

## 11.3 Policy (Review) - Water Metering (Smart Metering).DOC

**Andrew Swan**

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**From:** bscwater@ballina.nsw.gov.au  
**Sent:** Thursday, 3 August 2017 4:26 PM  
**To:** Andrew Swan  
**Subject:** Smart Water Meter Data for Your Water Service from Ballina Shire Council  
**Attachments:** 3Month.pdf; 7Day.pdf; tabulateddata.pdf

Please find attached hourly and daily consumption reports for your water service at Ballina Shire Council.

Our analysis shows that you used 71,965 litres of water last month. That's 45% more than the previous month.

We also noticed that your minimum hourly flow rate was 0.0 litres per hour. That's great news!

For more information about how to interpret your smart water meter report see [www.ballinawater.com.au](http://www.ballinawater.com.au)

Thanks for being part of our Smart Metering Program!

Regards,  
Ballina Shire Council

<automated message - do not reply>

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email sent from Hydstra using HYMAILER, run by bscwater from PC BSCWATER at 2017/08/03 16:26:04

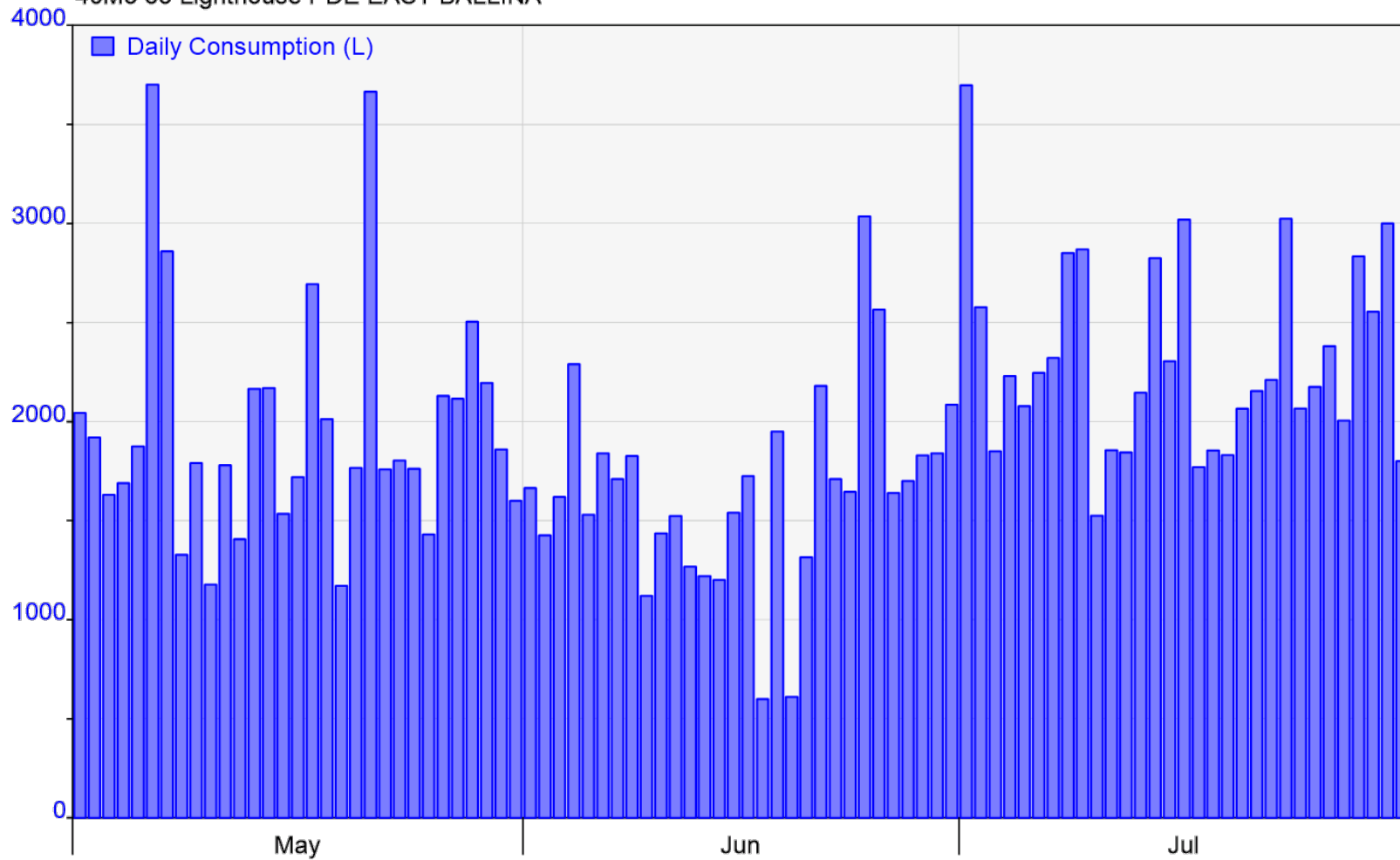
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### Ballina Shire Council

HYPLOT V133 Output 03/08/2017

Daily Metering Results for 13E000106  
Period 3 Month 01/05/2017 to 01/08/2017  
40M5 65 Lighthouse PDE EAST BALLINA

2017



**Ballina Shire Council**

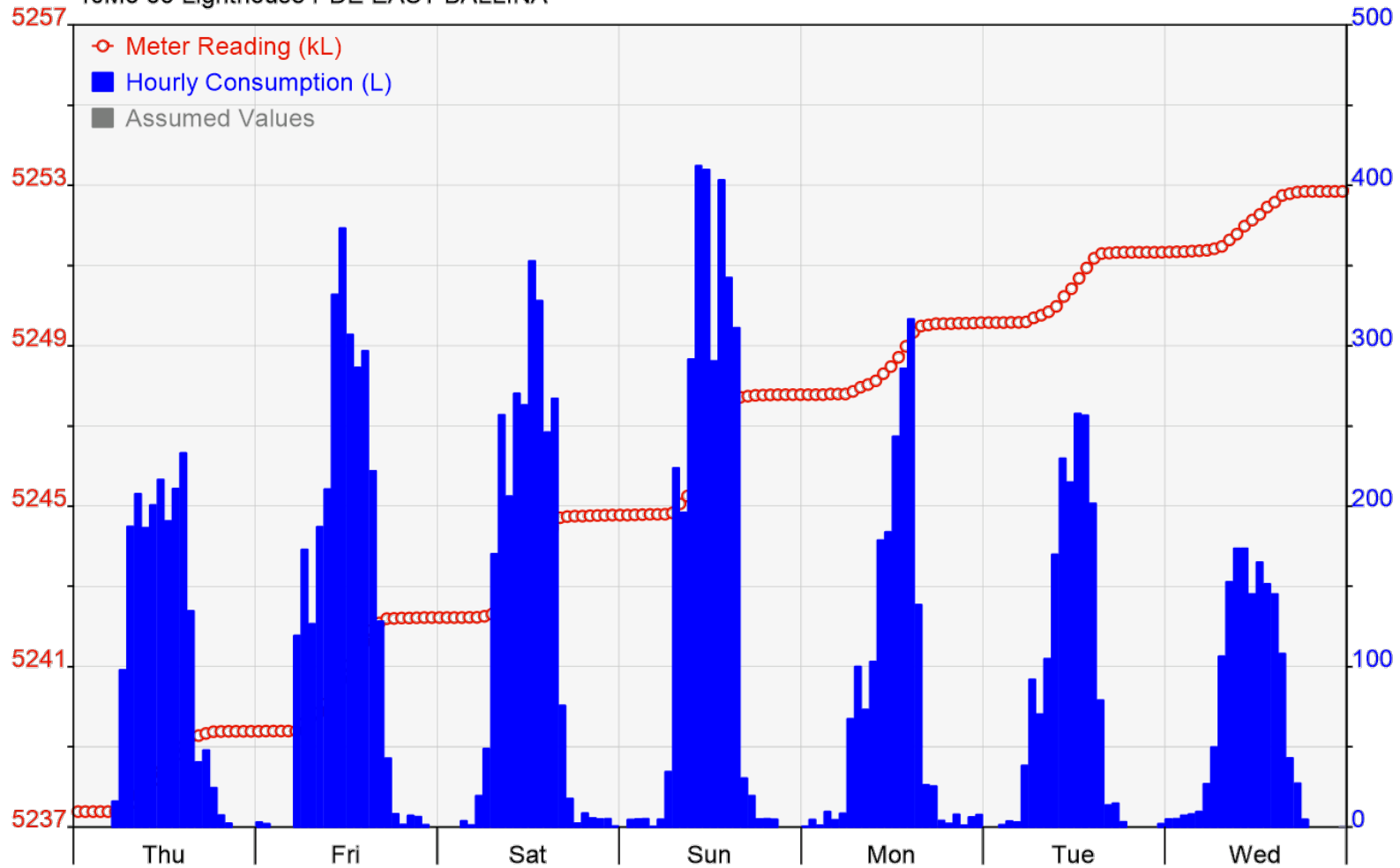
HYPLOT V133 Output 03/08/2017

Hourly Metering Results for 13E000106

Period 7 Day 27/07/2017 to 03/08/2017

2017

40M5 65 Lighthouse PDE EAST BALLINA



11.3 Policy (Review) - Water Metering (Smart Metering).DOC

Ballina Shire Council HYHOUR V79 Output 03/08/2017

Site 13E000106 40M5 65 Lighthouse PDE EAST BALLINA Site 13E000106  
 Variable 135.00 Flow Volume in Litres  
 Data for Jul 2017 Jul 2017

D	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Max	Tot	
A	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to			
Y	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
1	.000	.000	3.52	1.48	.000	3.69	72.4	134	187	211	235	311	323	314	174	254	196	250	259	229	306	162	53.6	18.5	323	3698	
2	6.32	5.05	5.06	5.04	.450	4.85	37.9	183	187	194	314	321	279	360	329	243	57.7	20.0	5.20	9.94	4.78	.325	4.67	.454	360	2577	
3	4.55	.000	.000	.000	.000	1.69	27.4	110	136	185	229	215	206	315	234	150	15.7	1.18	6.24	7.57	.000	1.33	3.67	.000	315	1650	
4	.000	1.52	3.48	.000	.000	3.36	34.2	103	166	235	292	299	289	266	258	178	66.9	21.5	9.20	.000	2.01	2.99	.000	.000	299	2230	
5	.000	2.20	2.80	.000	.000	2.29	16.8	52.0	136	193	170	224	294	256	231	231	160	56.2	12.4	7.35	7.73	12.9	6.74	.000	2.86	294	2078
6	2.14	2.92	2.08	.000	.000	.000	42.0	102	157	142	175	331	295	283	350	211	48.7	2.94	40.0	33.3	6.67	3.75	8.83	6.26	350	2246	
7	8.96	2.20	.000	.000	.000	4.19	123	134	178	234	211	215	212	304	257	311	104	12.2	5.04	5.04	.396	.000	.000	.000	311	2321	
8	.000	.000	.000	34.6	.420	15.9	72.6	172	184	287	299	370	337	347	357	224	89.2	5.08	6.01	14.1	5.61	9.48	5.06	5.06	370	2851	
9	4.27	.000	.863	5.07	4.07	4.17	46.5	152	204	263	352	451	360	360	367	206	52.8	12.5	5.05	5.02	5.04	3.52	1.64	3.36	451	2869	
10	1.72	6.81	6.47	.000	5.86	13.2	66.3	110	77.3	130	200	207	176	158	152	132	38.6	17.9	7.60	5.05	5.05	2.44	2.70	2.30	207	1525	
11	.000	.000	.000	.000	.000	.000	102	153	141	141	220	237	208	198	206	101	27.1	13.4	20.3	21.8	27.1	12.6	19.3	7.14	237	1855	
12	3.67	1.33	.000	.000	.000	15.6	43.8	85.9	128	209	294	222	173	242	249	149	18.8	4.35	.652	.000	.000	.000	.000	4.57	294	1845	
13	8.64	7.89	4.70	.299	.000	14.6	44.7	199	156	98.9	201	230	251	227	276	227	25.5	174	4.78	.000	.000	.000	.000	.000	276	2145	
14	.000	.000	.000	.000	21.7	113	31.8	101	265	268	325	373	298	284	301	274	134	32.0	3.79	.000	.000	.000	.000	.000	373	2825	
15	.000	.000	1.58	5.06	8.42	18.7	78.9	156	149	264	258	243	309	259	245	165	70.6	13.1	8.03	2.97	.000	4.29	5.71	.000	309	2305	
16	.000	.000	4.59	5.31	.000	.000	68.6	138	231	274	614	618	290	273	275	172	43.5	6.97	2.76	2.24	.000	.000	.000	.000	618	3020	
17	.000	3.10	5.05	5.03	5.04	44.5	95.5	63.7	125	179	230	185	196	208	199	147	49.0	11.6	6.46	5.06	5.05	1.28	.000	.000	230	1770	
18	.000	.000	3.98	1.02	4.05	.948	41.1	133	150	194	214	199	204	230	257	118	40.1	26.1	7.79	9.38	5.68	5.01	5.03	5.05	257	1854	
19	.508	.000	.000	4.67	.334	14.2	92.2	90.8	85.8	139	221	214	211	197	251	170	89.3	19.8	5.05	5.30	9.52	.334	5.03	4.64	251	1831	
20	.000	.000	.000	.624	4.38	7.22	61.9	129	145	155	218	253	264	272	241	244	31.2	28.3	.000	.000	.000	1.15	5.04	3.81	272	2065	
21	.000	.000	1.41	3.69	.000	29.1	108	163	161	214	286	264	285	273	222	128	10.1	8.17	3.02	.000	.000	.000	.000	.000	286	2155	
22	.000	.000	4.77	5.23	4.97	7.56	43.7	122	181	263	300	268	254	257	225	141	90.3	39.6	2.10	.000	.000	.000	.000	.000	300	2210	
23	.000	3.35	8.50	6.63	1.51	10.8	93.3	124	236	275	334	370	416	469	313	219	89.1	19.3	6.14	5.05	5.04	5.06	9.21	5.87	469	3024	
24	.811	.000	4.30	.697	4.41	.589	58.6	110	137	198	224	266	234	253	243	233	31.1	34.2	11.5	10.1	5.20	5.04	5.06	5.05	266	2066	
25	5.03	5.03	5.22	10.1	10.6	21.3	52.8	239	297	134	180	186	240	225	207	185	23.6	78.1	23.1	12.6	23.5	12.5	.000	.000	297	2175	
26	.000	1.16	3.84	.000	4.04	29.3	93.3	147	172	296	258	254	235	261	258	178	54.7	40.9	48.7	21.5	13.3	6.32	1.95	3.05	296	2380	
27	.000	.000	.000	.000	.000	16.0	98.0	187	208	187	201	217	191	211	233	135	40.5	47.9	24.5	7.40	2.30	.000	.000	.000	238	2005	
28	2.97	2.03	.000	.000	.000	119	173	127	187	211	332	373	307	286	297	222	128	42.9	8.17	1.53	7.09	6.50	1.41	.000	373	2835	
29	.000	.000	.000	3.82	1.18	19.6	48.8	170	257	206	270	263	353	328	246	267	75.8	17.7	2.38	8.67	5.66	5.03	5.06	.569	353	2555	
30	.000	4.58	5.05	5.07	.299	4.83	34.5	224	196	292	412	410	291	403	343	311	30.4	19.6	5.05	5.05	4.77	.000	.000	.000	412	3000	
31	.417	4.58	1.09	9.50	4.40	8.45	67.4	100	73.2	103	179	184	243	286	317	139	26.3	25.5	4.01	2.15	7.85	1.13	6.22	7.65	317	1800	

Monthly Summary

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Total 71965

	Maximum	Minimum
Hourly	617.9	0.000
Daily Tot	3698	1525

**POLICY NAME:** WATER METERING  
**POLICY REF:** W02  
**MEETING ADOPTED:** 28 April 2016  
 Resolution No. 280416/23  
**POLICY HISTORY:** 230212/34; 250107/023



**TABLE OF CONTENTS**

**OBJECTIVE** ..... 1  
**POLICY** ..... 1  
 Introduction ..... 1  
 Disclaimer ..... 1  
 Responsibilities ..... 1  
 Conditions ..... 3  
 1. Completeness ..... 3  
 2. Where Hydraulic Designs are required ..... 3  
 3. Applications and Tendering ..... 3  
 4. Location of Water Meters ..... 3  
 5. Backflow Protection ..... 4  
 6. Fire Services ..... 4  
 7. Urban Rainwater Tanks ..... 5  
 8. Rural Connections and allotments without access to reticulated water mains ..... 7  
 9. If Council Approves a Rural Connection ..... 8  
 10. Recycled Water Installations ..... 9  
 11. Master / Subtract Meters ..... 10  
 12. Automatic Meter Reading (AMR) Remote Metering (Where signal is available) ..... 10  
 13. Disused Services and Demolitions ..... 12  
 14. Disconnection from Council Reticulated Water Mains ..... 12  
 15. Damaged Water Meters ..... 12  
 16. Water Service Compliance ..... 12  
 17. Council Adoption of Private Water Meters ..... 13  
 18. Meter Inaccuracies ..... 13  
 19. Meter Replacement Criteria ..... 13  
 20. Temporary Connections ..... 13  
 21. Exemptions ..... 14  
 22. Work Health & Safety requirements private property ..... 14  
 23. Smart Metering ..... 14  
**BACKGROUND** ..... 15  
**DEFINITIONS** ..... 15  
**SCOPE OF POLICY** ..... 16  
**RELATED DOCUMENTATION** ..... 16  
**REVIEW** ..... 17

### OBJECTIVE

The purpose of this policy is to develop a standard water meter assembly policy. The policy defines Council, owners and plumbing contractors' responsibilities for installations, maintenance, and disconnections, reading and monitoring of water meters.

### POLICY

#### Introduction

This Policy is intended to provide information and legal requirements for Customers connected to Council's drinking water and recycled reticulated water supplies in the Ballina Shire Council Local Government Area.

All water and recycled water services must comply with this policy and will be controlled by Council's *Water & Wastewater Section, Civil Services Group*.

#### Disclaimer

An application for Water Service under this policy does not negate the need for the applicant/developer/property owner to submit to Council the following for assessment and approval when required:

- Section 68 Application for the proposed works prior to works being undertaken.
- A Development Application (DA) if required
- A Complying Development Certificate (CDC) if required
- Any other application deemed necessary by legislation or Council policy.

The submission of an application does not guarantee that an approval to connect will be granted.

#### Responsibilities

- Ballina Shire Council exercises its water supply functions under Division 2 Part 3 Chapter 6 of the *Local Government Act 1993*:
- Ballina Shire Council (BSC) is responsible for the pricing and installation of water meter assemblies for the provision of potable water and recycled water. BSC is responsible for the water service from the water main to the outlet of the meter and/or the backflow prevention device and isolation valve as required.
- BSC is responsible for the pricing and installation of water service assemblies for the purpose of fire protection. This includes the water service from the water main to the backflow prevention device and or by-pass detector meter assembly up to and including the downstream isolation valve as required.

- BSC is responsible for the installation and maintenance of pipe work, meter, and valves from the water main to the private property, to a distance of no greater than 1000mm into the private property. The maintenance of water pipes greater than 1000mm from the property entry point is the responsibility of the property owner regardless of where the meter or water assembly is located.
- Only Council staff are permitted to work on Council infrastructure. Misuse of or tampering of Council infrastructure including meters and valves may result in costs to investigate and rectify being charged to the Customer.
- For developments on unpressurised mains the developer is responsible for house connections to the reticulated main. As per Council's standard drawing design *SP066* which is available from Council on request. The service connection is to be terminated inside the property boundary with a service isolation valve inside a termination box and fitted with an approved corrosion resistant magnet for locating purposes.

When the main becomes live and a water meter is required the developer/builder/owner shall make an application for water service to Council. Council will complete the installation by providing a riser and water meter. Developers, plumbers or any other entity are not permitted to work on or connect to Council's pressurised mains.

- For development sites fronting pressurised mains the developer/builder/owner will make an application to Council for a house connection. As per standard drawing design *SP066* which is available from Council on request Council will terminate the service inside the property boundary with a service isolation valve inside a termination box. When a water meter is required the builder/owner shall make an application for water service to Council. Council will complete the installation by providing a riser and water meter.
- Ongoing service and maintenance of backflow prevention devices are the responsibility of the property owner as per the Plumbing Code of Australia (PCA) Australian & New Zealand Standards AS/NZS 3500
- Costing will be provided to the applicant in the form of an estimate only. Quotes cannot be provided to the applicant. Estimates are subject to change and are current for 60 days only.
- The licensed plumbing contractor is responsible for providing connection from the private property side of the water service to the meter assembly.
- The licensed plumbing contractor is responsible for providing permanent structural support to all water meter assemblies when connecting the private property side of the water service.
- The applicant is responsible for clearly marking the desired position of the water meter assembly on the application form within the space provided, or with a site plan along with measurements and details required.
- Council's connection to the main will be installed perpendicular to the meter assembly location. Council recognises that certain situations may not allow this.

### Conditions

#### 1. Completeness

Water Service Applications are to be completed in full and submitted with the necessary design details or plans. Applications with inadequate detail will not be assessed or priced by Council. Council's Customer Service staff will not accept incomplete, or unsigned applications.

#### 2. Where Hydraulic Designs are required

The following will require hydraulic design provided by a suitably competent and qualified person, (COP 2.2.8), which will need to be accompanied by a design/compliance certificate by a suitably qualified person to the satisfaction of Council's *Water & Wastewater Strategic Engineer*:

- Any fire service assembly, including Fire Hose Reels, and/or
- Unit demand of 3 units and greater, and/or
- 32mm assemblies or greater.
- Or when requested by Council

A *Section 68* Application under the provisions of the *Local Government Act* must be submitted to and approved by the appropriate section of Council prior to the issue of a Construction Certificate and/or work being undertaken.

Such application must be accompanied by suitable hydraulic plans and associated detail of drinking water services, fire services, and any recycled water services.

#### 3. Applications and Tendering

- Prices will not be provided by Council to plumbers or contractors for the tendering process.
- The owner of the property or the plumber commissioned for the job (the applicant) only may make a request for water services and an estimate may then be provided.
- Properties with a body corporation or multiple owners must have the written permission of the owner's corporation, or the property's entire owner's which must accompany the submitted application.
- Applicant's wishing to convert a single metered multi unit or duplex property to individual meters must show that a NSW licensed plumber has undertaken satisfactory investigation into the altering of the private owned component of the properties water service, and that these alterations are able to be carried out.

#### 4. Location of Water Meters

- Generally the meter(s) will be installed approximately 500mm to 1000mm inside the property boundary. The maximum distance being 1000mm from



the front and side boundaries typically at 90° to the road/front boundary. Further fees may apply if an alternative location is required.

- Meters must be readily accessible for reading, maintenance or removal and be clear of obstacles. New meters should not be installed below ground, in locked cabinets or behind high fences.
- If a new or existing meter requires relocating the costs shall be at the expense of the applicant.
- When it is impractical or there are 3 or more meters required to serve a property; remote metering will be required if signal is available at that location. (See 11 of this Policy)

### 5. **Backflow Protection**

- All backflow prevention devices to comply with AS 2845.1
- All backflow prevention shall comply with Ballina Shire Council's *Backflow Prevention Policy 2012*
- All services are to have a minimum of a dual check device
- The type of backflow for individual, zone and containment protection is as per AS/NZ 3500 appendix F table F1-F3
- Registered break tanks, air gaps, pressure-type vacuum-breakers, reduced-pressure-zone devices and double check valves require a test frequency not exceeding twelve months (AS 2845.3), and are the responsibility of the property owner
- Testing of any Backflow Prevention device shall comply with Council's *Backflow Prevention Policy 2012*, and will be at the property owner's expense.
- Only NSW Licensed plumbers with *NSW TAFE Backflow Prevention Certification* may install, test, maintain, or certify backflow prevention devices.

### 6. **Fire Services**

- Fire services are required for buildings based on floor area, building levels as per the Building Code of Australia
- An application for a fire pressure certificate from Council's *Water and Wastewater Strategic Engineer* is required
- After receiving the pressure certificate, hydraulic details prepared by a qualified hydraulic consultant are to be submitted to Council with a compliance/design certificate for Council assessment
- Above ground isolation valves shall be a full flow outside screw and yoke wheel, resilient seated gate valve or approved butterfly valve closed by rotating the handle clockwise

- Below ground isolating valves shall be resilient seated key operated sluice valves
- The plumbing contractor is responsible for labelling and securing all fire services as per Australian Standards.

### 6.1 Where Inline Meters are not Permitted

- Where the metering of water used for fire protection is required, in line meters shall not be installed. The preferred method is a metered bypass across a double check detector assembly (COP 6.5). This includes Fire hydrants installed in accordance with AS 2419.1, Booster pumps (AS 2419.1) sprinkler services (AS 2118.1), window or wall drencher systems.
- Window or wall drencher systems must be separate and distinct from all other services (AS 2118.1 cl 4.4.1). Large/complex installations will require metering across a double check detector assembly.

### 6.2 Where Inline Meters are permitted

- Hose Reels shall be connected to a metered service (COP 2.2.2), which can be inline metered. The minimum size service for a single hose reel is 25mm.
- A 32mm service is normally provided to allow for pressure and flow fluctuations. Where fire hose reels are connected there shall be no line strainer provided prior to the water meter (AS 3500 cl 4.6.1).
- Where practical it is preferred that all fire hose reels come off the domestic service to reduce tapings to the main and standardise installations.

## 7. Urban Rainwater Tanks

It is extremely important for the health and wellbeing of all Ballina Shire Council residents and visitors to ensure that Council's reticulated drinking water supply is protected from contamination from outside sources. One of the greatest risks of contamination of the drinking water supply is from cross connections with rainwater tanks.

Whilst the majority of rainwater tanks are well cared for it only takes one poorly managed or maintained rainwater tank to infect the drinking water supply which could cause sickness or even possibly death.

7.1 Where rainwater tank installations have been designed and installed so as to allow a top up connection with the drinking water supply the following is required:

- a) Zone Protection – zone protection shall also be provided by installation of an authorised backflow prevention device, suitable for the degree of hazard and sized to suit the water service. The

backflow prevention device shall be fitted immediately upstream on the drinking water service at the point of connection.

Where a hot water service is fed by a rainwater supply, or any alternative water supply (e.g. bore or dam water), or a temperature control device is installed and connected to the mains drinking water supply, then a suitable backflow prevention device shall be fitted upstream on the drinking water service at the point of connection.

- b) Containment protection – where a rainwater tank is to be connected (either directly or via an air gap), with the on-site drinking water supply, the mains supply shall be protected by installation of an authorised backflow prevention device, suitable for the degree of hazard and sized to suit the water service, fitted immediately downstream of the water meter or integral with the water meter.
- c) Council may permit a non-testable backflow prevention device to be used as zone protection for above ground rainwater tanks and a water meter with an
- d) Integral dual check valve for containment if the drinking water service is DN 20 - DN 25.
- e) Council shall permit a non-testable (Vented Dual Check Valve (VDCV)) backflow prevention device to be used for containment protection and a no-testable device for zone protection for any fully or partially buried rainwater tank(s) installation.
- f) Council reserves the right to require greater backflow prevention or to disallow cross-connection if rainwater tanks or any other fixture within the property is are not installed or operated in strict compliance with Council requirements.
- g) Where any sides of the rainwater tank are buried, or have soil or other such material in contact with the walls of the tank, the tank shall be treated as a fully buried tank for backflow prevention requirements.
- h) For a tank to be above ground it must be clear of any embankment, fill or the like.
- i) All water supply systems for rainwater tanks shall be installed as per the Plumbing Code of Australia (PCA) Australian & New Zealand Standards AS/NZS 3500
- j) Any top up mechanism shall incorporate a device to limit the flow rate to 4.0 litres per minute.
- k) The connection to the rainwater tank shall be by a visible air gap external to the tank, or an approved auto change over device.
- l) Manual changes over devices are strictly not permitted.

- m) Any topping up from a non-drinking water supply (if permitted) shall be clearly marked/labelled and visible.
  - n) All permitted outlet points supplied by the rainwater tank shall be clearly marked/labelled as "*Rainwater*".
- 7.2 Above ground rainwater tanks are to have as a minimum a Dual Check Valve (DCV) as zone and containment protection as required under the Plumbing Code of Australia (PCA) Australian & New Zealand Standards AS/NZS 3500
- For a tank to be above ground it must be clear of any embankment, fill or the like.
- 7.3 Fully or partially buried rainwater tanks are to have as a minimum a Testable Double Check Valve (TDCV) or a Vented Check Valve (VCV) as zone and containment protection, as required under the Plumbing Code of Australia (PCA) Australian & New Zealand Standards AS/NZS 3500
- Where any sides of the rainwater tank are buried, or have soil or other such material in contact with the walls of the tank, the tank shall be treated as a fully buried tank for backflow prevention requirements.
- 7.4 Council does permit the interconnection of rainwater tanks with the potable or non-potable water supplies. The New South Wales department of health does not recommend consumption from rainwater tanks where a potable water supply is provided.
- 7.5 Rainwater tanks installed in areas with a reticulated recycled water supply (e.g. Cumbalum Heights etc), are not permitted to have any type of top up device for the rainwater tank. This must be strictly complied with and all top up devices from any water supply, be it drinking water or recycled water, shall not be permitted.
- 7.6 Interconnection from a rainwater tank to any other water supply or plumbing fixture is not permitted in areas with a reticulated recycled water supply (e.g. Cumbalum Heights etc).
- 8. Rural Connections and allotments without access to reticulated water mains**
- Rural areas are defined, in this case, as areas (or allotments) where no standard urban reticulation systems are present.
  - Trunk mains are not standard urban reticulation systems. The reasons Council do not allow connections to trunk mains are as follows. Council can shut down trunk mains for periodic maintenance without prior notification to customers. Trunk mains are generally between two reservoirs hence the need for additional protection of the potable water supply. Pressure fluctuations are not regulated to the same extent as urban reticulation systems.

- A written submission is required for Council's consideration for a rural connection detailing any special considerations. It is at the sole discretion of the Council on a case by case basis as to whether a rural connection will be granted or not.

### 9. If Council Approves a Rural Connection

The following conditions apply:

- All rural connections must have backflow protection to Council's satisfaction.
- Any property with its own Onsite Sewage Management System (OSSMS) or Greywater Treatment System (GTS), or a Grey Water Diversion Device (GDD) must comply with BSC's *Backflow Prevention Policy 20124*, and have as a minimum a testable backflow prevention device installed at the water meter assembly at the owner's expense.
- 20mm connections only are permitted as the water supply is for domestic purposes.
- Council makes no guarantee as to the quality and quantity of supply.
- A storage tank and pressure pump system to distribute the water supply to the dwelling is required. The owner's water supply line from the meter must only discharge into this storage tank. The discharge can be via a visible air gap or in the case of an internal discharge point, with a registered air gap as per AS 2845 and AS 3500. There will be no connections in between the water meter and the storage tank.
- The tank shall be cleaned and disinfected at no greater than 2-year intervals.
- No headwork's charges will be levied, as this connection is not a guaranteed service to Council's service level standards for potable water supply.
- Where an extension of the main is required a meter will be installed just prior to the endpoint of the main. The owner is responsible for the running of appropriate pipe from this point and is responsible for its maintenance.
- Where the pipe is to be run along the Council road reserve a proposed pipe layout is required showing depth of pipe (minimum 600mm) and route for Council's consideration. It is the applicant's responsibility to obtain all required approvals, check to ensure other services will not be disrupted or damaged and that the public and any workers health and safety are not put at risk.
- If a private contractor is engaged Council will need a copy of their public liability insurance, Workers compensation policy and OWH&S policy. If the applicant is performing the works on their own. Public liability insurance only will be necessary.

- A traffic control or management plan is to be provided.
- Consult with Council's risk management officer before applicant is advised to proceed.

### 10. Recycled Water Installations

Recycled water connections will service various uses approved by Council, and must comply with the following:

- Where reticulated Recycled water supply is provided Ballina Shire Council will install both the potable and re-claimed water meter for the same fee as a single potable connection.
- Only a 20mm Recycled water service will be provided for domestic purposes.
- All internal recycled water fittings must be identified with appropriate signage as required and lilac in colour. The recycled water meter will also be coloured lilac.
- Rainwater tanks installed in areas with a reticulated Recycled water supply (e.g. Cumbalum Heights etc), are not permitted to have any type of top up device for the rainwater tank. This must be strictly complied with and all top up devices from any water supply be it drinking water or Recycled water shall not be permitted.
- Interconnection from a rainwater tank to any other water supply or plumbing fixture is not permitted in areas with a reticulated Recycled water supply (e.g. Cumbalum Heights etc).
- Interconnection from any Recycled water supply, water service, fixture, or storage tank to any other water supply or plumbing fixture is not permitted in areas with a reticulated drinking water supply, (e.g. Cumbalum Heights, etc).
- Commercial/industrial requirements must be sized to suit demand upon application and the associated hydraulic designs. All costs of the installation will be provided as an estimate for the commercial/industrial property owner.
- The potable water meter must be installed with the appropriate backflow prevention device as per Council requirements at the applicants expense. This meter will be located closest to the side property boundary.
- All external tap outlets on the potable supply shall also be lilac in colour and fitted with hose connection vacuum breakers and appropriate signage.
- All external tap outlets on the Recycled supply shall be as per AS 3500, Plumbing Code of Australia (PCA) Australian & New Zealand Standards AS/NZS 3500 and Ballina Shire Council guidelines.
- The lilac coloured Recycled water meter will be installed beside the potable water meter with at least 100mm separation between the two meters.

- All plumbers contracted to do works where Recycled services are available can be provided with a *Plumbers Information Pack*.
- Where the numbers of meters at the boundary become impractical see *remote metering* below.

### 11. Master / Subtract Meters

Where a property has multiple tenancies / services with the boundary of the property then each tenancy / service will be individually metered (called a Subtract Meter).

In this case there will also be a single, metered, connection between the internal water supply and Council's water distribution infrastructure (called the Master Meter).

By design all normal flow through a Master Meter should also be metered through a Subtract Meter, such that the sum of flow through the master meter minus the sum of flow through the subtract meters is zero (plus or minus meter inaccuracies, leakage and fire hose usage).

The Master Meter will have no access charge levied but will be used to capture leakage or inappropriate fire hose usage. Standard consumption charges will apply.

### 12. Automatic Meter Reading (AMR) Remote Metering (Where signal is available)

Automatic Meter Reading is to be installed in all new commercial, industrial and residential connections for drinking water and wastewater of the following type;

- Where there is more than two metered services on the property (except for residential dual reticulation services in which case where there are more than four). ~~If it is impractical for separate metering at the boundary due to the number of meters required or the logistics of the installation, remote read meters will be used. This includes all commercial, industrial and residential developments.~~
- All connections that are greater than 20mm
- Any location that has a master/subtract meter reading arrangement
- Any location that has a Category 2 or 3 liquid trade waste agreement.
- Any metered wastewater discharge

Where required to be installed for the reasons above, the applicant will be responsible for all costs to install and commission the devices.

Council may install AMR devices on any other new or existing water meter upon request for Smart Metering Services and payment of fee as per Council's fees and charges.

From time-to-time (say during trade waste approvals renewals); existing connections may be required to convert to AMR services to comply with these new requirements. In this case, once a condition of consent has been issued with the requirement to install the devices then they will be provided at full cost, prior to the consent being issued the subsidised cost via Smart Metering Services is available.

Council may install AMR devices on any existing water meters for operational reasons.

~~Council will install a master meter at the boundary and provide remote read meters to the applicant for installation by a licensed plumber. The master meter will have no access charge levied but will be used to capture common use consumption or inappropriate fire hose usage. Standard consumption charges will apply.~~

Each AMR water remote read meter would incur the appropriate water access charge as per Councils fees and charges.

The plumber contracted to install AMR water remote read meters must call Council with a minimum of 48 hours' notice for a commissioning inspection upon completion of installations.

All meters & AMR metering devices will be provided by Council to the developer. Arrangements are to be made with Council as to how the meters can be collected for installation. All items supplied by Council must be taken possession of by the applicant's representative. Once handover & possession of items has occurred the items become the responsibility of the applicant. The cost to install the remote metering equipment, including any supplementary fittings or materials, is at the expense of the applicant/developer.

The applicant's NSW Licensed plumber is responsible for installing the remote read transducers to each sub-meter within the property to Councils satisfaction. Council can be contacted for instruction.

All meters with remote metering devices shall be located so they are easily located, accessible for reading, and able to be maintained or replaced and clear of obstacles.

~~The applicant/developer is responsible for providing an IP68 minimum rated waterproof enclosure at the front of the building usually adjacent to the electrical meter box. The enclosure must be fitted with a 240v General Purpose Outlet (GPO). The enclosure and GPO costs are to be borne by the applicant/developer. Once completed Council will install the 240v remote read repeater into the enclosure. Council will connect the transducers and repeater to our remote read network.~~

AMR Remote metering devices shall not be installed in locations that adversely impact on the ability of the device to transmit adequate signal strength back to Council's receivers.

Plans must be submitted to Council with the locations of all AMR water remote meters clearly identified.



Any missing items, stolen, misplaced or otherwise are the responsibility of the applicant after handover. Replacement items are at the cost to the applicant.

AMR water Remote meters located on private property if found to be faulty must be replaced by the property owners' NSW Licensed plumber. The plumber is to contact Council to arrange for a replacement water meter. The old water must be returned to Council and exchanged for the new replacement water meter. The cost to install the new meter and refit the remote metering equipment, including any supplementary fittings or materials, is at the expense of the applicant/developer.

AMR devices will be analysed by Council's Rapid Customer Leak Detection algorithms. This algorithm will run once per week and generate a list of connections with suspected leaks. The timing and detail of those algorithms are subject to improvement and change without notice. Council will endeavour to notify customers of suspected leaks in their property once the leaks are detected. Council accepts no liability for being able to detect any leaks or informing customers once detected.

### 13. Disused Services and Demolitions

Where a service or part of a service becomes disused it shall be disconnected. ~~by Council after an application for water services disconnection has been made and the appropriate fee received by Council. Fees for such will be determined by Council on application and will be at the expense of the applicant.~~

Where a property or part of a property is approved (or otherwise confirmed) for demolition, any service or part of a service that becomes disused must be disconnected prior to commencement of any demolitions works on site.

### 14. Disconnection from Council Reticulated Water Mains

Persons that require disconnection from Councils reticulated water services may apply to do so. Only property owners and or their representatives may apply to disconnect a water service.

All costs associated with disconnection of the water service are to be borne by the applicant and paid up front prior to Council undertaking works.

### 15. Damaged Water Meters

Where meters are damaged, these will be repaired by Council and an invoice for the costs incurred will be issued to the customer.

### 16. Water Service Compliance

All water service installations downstream of the property service meter shall be installed in compliance with the Building of Australia, Australian Standards, Plumbing Code of Australia (PCA) Australian & New Zealand Standards AS/NZS 3500, and Ballina Shire Council's requirements & Guidelines as necessary.

All Council water meters must be installed by Council approved staff only. Meters must be Council supplied and meet the relevant Council standards.

Persons other than Council approved staff, must not alter, tamper with or install their own or any other meter.

On new blocks that have not been occupied or are vacant; any components of a Council water service (meter, valves, connection kits etc.), that go missing or are stolen, are the responsibility of the applicant/property owner/developer after installation by Council. Replacement items are at the cost to the applicant. Council will not take responsibility for such instances.

Action may be taken by Council under Council's Enforcement Policy and to recover costs where Council's water service infrastructure is tampered with.

### 17. Council Adoption of Private Water Meters

Application can be made for private meters to be read and maintained by Council on a case-by-case basis given the following conditions are met:

- Meters are at the boundary and are readily accessible for reading **or Automatic Meter Reading Devices are installed.** ~~If meters are not in a suitable location, remote read meters may be installed at the applicants cost where signal is available.~~
- Meters are in good condition, of suitable quality and have the appropriate level of backflow prevention. If not, meters can be upgraded though Council at the applicant's cost.

### 18. Meter Inaccuracies

Any suspected meter inaccuracies must be reported to Council by the property owner as soon as practicable. Council will investigate and if the meter is proven to be inaccurate the meter will be replaced. Any water billing anomalies will be considered by Council's Rates section.

Council shall not be responsible for water leaks in private pipework, fittings or fixtures not the responsibility of Council. Any resulting costs as a result of excess water use or from the water leak in private property pipework, fittings, or fixtures are the property owners' responsibility, and shall be paid for by the property owner.

### 19. Meter Replacement Criteria

Council will manage its meter fleet through an ongoing meter replacement process to replace old and faulty meters.

### 20. Temporary Connections

Council will assess all requests for temporary water service connections on a case by case basis. Some examples of temporary water services that Council has approved are:

- Visiting Australian Navy Vessels
- Visiting circuses, carnivals, etc.

All temporary services must still meet the requirements within this and other Council policy. Costs shall be at the applicant's expense.

### 21. Exemptions

Council operations generally must comply with this and all other related policy for all water related connections. Some exemptions may apply as allowed for under legislation and Council requirements.

### 22. **Work** Health & Safety requirements private property

All water services and associated components that are the responsibility of the Council such as the water meter, isolation valves, or any other relevant fitting must be kept in such a way by the property owner so as to meet the following:

- Clear of encroachment by long grass, bushes, etc.
- Not covered by soil, gardens or any other item.
- Not damaged by motor vehicle movements
- Not painted over and not covered unless by a Council approved method
- Easily accessed for meter reading and maintenance purposes
- Not tampered with or altered by the owner or plumber.
- Able to be fitted with a safety electrical continuity strap during meter replacement

### 23. **Smart Metering**

Council provides detailed customer information to subscribed customers who have AMR devices fitted in the following way:

- Information is provided automatically via email at a frequency nominated by the subscribed customer (eg fortnightly)
- The performance target for automatic provision of data is 95% within 24 hours of due date
- The format is as developed by Council and will include the raw data and visualisations of:
  - Hourly data
  - Daily data
- Ad-hoc data requests will not be serviced unless the customer has undertaken works to fix leaks and would like a more timely provision of confirmation that the leak is fixed (where the customer cannot easily inspect the water meter).

The timing and details of information provided is subject to improvement and change without notice.

**BACKGROUND**

This 2016 version is a review and update of Councils previously adopted Water Meter Policy 2012, Resolution No. 230212/34.

**DEFINITIONS**

<b>Back Siphonage</b>	A condition where the water or other contaminated/polluted liquid enters the potable water supply by siphonage caused by a negative pressure (vacuum or partial vacuum) in the reticulation system. Back siphonage can be created when there is a stoppage of the water supply due to fire-fighting, repairs or breaks.
<b>Back Pressure</b>	A condition where the pressure downstream of the cross connection becomes greater than the pressure upstream of the cross connection, thus allowing water or other contaminated/polluted liquid to reverse its normal flow and enter the potable supply.
<b>Council (BSC)</b>	Ballina Shire Council
<b>LWU</b>	Local Water Utility (for the purposes of this policy, Ballina Shire Council).
<b>GDD</b>	Greywater Diversion Device; a device installed sewer areas used to divert greywater to an approved subsurface or subsoil disposal area within the property.
<b>OSSMS</b>	Onsite Sewage Management System.
<b>GTS</b>	Grey water Treatment System.
<b>Water Meter</b>	A device connected inline to a premises water supply usually at the front of the property to measure the amount of water used for billing purposes.
<b>Back Flow Prevention Device</b>	A device used to protect a water supply by preventing contaminated water from either <i>back siphoning</i> or being <i>back pressured</i> from a premise back into the water main.
<b>Greenfield Developments</b>	A term used in construction and development to reference land that has never been used (e.g. green or new), where there is no need to demolish or rebuild any existing structures.
<b>WH&amp;S</b>	Work <del>ers</del> Health & Safety
<b>Urban Rainwater Tanks</b>	Rainwater tanks located in a city, town, village, estate or other area supplied with a Council reticulated drinking water supply. These areas may or may not be sewerred.

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<b>Topping up</b>	Term used to describe the physical method of re-filling or topping up a rainwater tank with another water source.
<b>Valve</b>	A device used to turn off or on, or regulate up or down, or open and close the flow of water in a pipe.
<b>Recycled Water</b>	Wastewater that has been restored to a state that will allow it to be beneficially reused. This water is not for human or animal consumption or general contact.
<b>Unpressurised Mains</b>	Water mains that are being newly constructed and installed by developers/contractors and which have not been pressurised and/or handed over to Council.
<b>Pressurised Mains</b>	Water mains which have been handed over to Council and/or are pressurised or under Council control.
<b>Automatic Meter Reading (AMR)</b>	the automated, remote collection of meter reads.
<b>'Smart Metering'</b>	the provision of detailed water consumption information to the customer
<b>Rapid Customer Leak Detection</b>	The periodic review of detailed customer consumption patterns for signs of leakage in the customer service

### SCOPE OF POLICY

This policy applies to:

- Property owners
- Water customers
- Sewer customers
- Council employees
- Community members
- Committees of Council
- Consultants/Contractors
- NSW Licensed Plumbers
- Commercial enterprises/businesses, and residential premises in the Ballina Shire that require fire, drinking water, and/or recycled water services.

### RELATED DOCUMENTATION

Related documents, policies and legislation:

- Local Government Act 1993 (NSW)
- Local Government (General) Regulation 2005
- Environment Planning and Assessment Act 1979 (NSW)

- Public Health Act 2010 (NSW)
- Public Health Regulation 2012
- Water Management Act 2000
- Water Management (General) Regulation 2011
- Protection of the Environment Operations Act 1997 (NSW)
- Protection of the Environment Operations Regulation (General 2009) (Waste 2005) (Administration 2012) (NSW)
- National Wastewater Source Management Guideline 2008 - Water Services Association of Australia (WSAA)
- Integrated Water Cycle Management Guidelines for NSW Local Water Utilities 2004 - NSW Department of Energy, Utilities and Sustainability (DEUS)
- Plumbing Code of Australia (PCA) Australian & New Zealand Standards AS/NZS 3500
- Liquid Trade Waste Regulation Guidelines 2009 - NSW Department of Water and Energy
- NSW Government's Best-Practice Management of Water Supply of Sewerage Guidelines, 2007

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Ballina Shire Council documents:

- Ballina Shire Urban Water Management Strategy
- Community Strategic Plan 2010-2025
- Urban Water Quality Policy 2015 (BSC)
- Backflow Prevention Policy 2014 (BSC)
- Drinking Water Management System (BSC)
- Recycled Water Management System (BSC)
- Dual Water Supply Plumbing Policy 2013 (BSC)
- BSC Liquid Trade Waste Fact Sheets No's 1 – 5.
- Enforcement Policy 2013 (BSC)

### **REVIEW**

The Water Metering Policy is to be reviewed every four years of the election of a new Council.