



Date: August 2014

Backflow Prevention Containment

Successes and Challenges in Western Australia

watercorporation.com.au

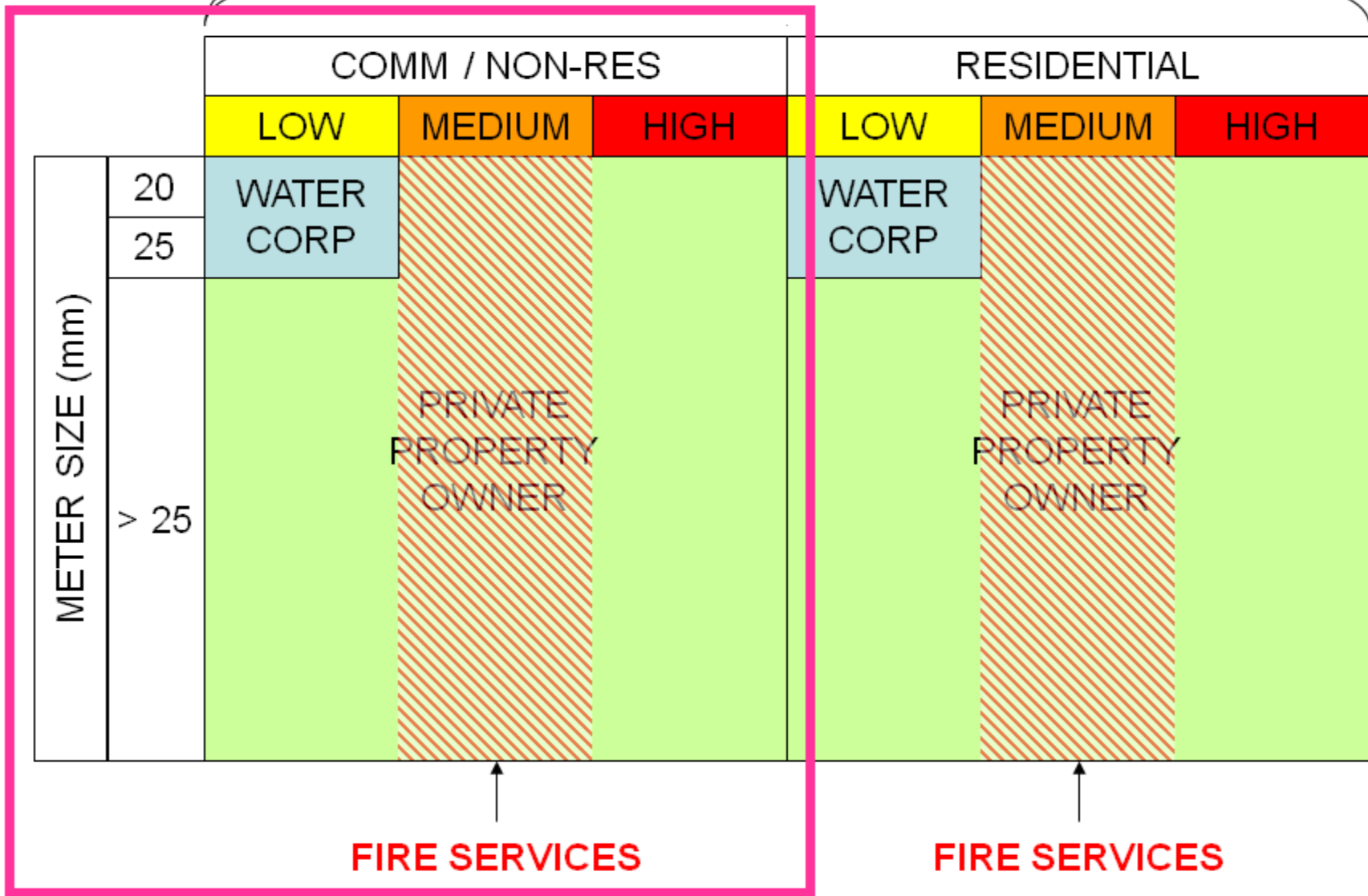
FRESH WATER THINKING  WATER
CORPORATION

Boundary Containment

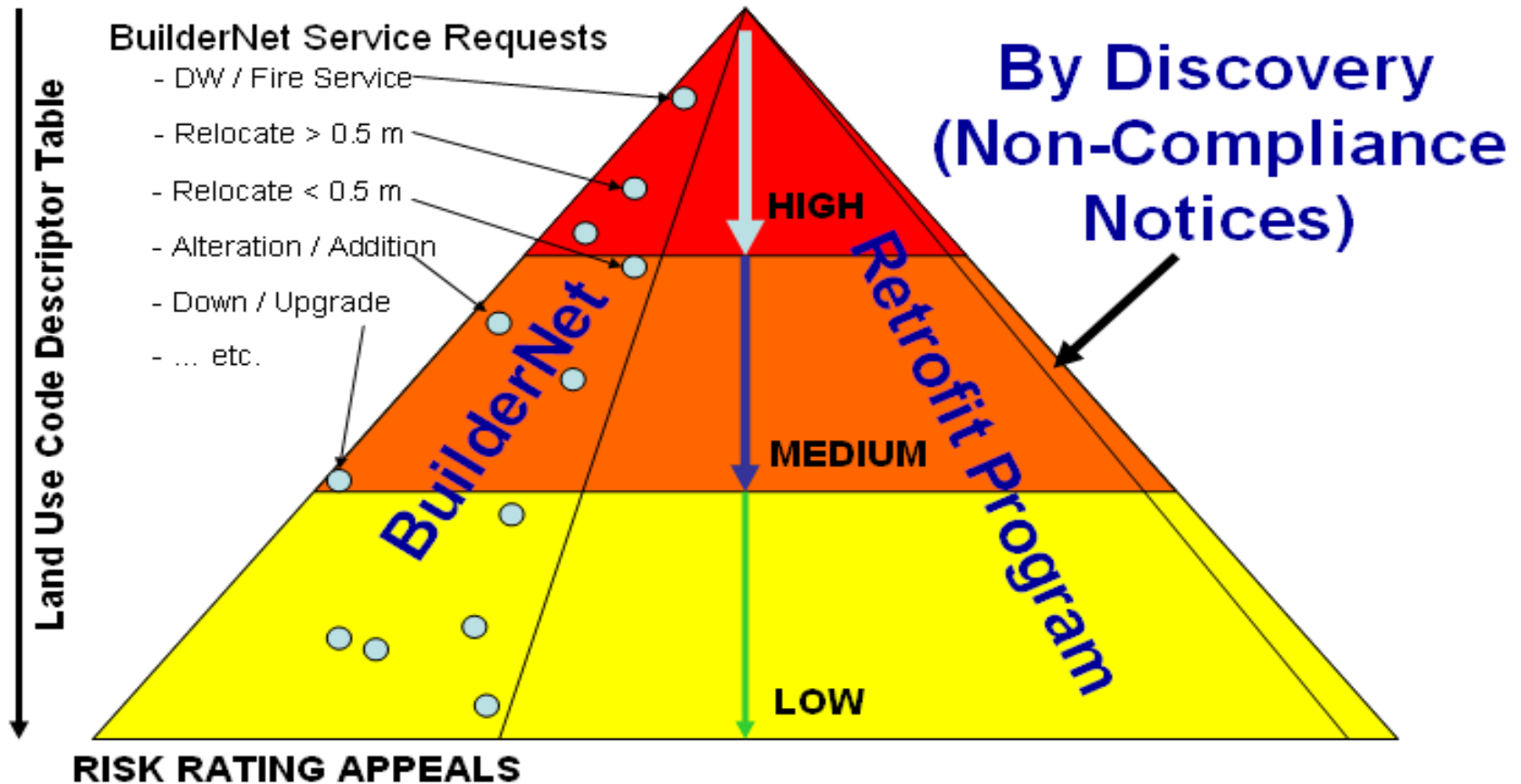
- Began May 2010
- Triggered through a Building or Service application
- Using AS3500, a risk has been assigned to each Land Use Code
- If a property's specific activity is already known the risk rating may change (e.g. Trade Waste)
- Condition of approval attached to application

Land Use Codes

LUC Description	Risk	Notes
ABATTOIR	High	Known Risk
ABORIGINAL COMMUNITY	Low	If I.W. is present then default to high
ADD SERVICE IND	High	Unknown practice
ADD SERVICE NON RES	High	Unknown practice
ADD SERVICE RES	Low	If I.W. is present then default to high
AGED HOME	High	Unknown practice
AGED UNIT	Low	If I.W. is present then default to high
BORE SITE	High	Known Risk
AGRICULTURAL COLLEGE	High	Known Risk
AIRPORT	High	Known Risk
AMBULANCE DEPOT	Low	If I.W. is present then default to high
AMENITIES	Low	If I.W. is present then default to high
ANIMAL POUND	High	Known Risk
APARTMENT HOUSE	Low	If I.W. is present then default to high
APIARY	Low	If I.W. is present then default to high
ARCHBISHOP RES	Low	If I.W. is present then default to high
ARMY ESTABLISHMENT	High	Known Risk
ART CENTRE	High	Unknown practice
ART GALLERY	Low	If I.W. is present then default to high
AUCTION ROOMS	Low	If I.W. is present then default to high
BADMINTON COURTS	Low	If I.W. is present then default to high
BAKERY	Medium	If I.W. is present then default to high
BAKERY, RESIDENCE	Medium	If I.W. is present then default to high
BALLROOM	Low	If I.W. is present then default to high
BANK	Low	If I.W. is present then default to high
BANK, RES	Low	If I.W. is present then default to high
BASKETBALL CRTS	Low	If I.W. is present then default to high



Overview



NOTE: Area of triangles not to scale for number of services in each category.

Building Application

- Backflow approval sticker
- Backflow information sheet with applicable risk rating
- Plumber's information sheet
- Letter sent 1st of the month following the application approval date to the property owner/agent identifying that a backflow protection requirement has been placed on the property as a result of the recent building application approval

BuilderNet ID Number

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Property Account Number

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Property Address

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The contamination risk assessment rating for this property is deemed as:

HIGH RISK

You must install a high risk rated backflow prevention device at the boundary to all provided drinking water services (all fire services require a medium rated device).

The following backflow prevention conditions apply to this building approval if plans were submitted under *S148* of the *Metropolitan Water Supply, Sewerage and Drainage Act 1909*, or *S43A* of the *Country Areas Water Supply Act 1947*, or *S41A* of the *Country Towns Sewerage Act 1948*.

1. **If the property is connected or proposed to be connected to a Water Corporation drinking water supply main**
 - 1.1. A high risk backflow prevention device must be installed as the Water Corporation has assessed the property and/or proposed development as presenting a high risk of contamination to its drinking water supply system.
 - 1.2. The device is to be selected and installed in accordance with Australian Standard 3500.1:2003, and meet the requirements of:
 - 1.2.1. Water Corporation Backflow Prevention Policy
 - 1.2.2. Where the backflow prevention device is an air gap or break tank – Australian Standard 2845.2:1996; or
 - 1.2.3. Any other backflow prevention device – Australian Standard 2845.1:1998.

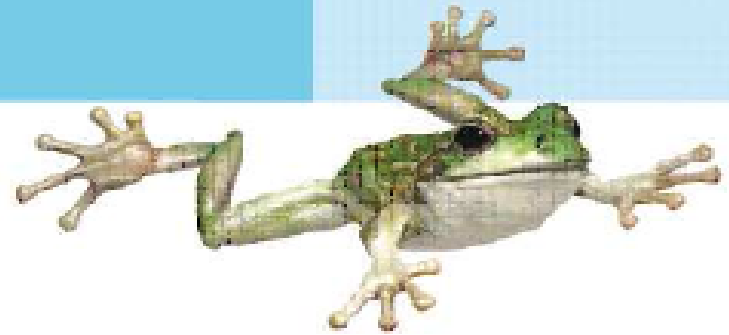
Note: Regular testing and maintenance of backflow prevention devices is required to be undertaken pursuant to the *Metropolitan Water Supply Sewerage and Drainage By-laws 1981* and the *Country Areas Water Supply By-Laws 1957*.

2. **General**

All plumbing works connected to the Water Corporation's services must be performed by a licensed plumber and conform to applicable legislation and standards. As this proposal may affect the existing property service pipes, their location must be verified prior to construction.

Any alterations to this plan will require the plan to be re-submitted to the Water Corporation. Failure to do so may result in a penalty and/or removal of any structure. These backflow prevention conditions are in addition to any other conditions that apply to this building approval.

Important Information



BuilderNet® Application Number: 143210

Date: 01/03/2011

Property Account Number: 9009947402

Property Address: Lot 942 / 11 ELVIRE CT CANNING VALE 6155

Based on the information provided in your proposed or connected development service application, your property has been assessed as presenting a potential **HIGH LEVEL RISK** to the water services managed by the Water Corporation.

This sheet is to inform you of the boundary backflow prevention requirements for your development. An information sheet for your plumber is also included.

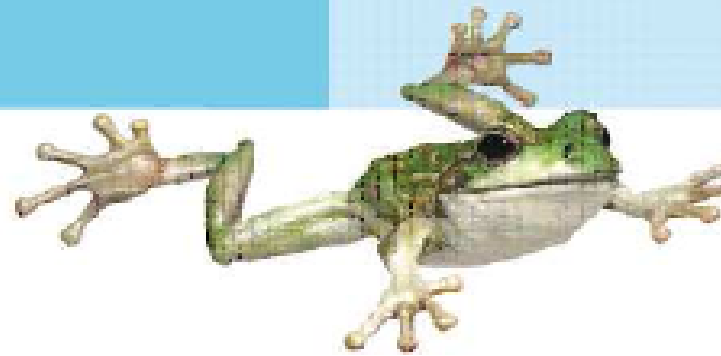
You are required to install (at the property boundary) a suitable backflow prevention device to ALL new and any existing drinking water services that shall be connected to or are presently connected to the water supply.

If your service request also involves fire services then you are also required to install (at the property boundary) a suitable backflow prevention device to any of these new or existing fire services that formed part of this services request. Any existing fire service *that is not involved in this service request* will not require backflow prevention protection at this stage in time.

All fire services require a medium rated device. If a mechanical valve type device is installed for the fire service (and this fire service is not metered) then it must have the capability to be fitted with a detector assembly.

Please note the installation of some forms of backflow prevention devices will reduce water pressure and flow rate down stream of the device. If pressure and flow rate are critical to the activities on the property it is recommended that you discuss these issues with your licensed plumbing contractor or hydraulic design consultant before they proceed with their detailed hydraulic design of the internal water service. In particular, they should be

Information for Licensed Plumbing Contractor



BuilderNet® Application Number: 142951

Date: 20/10/2010

Property Account Number: 9009948018

Property Address: Lot 941 / 10 ELVIRE CT CANNING VALE 6155

A service application has been received from your client and this involves connection or reconnection of the development to water services that are managed by the Water Corporation.

This sheet is to inform you of important boundary backflow prevention requirements for the development.

Commercial and industrial facilities present an increased level of risk to drinking water quality. For developments of this type, backflow prevention devices are required on all drinking water service connections located at the boundary.

The Water Corporation has determined that it is a requirement of connection that a backflow prevention device must be installed and comply with the following legislation:

- Metropolitan Water Supply, Sewerage and Drainage By-laws 1981
- Country Areas Water Supply By-laws 1957
- Water Services Licensing (Plumbers Licensing and Plumbing Standards) Regulations 2000

The Water Corporation will inspect the property to ensure ongoing compliance with the backflow prevention policy and legislation.

Only licensed plumbing contractors who are qualified to install, and permitted to test and certify backflow prevention devices are allowed to carry out such works.

The assessed risk of your client's property has already been supplied to your client.

Incidents



Fire Service

Water Meter

Main Office







Training Rooms

Training Area

Incidents – What have we learnt

- One incident can effect many people
- Customer service is everything
- Take another FIO with you to site
- Being clear about what we wanted
- Documenting all conversations
- Many sections get involved
- Be very prepared for any meetings

Current state

- 6113 BuilderNet applications received  1280
- 6419 Boundary devices installed  62%
- 1810 Property inspections  515
- 3411 Customer contacts  1694
- 5225 Emails through inbox  670
- Property device installation compliance  30%
- Annual device testing compliance – Steady 92%

Region	% properties compliant at start of FY	Properties requiring BF device YTD	% properties compliant with BF reqmnt YTD	% increase in properties compliant YTD	Target
Metro	43%	3683	73%	30.5%	12.5%
GA	19%	285	36%	17.3%	12.5%
GS	14%	321	36%	22.2%	12.5%
MW	30%	383	79%	48.3%	12.5%
NW	26%	576	52%	25.5%	12.5%
SW	44%	219	77%	32.5%	12.5%
Total	37%	5467	67%	30.2%	12.5%

Region	Devices at start of FY	Devices YTD	Devices compliant YTD	% compliant	Target	% growth
Metro	2709	4410	4196	95.1%	90%	63%
GA	232	330	269	81.5%	90%	42%
GS	197	403	262	65.0%	90%	105%
MW	204	366	357	97.5%	90%	79%
NW	469	670	550	82.1%	90%	43%
SW	159	240	238	99.2%	90%	51%
Total	3970	6419	5872	91.5%	90%	62%

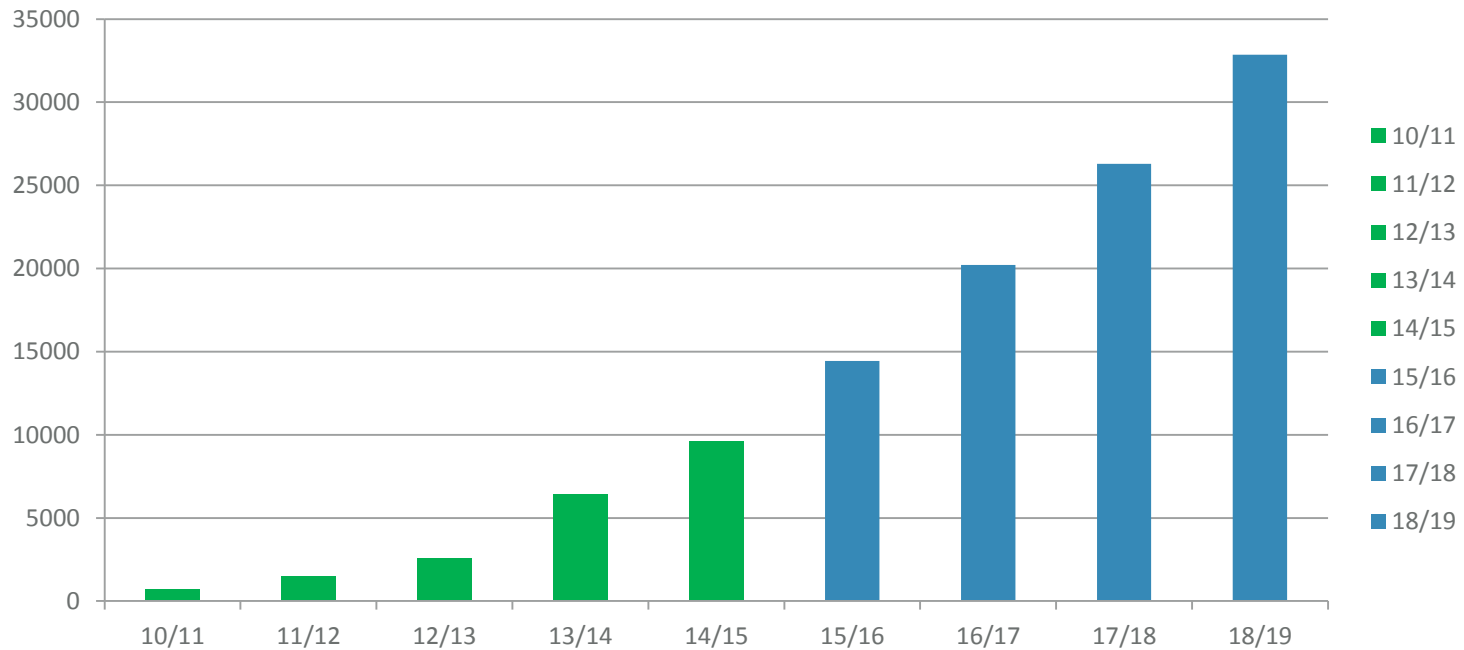
Key factors of success

- Clear and defensible trigger points of requirement
- BuilderNet applicant advised at issue of building licence/service approval and property owner +1 month
- Well defined processes with quality audit programs
- Customer focused – Industry engagement
- Improved planning and scheduling practises
- High level of expertise – acknowledged/trusted by industry
- Highly engaged and performing team

Growth

- The program is really starting to take off

Estimated device growth



Challenges

- Managing steep device growth and maintaining compliance levels
- Administration component of program growing too fast for current substantive FTE numbers
 - Cutting of Midas R5 Funding (self lodgement of TRFs)
- Continual internal/external stakeholder engagement
- 1000 property inspections still in backlog
- Creating flexibility in staff to perform multiple roles while on site
- System integration enhancements

Mission statement

Mission:

- To be relentless in the pursuit of protecting our drinking water supply from the reverse flow of water from a customer's internal water connection.

Vision

- To be recognized as a team that will stop at nothing to provide timely guidance and support to our customers, industry and the community.

Purpose:

- To enable individuals and the Water Corporation to meet the specific and ever changing risk exposure to our drinking water facing our customers.
- We are persistent in providing the highest standards in customer service, reliability and look continuously for innovative solutions that are cost effective and sustainable

Four Agreements

- Be impeccable with your word
- Don't take anything personally
- Don't make assumptions
- Always do your best

Questions

