

POLICY NAME: (REVIEW)
Dual Water Supply Plumbing Policy

POLICY REF: D10

MEETING ADOPTED: 28 November 2013
Resolution No. 281113/23

POLICY HISTORY:



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OBJECTIVE

The purpose of this policy is to provide information about the requirements for plumbing for residential and non-residential premises that are supplied with Recycled Water in Ballina Shire. ~~in the designated dual water supply areas.~~

BACKGROUND

In accordance with Council's Urban Water Management Strategy, Council operates four recycled water treatment plants in Ballina Shire – one treatment plant is currently approved to supply recycled water for domestic use (Lennox Head) with the remainder capable of supply recycled water for certain approved commercial and municipal uses.

Council has identified areas which will be subject to this policy (see Map in appendix A), but this does not prevent the opportunistic identification of sites as a process of reviewing a development application or Section 68 application (Local Government Act) on a case by case basis.

~~Ballina Shire Council is introducing a dual water supply into Ballina Shire's new residential commercial and industrial developments as part of Ballina's Urban Water Management Strategy. The dual water supply system is being installed to serve all lots in new developments and every lot must connect to both supplies.~~

To safeguard public health it is very important that water supply plumbing is carried out in the correct manner to prevent inappropriate use of the recycled water and cross connection of the two separate water supplies. This includes the use of fittings, lilac coloured pipework and permanent markings so that occupants don't inadvertently use the wrong water or future plumbers inadvertently connect to the wrong system.

All installations will be subject to Council inspection ~~at any~~ at certain stages to confirm that the plumbing has been executed and is being maintained in accordance with the policy.

This document supersedes the Ballina Heights Dual Water Supply Plumbing Guidelines and is designed to provide the information necessary to correctly plumb houses located in designated dual water supply areas and more generally for residential and non-residential premises that are supplied with Recycled Water in Ballina Shire.

DEFINITIONS

Drinking Water is otherwise known as 'potable water' which is approved by use for humans for drinking, food preparation and activities such as swimming and washing. Some people call it 'town water'. It is water that is generally sourced from drinking water catchments such as Rocky Creek Dam, before being filtered, disinfected and distributed.

Dual Water Supply - Each property in the dual water supply system has a drinking water supply and a recycled water supply. The different water supplies are to be delivered through two separate pipe systems and each supply is separately metered. (See Appendix A – Dual Water Supply Mapping)

Grey Water - is wastewater generated from wash hand basins, showers and baths, which can be recycled on-site for uses such as toilet-flushing. It is usually treated onsite before re-use and the level of onsite treatment is determined by the source of the water and the level of nutrients within it.

Recycled Water – sometimes called ~~is otherwise known as~~ 'reclaimed water' or 'reuse water' and ~~is~~ can be approved for uses such as garden water, toilet flushing and clothes washing in cold water. It is generally sourced from water that would otherwise be discharged to the environment. Instead of being wasted, this water is filtered, disinfected and distributed. Ballina Shire Council's Recycled Water Schemes ~~are~~ is-supplied with water recycled from wastewater.

Non-Treatment Barriers – non-treatment barriers function by reducing the exposure of hazards in recycled water to the end user; these include such practices as restricting public access when irrigating sports fields or drip irrigation of crops. Recycled Water Schemes approved for appropriate domestic uses (toilet, cold water laundry tap, outdoor watering) do not require the use of any non-treatment barriers (ie the Lennox Head Recycled Water Scheme).

SCOPE OF POLICY

This policy applies to (add or delete where necessary):

- Council employees
- Councillors
- Community members
- Committees of Council
- Consultants/Contractors
- Developers/Builders/**Plumbers**
- Homeowners/Tenants
- **Real Estate Agents**
- Legal Profession

RELATED DOCUMENTATION

Related documents, policies and legislation:

- Section 149(2) Certificate (Environmental Planning and Assessment Act 1979)
- Section 68 (General Building Construction DA Consent / section 68 Local Government Act)
- 88E (Land Subdivision DA consent condition and section 88E condition pursuant to the Conveyancing Act 1919)
- Plumber's Information Pack (Appendix C)
- Notice of Work (For Plumbing and Drainage work within the Ballina Shire Council Area)
- NSW Public Health Act 2010.
- Environmental Planning and Assessment Act 1979 (NSW)

- Local Government Act 1993 (NSW)
- Local Government (General) Regulation 2005
- Protection of the Environment Operations Act 1997 (NSW)
- (Draft) NSW Public Health Regulation 2011.
- NHMRC/NRMMC Australian Drinking Water Guidelines 2004.
- NSW Code of Practice: Plumbing & Drainage, 3rd Edition 2006
- Australian & New Zealand Standard AS/NZS 3500.1 :2003
- Australian Guidelines for Water Recycling and Managing Health and Environmental Risk (Phase 1) (2006)
- Australian & New Zealand Standard AS/NZS 3500.1 :2003
- Water Metering Policy (2017, Ballina Shire Council)
- Backflow Prevention Policy (2014)
- NSW Guidelines for Greywater Reuse in Sewered, Single Household Residential Premises (2008)

POLICY

1. The Dual Water Supply System

1.1. Background

Both drinking water and recycled water will be delivered to all dual water supply properties within Ballina Shire via separate water mains. This means that all houses within the dual water supply area will have two independent water supplies.

To ensure that these two plumbing systems remain isolated from one another and to minimise the potential for improper use of recycled water there are a number of requirements, in addition to the standard plumbing arrangements, for domestic water supply installation that must be adhered to.

All recycled water pipes, fittings and fixtures are identified by purple coloured markings and warning signage; 'DO NOT DRINK'.

1.2. How Can Recycled Water be Used?

Recycled water **can** only be used domestically for:

- Toilet flushing
- Cold water clothes washing tap
- Garden irrigation
- Ornamental ponds
- Washing cars, pathways, walls
- Pet washing / watering

Recycled water **cannot** domestically be used for:

- Drinking
- Cooking or other kitchen purposes
- Baths, showers, hand basins or personal washing
- Swimming Pools

- Water contact recreation (for example, playing under a sprinkler)
- Rainwater tanks

Please note: that residential premises are only supplied from Recycled Water Treatment Plants that are approved for that purpose.

Recycled Water can be used in non-residential premises for the above uses (when supplied from Lennox Head) as well as other commercial, industrial, municipal or open spaces uses on a case by case basis. Examples include – golf course, lawn bowls, race track and sports grounds.

Where non-residential use exceed the standard domestic uses or Non-Treatment Barriers are required (as is the case for recycled water from the Alstonville, Wardell and Ballina Recycled Water Treatment Plants) that use ~~Please note: All commercial uses~~ must be outlined through ~~an~~ individual end-user agreements (binding legal document between user and Ballina Shire Council).

2. Connecting Recycled Water During Construction

Before the commencement of any plumbing work on dual reticulated premises, builders, property owners or their nominated agents must submit a Section 68 Application under the Local Government Act with Ballina Council with the relevant council fees. Builders, property owners or their nominated agents must also submit the NSW Office of Fair Trading's 'Notice of Works' form to Ballina Council (Appendix B)

Every water service in designated dual reticulated areas must be connected to both supplies and must have one outside drinking water tap and at least one recycled water tap. This includes services for residential flats under owner's corporation schemes where an additional external drinking water tap and recycled water tap(s) must be positioned on body corporate land.

2.1 Applying for a Water Service

Prior to carrying out any water supply work on the property, a water service application must be made by the builders, property owners or their nominated agents to Ballina Council. The applicant must obtain a copy of this Policy and ensure all plumbing work is undertaken in accordance with this Policy. A Plumber's Information Pack is also available for ease of reference. ~~At the time of the application the Ballina Council's Plumbing Policy for dual water supply must be provided to the applicant. The policy must be provided to the plumber to ensure that the plumbing is done in accordance with the policy and so that all legal requirements are met. To assist a Plumber's information pack has been included (Appendix C).~~

A water service application for the building development will result in both the drinking and recycled water meters being installed at the same time but the water service connection fees will be the same as for non-dual reticulated properties. That is, for dual reticulated residential properties there will only be one drinking water connection fee. The recycled water meter connection will be free of charge.

2.2 Property Service Connections and Water Meters

Upon receipt of a water service application Ballina Shire Council will install both the drinking water meter and the recycled water meter within the property. The meters will be positioned together in one corner of the property that fronts the street. This position is fixed and further fees will apply if an alternative location is required. Please refer to Ballina Shire Council's Water Metering Policy 2017, 2042 and Ballina Shire Council's Backflow Prevention Policy 2012.

2.2.1 Drinking Water Meter

The green coloured drinking water meter will ~~be installed in a meter frame which will~~ incorporate an appropriate backflow prevention device. The meter will be installed above ground ~~with a capped end on the discharge side. This meter will be~~ and located closest to the side property boundary.

2.2.2 Recycled Water Meter

The purple coloured recycled water meter will be installed beside the drinking water meter with at least 100mm separation distance between the two meters.

Like the drinking water meter, the recycled water meter will be installed above ground, ~~with a capped end.~~

The recycled water meter coupling threads are different to those on the drinking water meter to prevent interchange of the meters.

2.3 Household Plumbing

When carrying out plumbing in the dual water supply area, it should be remembered that the intention of the dual water supply is to conserve our drinking water resources by maximising the use of recycled water.

2.3.1 Drinking Water Supply Plumbing

The installation of drinking water services on dual reticulated residential properties is to be executed by, or supervised by, a license plumber in a usual manner in accordance with the NSW Plumbing and Drainage Act (2011), Plumbing Code of Australia, Australian/New Zealand Standards (AS/NZ) 3500. Including the following:

- Drinking water must not be connected to toilets and cold water washing machine tap
- One and only one drinking water outdoor tap must be provided (complete with hose connection vacuum breaker). ~~And must be~~ must be the nearest tap to the swimming pool, if a swimming pool has been installed.

- Drinking water piping must not be installed within 100mm above ground or 300mm below ground of any parallel recycled water plumbing
- No cross-connections between drinking and recycled water supply systems are permitted at any point in the system
- If a rain water tank is installed on the property no cross-connection between the tank supply and drinking water supply is permitted. (Please see indicative single property service installation (Appendix D))

Notes on the single outdoor drinking water tap:

The single outdoor drinking water tap must be located nearest the pool, even if the pool is constructed afterwards. This means the tap may need to be relocated during construction of the pool to be suitable.

A strata/body corporate or similar style development may have one or more additional outdoor drinking water taps in common use areas depending on the nature of the proposed uses from those taps, to be approved by Council on a case-by-case basis.

There must be one tap per dwelling/water meter, which allows for two taps for dual occupancies, secondary dwellings and the like, but does not apply in units and apartments that have no outdoor fixtures.

2.3.2 *Recycled Water Supply Plumbing*

The installation of recycled water services on dual reticulated residential properties is to be executed by, or supervised by, a licensed plumber in the usual manner in accordance with the NSW Plumbing and Drainage Act (2011), Plumbing Code of Australian/New Zealand Standard (AS/NZ) 3500. Including the following:

- Fixtures and fittings above and below ground must be clearly and permanently marked and labelled with Recycled Water – DO NOT DRINK in accordance to the Australian/New Zealand Standards (AS/NZ 3500).
- Any underground recycled water pipeline must not be installed within 300mm of a parallel drinking water supply pipeline. The pipes may be laid in the same trench provided the 300mm separation is maintained. This separation can be reduced to 100mm when the pipes are located above ground.
- Above ground recycled water hose taps must be lilac in colour, have approved fittings with left handed threads on the outlets and have removable handles as per AS/NZ 3500.
- Dual reticulated properties must have at least one external recycled water tap but can have as many more than one as desired.
- All toilets and cold water washing machine taps must be connected to the recycled water supply line.

2.3.3 Grey Water Plumbing

If grey water is captured on a dual reticulated property it can only be re-used for outdoor purposes **and in accordance with the NSW Guidelines (as applicable)**. No cross connections between grey water supply and recycled water supply are allowed.

2.3.4 Rainwater Tank Plumbing

If a rain water tank is installed on the property the rainwater supply shall be independent and have no interconnection or top up device from the drinking water or recycled water supply. Rainwater can only be used for outdoor purposes, **including pool-filling and top up** and tanks may only have one outdoor tap.

2.4 Approved Plumbing Supplies

All recycled water fittings and fixtures used must display the relevant compliance mark from the Standards Australia Product Approval Process as shown below. Recycled water fixtures and fittings must be labelled with warning signs as outlined in Appendix E.



Standards Mark compliance



Type Tested compliance



WaterMark compliance

2.5 Inspections

New development inspections will be carried out to ensure that proper plumbing standards are maintained. In dual water supply areas these inspections incorporate special requirements that apply to those areas. In addition, ongoing inspections will occur in dual water supply areas in accordance with Ballina Shire Council's Dual Water Supply Policy to ensure that the two water supplies are used for their intended and approved uses.

2.5.1 During Plumbing Work

Five (5) separate inspections must be completed by Ballina Shire Council's Building Services after each of the **following** stages; ~~of work set out below have been completed:~~

Stage	Description
1.	Water meter to dwelling
2.	Internal underfloor plumbing and drainage prior to cladding

3. Internal rough-in water supply network
4. External plumbing and drainage prior to backfilling
5. Final commissioning and testing

All inspections must be carried out by an authorised Ballina Shire Council representative and cannot be conducted by private accredited certifiers.

The inspections are carried out to ensure that usual proper plumbing standards are maintained and that the special dual water supply requirements are being adhered to.

It is an important measure to protect public safety that occupation of a dwelling does not occur until a satisfactory inspection has occurred after the final commissioning and testing stage of works.

Plumbers are required to contact Ballina Shire Council's Building Services on (02) 6686 1415 at least 24 hours ahead of the required inspections.

2.5.2 *After the Plumbing Work is completed*

The plumber who has carried out the work on the property is to complete the NSW Office of Fair Trading's Certificate of Compliance to Ballina Shire Council before occupation of any premises to which this policy applies (Appendix F).

Ongoing cross connection inspections will be conducted by Ballina Council at least once every five years on every dual reticulated residence. The inspections will be carried out systematically by Council at no cost to the property owner (unless a cross connection is detected.)

If a cross connection is identified during the mandatory inspection, the owner will be responsible for having the problem rectified by a licensed plumber and also for paying Council's costs in inspecting and retesting the plumbing during and following remedial work.

In addition, repairs / replacements required as a result of minor non-conformances not related to a cross connection are the responsibility of the owner to rectify, for example, non-compliant and or poorly identified signage, fittings and markers.

Home owners are encouraged to undertake cross connection checks using the seven step cross connection check for dual water supply properties (Appendix G).

It is the responsibility of the owner and resident to inform all visitors of the correct use of recycled water.

2.5.3 *Inspections at change of property ownership*

In the event of sale of a dual reticulated property, a separate 'pre-sale' cross connection audit must be done by Ballina Council's

Building Services section. Future home owners are informed of this requirement by the planning certificate issued by Council pursuant to Section 149(2) of the Environment Planning and Assessment Act 1979 which is required by law to be provided to purchasers as part of a contract for sale. Owners or an owner's agent must apply to Council for this certificate.

An inspection is only required where any previous inspection is greater than three months old.

2.6 *Health and Safety*

All work conducted on a recycled water system must be carried out with caution. It is important that the recycled water is only used for the purposes listed in section 3.2 of this policy. During construction, all employees, contractors and suppliers are to ensure that recycled water is not used for drinking or personal hygiene purposes.

Recycled water looks and smells the same as drinking water so care must be taken to prevent accidental use for the incorrect purpose.

In the event of the detection of a cross-connection between the drinking water and Recycled Water Council will immediately disconnect the recycled water supply at the property and issue an improvement notice, as soon as possible. This notice will be issued to the owner and any non-owner resident (where applicable).

Notices of compliance will also be issued to the owner and any non-owner resident (where applicable) by way of an identifying sticker in the electrical meter box. This certificate is valid for five years so long as no unapproved / non-compliant plumbing works have occurred and the property has not been sold.

2.7 *Application of this Policy to non-residential premises*

2.7.1 *Without a User Agreement*

Where the proposed uses of water (drinking and recycled) are generally consistent with domestic uses (see 1.2 above) then the plumbing requirements above apply as far as they reasonably can apply. Examples may include – warehouses, factory outlets, cafés etc.

2.7.2 *With a User Agreement*

Where the uses differ substantially from domestic uses of the applicant is responsible for non-domestic infrastructure (pumps, water mains etc) or Non-Treatment Barriers are required (as is the case for recycled water from the Alstonville, Wardell and Ballina Recycled Water Treatment Plants) then the plumbing requirements shall be determined by Council on application, and may be reinforced through an individual end-user agreement (binding legal document between user and Ballina Shire Council).

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2.7.3 Applicant to confirm the requirement for a user agreement

The applicant is required to seek confirmation from Council regarding the requirement for a User Agreement prior to the supply of recycled water. The requirement for an end-user agreement will be at the discretion of Council.

2.8 Application of these requirements to re-development / renovation

If BASIX requirements must be met then the plumbing standard applies in full. Otherwise, as far as reasonably practicable these standards shall also apply to re-developments and renovations.

REVIEW

The Dual Water Supply Plumbing Policy is to be reviewed **four yearly** annually.

APPENDIX A – DUAL WATER SUPPLY MAPPING



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APPENDIX B – NSW FAIR TRADING – NOTICE OF WORK FORM

	Regulator's Copy
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NOTICE OF WORK
for Plumbing and Drainage Work
within the Ballina Shire Council Area
Please supply requested information correct and neatly

PROPERTY & OWNER DETAILS					
House No.	Street		Suburb	Postcode	
Lot No.	DP No.	PDP or SP	Nearest Cross Street	Municipality/Shire	
Owner's Name			Full Address		
LICENSEE'S DETAILS					
Full Name		Address for Notices			
Phone No.	Qualified Supervisor No.		Expiry Date		
			DD	MM	YYYY
	Licence No.		Expiry Date		
			DD	MM	YYYY
WORK OF WATER SUPPLY please tick appropriate boxes					
Give full Description of Work carried out:					
<input type="checkbox"/> Install Water Supply					
<input type="checkbox"/> Install Irrigation system					
<input type="checkbox"/> On-site Alternative Water Services					
<input type="checkbox"/> Install/Commission/Maintenance of Thermostatic Mixing Valve					
<input type="checkbox"/> Connection to water supply					
<input type="checkbox"/> Install, alter, disconnect or remove a backflow prevention device					
<input type="checkbox"/> Recycled Water Services					
<input type="checkbox"/> Other					
PLUMBING WORK TO COMPLY WITH <input type="checkbox"/> AS/NZS3500 <input type="checkbox"/> ALTERNATIVE SOLUTION <input type="checkbox"/> COMBINED					
<input type="checkbox"/> BALLINA SHIRE COUNCIL DUAL WATER SUPPLY POLICY					
WORK OF SANITARY PLUMBING/DRAINAGE AND SUPPLY DRAINAGE PLAN					
Give full description of work carried out:					
<input type="checkbox"/> Carry out work of sanitary plumbing/drainage					
<input type="checkbox"/> Connection to Sewer					
<input type="checkbox"/> Sewer Disconnection					
<input type="checkbox"/> Carry out Trade Waste Drainage					
<input type="checkbox"/> Other					
DRAINAGE WORK TO COMPLY WITH <input type="checkbox"/> AS/NZS3500 <input type="checkbox"/> ALTERNATIVE SOLUTION <input type="checkbox"/> COMBINED					
SEWERAGE/WATER SERVICE INSPECTION FEE					
Date Fee Paid		Date of Commencement of Work		Estimated Date of Completion	
DD	MM	YYYY	DD	MM	YYYY
Amount		Reference No.		Contractors Signature	
\$					

1. This is your notification that you, as the Responsible Person, intend to carry out the work described on this NOTICE OF WORK, in accordance with provisions of the Regulators Act, Regulations, Codes and Standards.
2. This NOTICE TO WORK must be produced on the request of any person duly authorised by the REGULATOR. The corresponding numbered CERTIFICATE OF COMPLIANCE must be submitted by you to the Local Regulator on the completion of a FINAL INSPECTION on the above work.

APPENDIX C – PLUMBER'S INFORMATION PACK (REMOVED FROM POLICY AND TO PLACED ON WEBSITE)Ballina Shire Council Dual Water Supply Plumbing Policy**Plumber's Information Pack****THIS INFORMATION MUST BE HANDED TO THE PLUMBER**

The following information must be read prior to commencement of plumbing installations in Ballina Shire Council Dual Water Supply Areas.

1. Only licensed plumbers may carry out or supervise installations and repairs of dual water supply services.
 2. Water service applications are made to Ballina Shire Council in the standard manner.
 3. Water service fees for the dual water supply area are the same as for the rest of Ballina Shire.
 4. Ballina Shire Council will be responsible for installation of water meters for both drinking water and recycled water. Both meters will be installed at the same time.
 5. Recycled and drinking water service installations must be carried out in accordance with the *Ballina Shire Council Dual Water Supply Plumbing Policy*. Plumbers should familiarise themselves with this Policy. The requirements are summarised in the attached *Plumber's Quick Checklist*.
 6. Plumbers must ensure that recycled water is not used for drinking or personal hygiene purposes.
 7. The attached *Single Property Water Service Installation* diagram (see Appendix D) gives a sample plumbing layout. Plumbers should give particular attention to the location of the single outdoor drinking water tap taking account of outdoor uses that recycled water is not approved for.
 8. Inspections by a Council Inspector are required for internal plumbing after each of the following stages:
 - 8.1 - Water meter to dwelling
 - 8.2 - Internal underfloor plumbing and drainage prior to cladding
 - 8.3 - Internal rough-in water supply network
 - 8.4 - External plumbing and draining prior to backfilling
 - 8.5 - Final commissioning and testing
- The plumber must complete the *Fair Trading Compliance Certificate (Appendix F)* for *Ballina Shire Council Dual Water Supply areas* and give it to the Inspector before the Final Inspection.
9. This certificate can be found attached to the Notice of Works in the following address http://www.ballina.nsw.gov.au/cp_themes/default/page.asp?p=DOC-IQW-88-43-85

Please refer to the attached sheets prior to commencing plumbing work:

- *The Plumber's Quick Checklist*
- *Single Property Water Service Installation Diagram*
- *Compliance Certificate for Plumbing in Areas with Dual Water Supply*

Ballina Shire Council Dual Water Supply Plumbing Policy

The information sheets are intended as a summary only. Detailed information is provided in the *Ballina Shire Council Dual Water Supply Plumbing Policy*.

The Plumbers Quick Checklist for Plumbing in Areas with Dual Water Supply

Dual water supply plumbing inspections by Council.

The following inspection hold points **MUST** be adhered to:

- Property service pipe from the water meter to the building (underground pipes)
- Internal plumbing inspection before wall sheeting is installed (rough-in)
- Final Plumbing Inspection
(The plumber must complete the *Fair Trading, Compliance Certificate (Appendix F)*, for *Ballina Shire Council Dual Water Supply areas* and give it to the Inspector before the Final Inspection.)
- ONLY ONE** external drinking water tap on each property. This tap **MUST** be fitted with a hose connector vacuum breaker and **MUST** have a "Drinking Water" sign fixed nearby.
- Recycled water **MUST** be connected to all WC's and Washing machine cold water taps. These connections are the **ONLY** internal recycled water outlets permitted.
- Both internal and external recycled water piping **MUST** be lilac in colour.
- Underground recycled water services **MUST NOT** be installed within 300mm of any parallel drinking water service (100mm for above-ground pipes).
- Approved warning tape **MUST** be attached to all underground pipes.
- Properties **MUST** have **AT LEAST ONE** external recycled water tap.
- Recycled hose taps **MUST** have left hand threaded outlets and removable lilac coloured handles.
- Warning signs **MUST** be fixed near aboveground taps.
- Recycled Water Plumbing **MUST NOT** be cross-connected with drinking water plumbing.
- If the property has a rainwater tank **NO** connection to either to the recycled or drinking water supplies.
- Provide a test point at the water isolation valve for the dishwasher connection.

During construction, all employees, contractors and suppliers are to ensure that recycled water is not used for drinking or personal hygiene purposes.

Ballina Heights Dual Water Supply Plumbing Policy

Recycled water quality for residential use is specified by the *Australian Guidelines for Water Recycled and Managing Health and Environmental Risks (Phase 1) (2006)*. These guidelines set the minimum water quality requirements that must be met in order to safeguard the health and safety of recycled water users.

Physical Appearance

Recycled water looks and smells just like drinking water and without scientific tests, it is very difficult to tell the difference between the two.

Physical Quality

The physical properties of recycled water such as boiling point, pH and turbidity are similar to those of drinking water.

Chemical Quality

Recycled water undergoes a series of complex treatment processes to produce the final water which meets the requirements identified in the *Australian Guidelines for Water Recycled and Managing Health and Environmental Risks (Phase 1) (2006)*. A final disinfection process using chlorine is carried out in the same manner as drinking water treatment. The chlorine concentration of recycled water in residential areas is less than 0.5 mg/L.

Recycled water has a higher level of salt and nutrients than drinking water.

The levels of heavy metals and pesticides in recycled water will be lower than the requirements set by the NSW Environment Protection Authority.

Microbial Quality

The microbial quality of the water entering the distribution network meets the following requirements set by the NSW Guidelines:

- Faecal Coliforms: < 1 per 100 mL
- Total Coliforms: < 10 per 100 mL
- Viruses: < 2 per 50 L
- Parasites: < 1 per 50 L

Dual Water Supply Compliance Certificate Checklist**Instructions to the plumber:**

- In signing the Compliance Certificate (Appendix F) plumbers are certifying that they have inspected the plumbing and carried out the checks as detailed below and that the plumbing complies with all aspects of the checks and Australian Standards 3500.1 and Ballina Shire Council's Recycled Water Policy.

Compliance Checklist for New Dwellings, Alterations and Additions**Testing and Commissioning Procedure**

- a. The non-drinking water service shall be tested in accordance with this Section. It shall also be tested for cross-connection, prior to commissioning, as follows:
- b. Turn off the drinking water supply to the property at the meter (drinking water meter and recycled water meter will be different colours). The recycled water supply to remain on.
- c. Turn on all sink, laundry trough, bath and shower taps (both hot and cold) one by one. All taps should run dry after a short period of time.

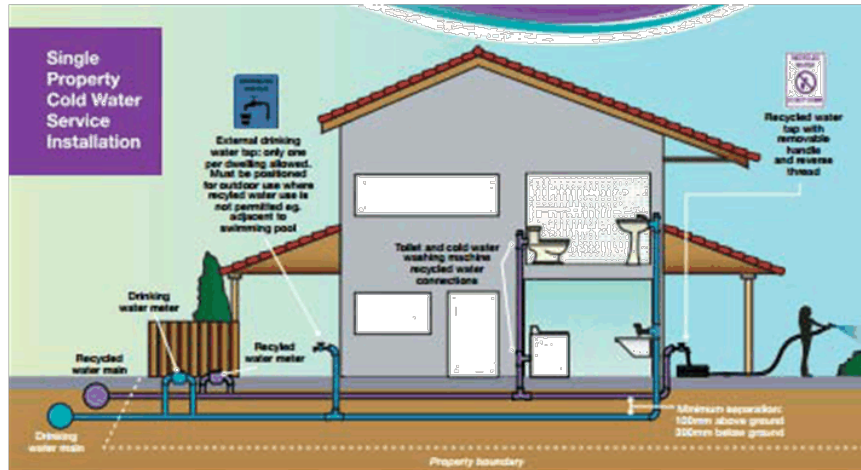
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- d. After taps have run dry, flush all toilets. The toilets and washing machine cold water taps should refill/run as normal, provided they are connected to the non-drinking water service.
- e. Turn on all outside taps. The external drinking water tap should run dry. Taps that continue to run are connected to the recycled water service and should be clearly identified with appropriate warning signs.
- f. To check appliances within the home such as dishwashers and refrigerators, turn off the recycled water service and turn the drinking supply back on. Run the recycled water service dry via the outside taps or toilet flushing.
- g. Turn on the internal appliances. If the appliances do not fill, they are connected to the incorrect supply.
- h. Turn recycled water service back on at the meter. Turn on the tap connected to the recycled water service that is located furthest away from the meter.
- i. Turn the meter tap back on slowly so that all air will be purged from the pipeline while it is being recharged.
- j. If the property has a rainwater tank check that there is **NO** connection between the tank outlet to either the drinking or recycled water supplies.




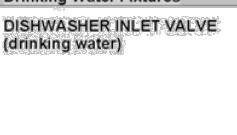
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APPENDIX D – SINGLE PROPERTY SERVICE INSTALLATION



APPENDIX E – MANDATORY PLUMBING AND SIGNAGE REQUIREMENTS

Mandatory Plumbing and Signage Requirements:

Recycled Water Fixtures	Plumbing requirements	Signage Requirements
<p>Outdoor Recycled Water Hose Tap Outlet</p>  <p>Figure #1</p>	<ul style="list-style-type: none"> • Must be connected to recycled water supply and all associated pipework must be lilac. • Must have a removable handle. • Must be coloured powdered coated purple (no darker than P24 Jacaranda or P12 Purple and no lighter than P23 Lilac). • Must have a standard inlet connecting thread and non standard hose connection outlet (left-hand thread). 	<p>All recycled water outdoor taps must be clearly marked with the purple and white coloured 'warning sign' seen in figure #1.</p>
<p>Washing Machine Cold Water Outlet</p>  <p>Figure #2</p>	<ul style="list-style-type: none"> • Must be connected to recycled water supply and all associated pipework must be lilac. 	<p>All cold water washing machine taps must be clearly marked with either a 'warning ring' as seen in figure #2 or the outdoor tap sign in Figure #1.</p>
<p>Toilet Cistern Isolation Valve</p>  <p>Figure #3</p>	<ul style="list-style-type: none"> • Must be connected to recycled water supply and all associated pipework must be lilac. 	<p>All toilet cistern isolation valves must be clearly marked with the 'warning sign' as seen in figure #3.</p>
<p>Drinking Water Fixtures</p> <p>DISHWASHER INLET VALVE (drinking water)</p>  <p>Figure #4</p>	<p>To allow for ease of cross connection checks all dishwashers must be installed with a test point at the isolation valve OR connected externally to the cold water inlet isolation valve that connects the kitchen taps.</p>	<p>No signage required for any drinking water devices.</p>

APPENDIX F – NSW FAIR TRADING – CERTIFICATE OF COMPLIANCE FORM



Regulator's Copy

CERTIFICATE OF COMPLIANCE
For Plumbing and Drainage Work
within the Ballina Shire Council area
Please supply requested information correct and neatly.

PROPERTY & OWNER DETAILS			
House No:	Street:	Suburb:	Postcode:
Lot No:	DP No:	PDP or SP:	Nearest Cross Street:
Municipality/Shire		Owner's Name:	
Full Address			
LICENSEE'S DETAILS			
Full Name		Address for Notices	
Phone No:	Qualified Supervisor No:	Expiry Date	
		DD MM YYYY	
	Licence No:	Expiry Date	
		DD MM YYYY	
WORK OF WATER SUPPLY please tick appropriate boxes			
Give full Description of Work carried out:			
<input type="checkbox"/> Install Water Supply			
<input type="checkbox"/> Install Irrigation system			
On-site Alternative Water Services:			
<input type="checkbox"/> Install/Commission/Maintenance of Thermostatic Mixing Valve			
<input type="checkbox"/> Connection to water supply			
<input type="checkbox"/> Install, alter, disconnect or remove a backflow prevention device			
<input type="checkbox"/> Recycled Water Services			
<input type="checkbox"/> Other			
PLUMBING WORK TO COMPLY WITH		<input type="checkbox"/> AS/NZS3500	<input type="checkbox"/> ALTERNATIVE SOLUTION
		<input type="checkbox"/> BALLINA SHIRE COUNCIL DUAL WATER SUPPLY POLICY	<input type="checkbox"/> COMBINED
WORK OF SANITARY PLUMBING/DRAINAGE AND SUPPLY DRAINAGE PLAN			
Give full description of work carried out:			
<input type="checkbox"/> Carry out work of sanitary plumbing/drainage			
<input type="checkbox"/> Connection to Sewer			
<input type="checkbox"/> Sewer Disconnection			
<input type="checkbox"/> Carry out Trade Waste Drainage			
<input type="checkbox"/> Other			
DRAINAGE WORK TO COMPLY WITH		<input type="checkbox"/> AS/NZS3500	<input type="checkbox"/> ALTERNATIVE SOLUTION
		<input type="checkbox"/> BALLINA SHIRE COUNCIL DUAL WATER SUPPLY POLICY	<input type="checkbox"/> COMBINED
SEWERAGE/WATER SERVICE INSPECTION FEE			
Date Fee Paid:	Date of Commencement of Work:	Estimated Date of Completion:	
DD MM YYYY	DD MM YYYY	DD MM YYYY	
Amount	Reference No:	Contractors Signature:	
\$			

- In respect of authorised work carried out by me at the above mentioned property I certify that:
 - The work corresponds to the specifications in the notice of work.
 - The completed work has been tested as required by the Regulator and has passed such test.
 - Where required by Section 11 of the Plumbing and Drainage Act 2011, I have given written notice of any identified pre-existing defective plumbing and/or drainage work. Yes N/A
 - The work complies with the relevant Acts, Regulations, Codes and Standards.
 - The work was completed on _____ Contractors Signature: _____
- If any defect is found in the work carried out by me within a period of two (2) years or within the time specified by Regulator, from the date of the final inspection, and the Regulator for Plumbing and Drainage certifies by written notice that in their opinion the defect is due to faulty workmanship or defective materials, then I undertake to rectify such work at my sole expense, if so directed by the Regulator within the time specified by the Regulator.

APPENDIX G – SEVEN STEP CROSS CONNECTION

1. Turn off drinking water supply at the property boundary and rainwater tank pump and/or valve.
2. Turn on all internal taps. Taps should run dry.
3. Flush all toilets. Toilets should refill if connected to the recycled water supply.
4. Turn on all external taps. Any external potable water taps should run dry. Taps continuing to run are connected to recycled water supply and should be coloured purple and marked with appropriate signs
5. Turn off recycled water supply and turn on drinking water supply and rainwater tank pump and/or valve. Run recycled water supply dry via external taps or toilet flushing.
6. Turn on internal drinking water supply fixtures. Fixtures that do not fill are wrongly connected to the recycled water supply.
7. Turn on recycled water supply. Slowly turn on tap connected to recycled water supply that is located furthest from meter. This will purge all air from the pipeline while it is being recharged.

For more information on this process or to report an incorrect connection, contact Ballina Council on 6686 444.