - DSP with commercial developer charges	Yes
(2) (2a) Pricing - Full Cost Recovery without significant cross subsidies	Yes	(2f) Pricing - Liquid trade waste approvals & policy	Yes
(2b) Pricing - Appropriate Residential Charges	Yes	(3) Complete performance reporting (by 15 September)	YES
(2c) Pricing - Appropriate Non-Residential Charges	Yes	(4) Integrated water cycle management strategy	YES*
(2d) Pricing - Appropriate Trade Waste Fees and Charges	Yes	IMPLEMENTATION OF ALL OUTCOMES	100%

TRIPLE BOTTOM LINE (TBL) PERFORMANCE INDICATORS				RESULT	RANKING		MEDIAN	
	NWU	No.			Size Group 2	All LWUs	Statewide	National
UTILITY	CHARACTERISTICS	C5	1 Population served: 16,100	(Number of assessments: 5,950)	Col 1			
		C8	2 Number of connected properties:	Council is within Size Group 2: (4,001 to 10,000 properties)	5,710			
		C6	3 Residential connected properties	No.	5,090			
		4	4 New residences connected to sewerage	%	0.8	2	3	1.2
		A6	5 Properties served	prop/km main	38			38
		W18	6 Volume of sewage collected	ML	1,065			4,900
		7	7 Renewals expenditure	% CRC	1.2	2	2	0.5
		8	8 Employees	per 1,000 prop	1.9	4	3	1.7
SOCIAL	CHARGES & BILLS	P4	Description of residential tariff structure for 2016-17:	access charge/prop; independent of land value				
		P6	12a Typical residential bill for 2015-16	\$/assessment (2015-16)	495	2	2	697
		12	12 Typical residential bill for 2016-17	\$/assessment (2016-17)	510	2	2	718
		13	13 Typical developer charge for 2016-17	\$/ET (2016-17)	3,330	4	4	4,700
		14	14 Non-residential sewer usage charge for 2016-17	c/kL (2016-17)	170	3	3	159
	HEALTH	F6	15 Revenue - Sge	\$/prop	680	4	3	1,095
		16	16 Sewerage Coverage (% of Urban Population with Reticulated Sge Service)	% of population	95.3	2	3	97.8
		E3	17 Percent of sewage treated to a tertiary level	%	100	2	2	95
	SERVICE LEVELS	18	18 Percent of sewage volume treated that was compliant	%	100	1	1	100
		21	21 Odour complaints	per 1,000 prop	0.7	4	4	0.9
ENVIRONMENTAL	NATURAL RESOURCE MANAGEMENT	C11	22 Service complaints - Sge	per 1,000 prop	14.0	3	3	5
		C16	23a Average sewerage interruption	min	116	4	4	108
		25	25 Total days lost	%	3.7	4	4	3.5
		W19	26 Volume of sewage collected	kL/prop	187	2	2	234
		W26	26a Total recycled water supplied	ML				740
	ENVIRONMENTAL PERFORMANCE	W27	27 Recycled water	% of effluent				11
		E8	28 Biosolids reuse	%				100
		30	30 Energy consumption	kWh/ML	683	3	3	810
		E12	32 Net greenhouse gas emissions - WS & Sge	t CO2 eq per 1,000 prop	310	2	2	390
		33	90 <sup>th</sup> Percentile licence limits for effluent discharge: BOD 30 mg/L; SS 30 mg/L; Total N 25 mg/L; Total P 15 mg/L					
	FINANCE	34	34 Compliance with BOD in licence	%	100	1	1	100
		35	35 Compliance with SS in licence	%	100	1	1	100
		A14	36 Sewer main breaks and chokes	per 100km main	45	4	4	38
		37a	37a Sewer overflows	per 100km main	15	3	4	14
		E13	37b Sewer overflows reported to environmental regulator	per 100km main	0.7	4	4	0.9
ECONOMIC	EFFICIENCY	39	39 Non residential & trade waste sewage volume	% of sewage	20			20
		43	43 Revenue from non-residential & trade waste charges	% of revenue	27	1	1	19
		44	44 Revenue from trade waste charges	% of revenue	2.1	2	2	1.0
		F18	46 Economic real rate of return - Sge	%	3.3	1	1	2.5
		46a	46a Return on assets - Sge	%	5.4	1	1	1.8
		48a	48a Loan payment - Sge	\$/prop				83
		49	49 Operating cost (OMA) per 100 km of main	\$/000	1,240	2	2	1,700
		F12	50 Operating cost (OMA) per property - Note 9	\$/prop	328	2	2	470
		51	51 Operating cost (OMA) per kL	c/kL	176	1	2	208
		52	52 Management cost	\$/prop	129	3	3	164
		53	53 Treatment cost	\$/prop	92	1	1	159
		54	54 Pumping cost	\$/prop	21	1	1	59
		55	55 Energy cost	\$/prop	26	2	2	34
		56	56 Sewer main cost	\$/prop	86	5	5	51
		F29	57 Capital Expenditure	\$/prop	240	3	2	186

#### NOTES:

- Col 2 rankings are on a % of LWUs basis - best reveals performance compared to similar sized LWUs (ie. Result in Col 1 is compared with LWUs in Size Group 2).
- Col 3 rankings are on a % of LWUs basis - best reveals performance compared to all NSW LWUs (ie. Result in Col 1 is compared with all NSW LWUs).
- Col 4 (Statewide Median) is on a % of connected properties basis- best reveals statewide performance (gives due weight to larger LWUs & reduces effect of smaller LWUs).
- Col 5 (National Median) is the median value for the 74 utilities reporting sewerage performance in the National Performance Report 2015-16 ([www.bom.gov.au](http://www.bom.gov.au)).
- LWUs are required to annually review key projections and actions in the later of their IWC Strategy and financial plan and their Strategic Business Plan and to annually 'roll forward', review and update their 30-year total asset management plan (TAMP) and 30-year financial plan.
- Non-residential access charge - \$552 (uniform access charge). Sewer usage charge - 170 c/kL.
- Non-residential revenue was 27% of revenue from access, usage & trade waste charges. The sewage collected (residential, non-residential & trade waste) was not reported.
- Compliance with Total N in Licence was 100%. Compliance with Total P in Licence was 100%.
- Operating cost (OMA)/property was \$328. Components were: management (\$129), operation (\$69), maintenance (\$103), energy (\$26) and chemical (\$1).
- Singleton Council rehabilitations included 3.3% of its sewerage mains and 0.5% of its service connections. Renewals expenditure was \$578,000/100km of main.
- Council has 1 fully qualified wastewater treatment operator who meets the NSW Certification requirements.





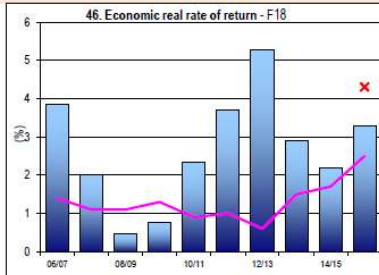
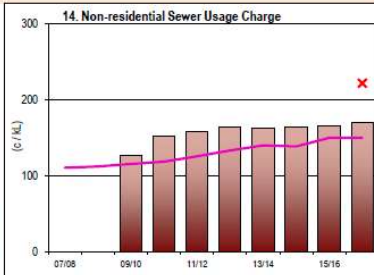
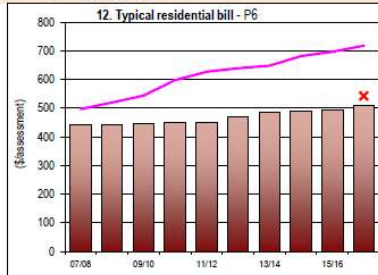
Singleton Council

TBL Sewerage Performance (page 2)

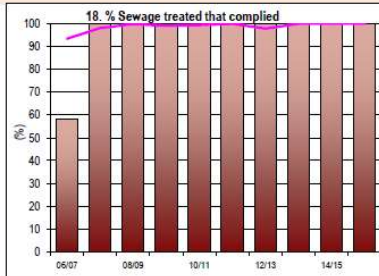
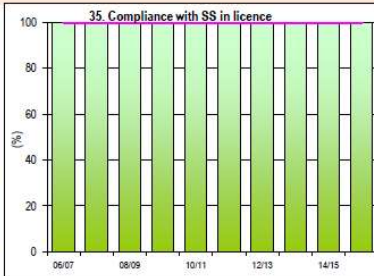
2015-16

(Results shown for 10 years together with Statewide Median and 2015-16 Top 20%)

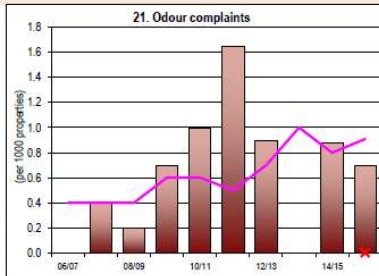
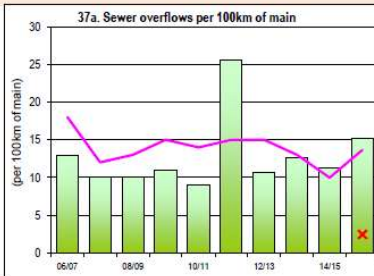
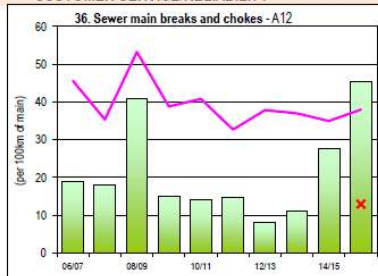
COST RECOVERY



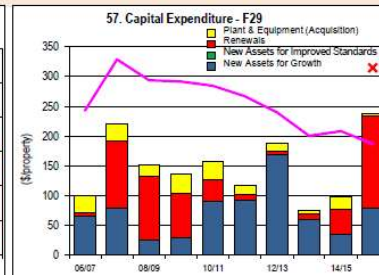
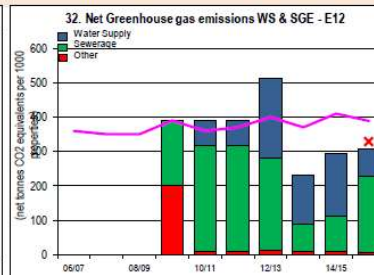
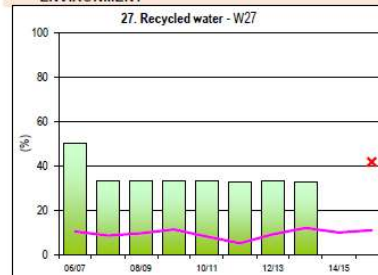
COMPLIANCE



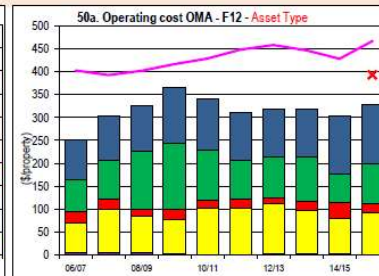
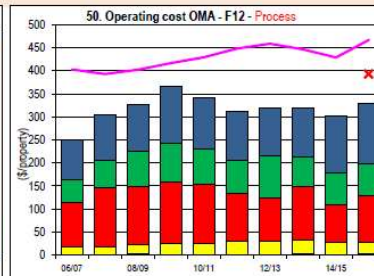
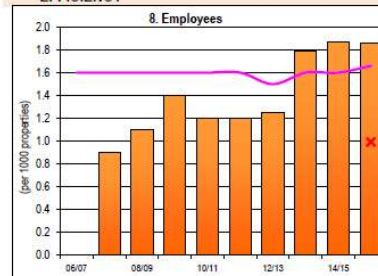
CUSTOMER SERVICE/RELIABILITY



ENVIRONMENT



EFFICIENCY



NOTES:

1 Costs are in Jan 2016\$ except for graphs 12 and 14, which are in Jan 2017\$.

LEGEND  
State Median for all years  
Top 20% for 2015-16



For more information, contact Singleton Council

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