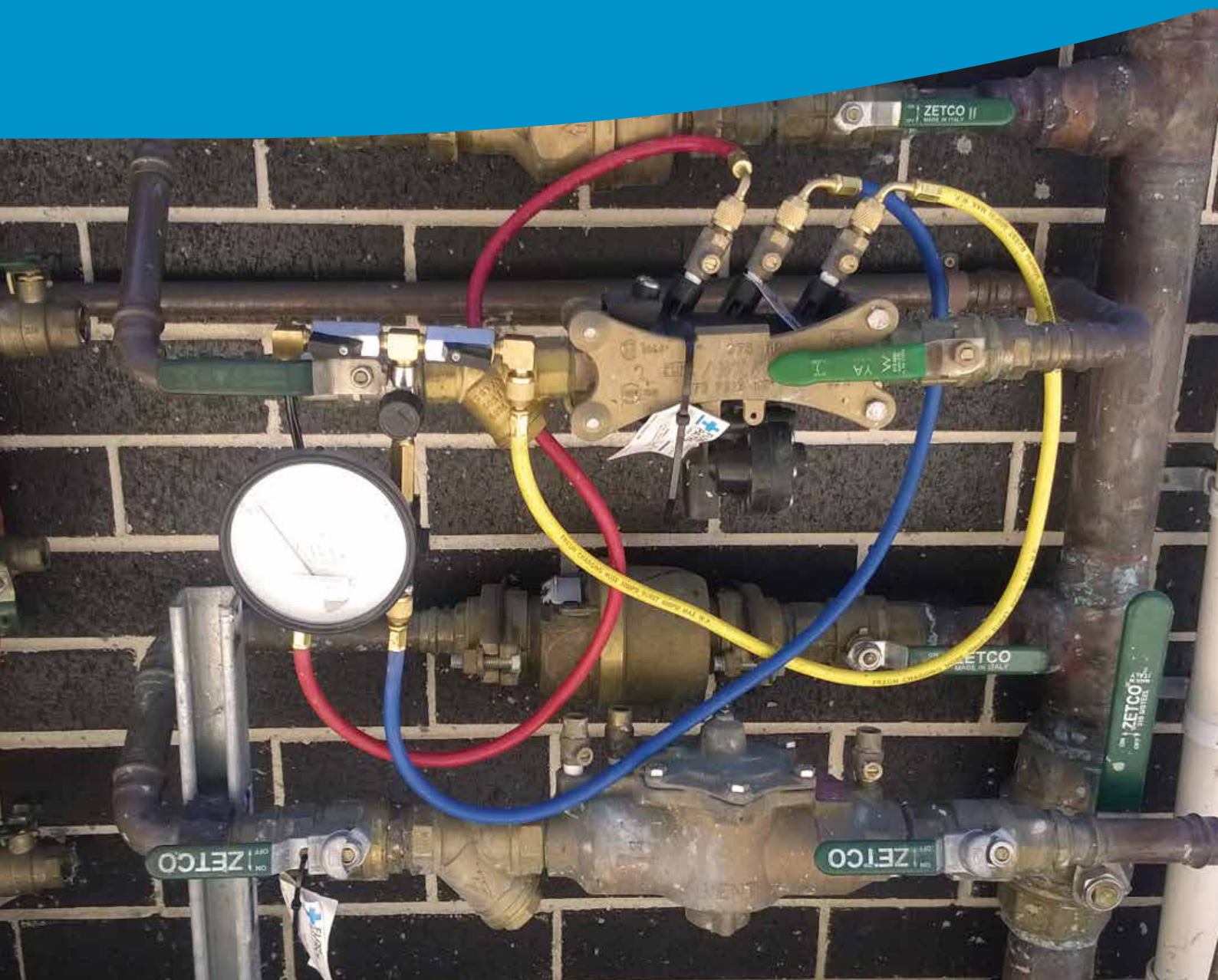
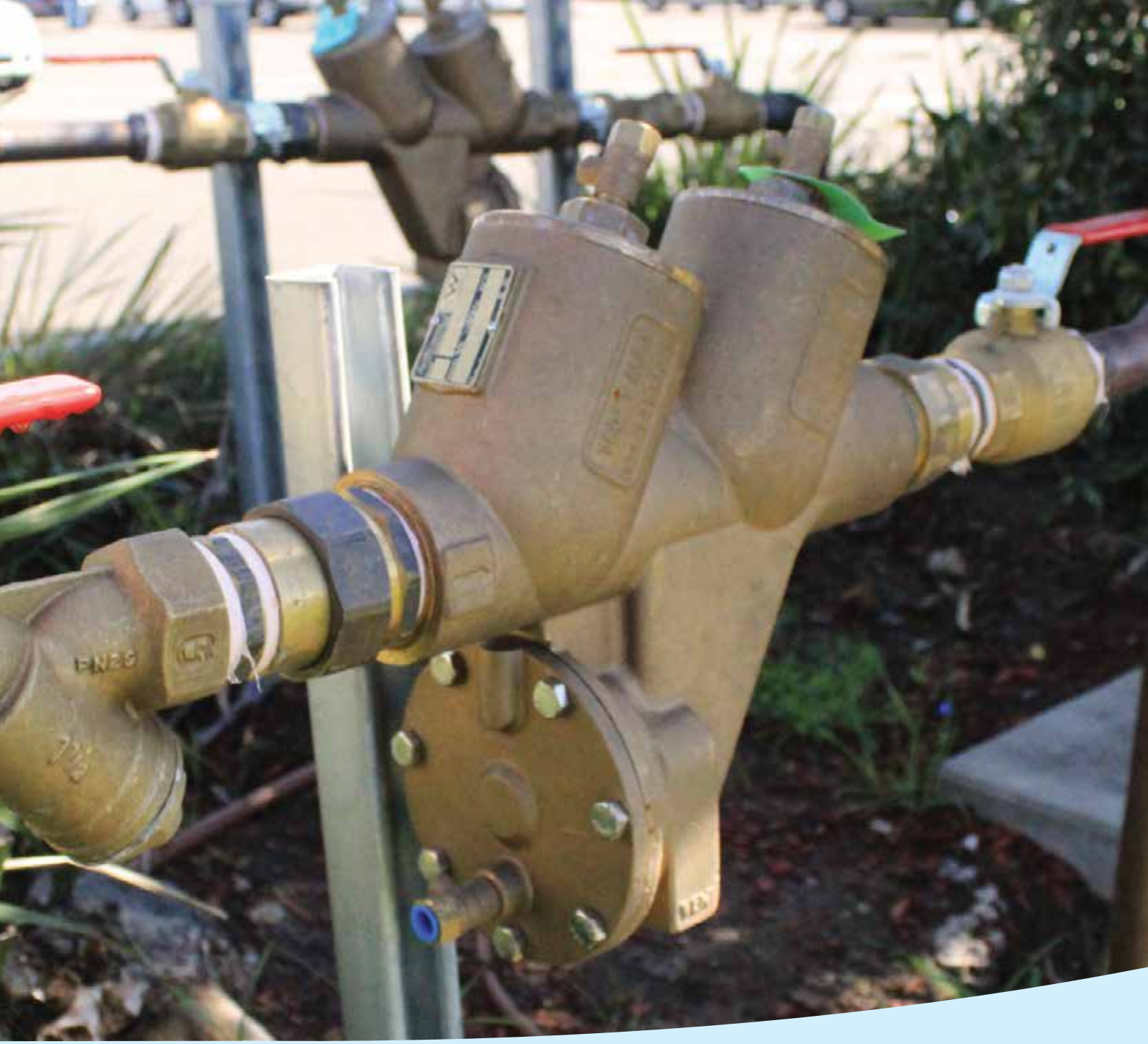
Sydney WATER

Backflow prevention

Information for plumbers





If there are contaminants in the water, backflow can cause serious or even fatal injuries to our customers and yours

Backflow prevention containment protects our water supplies

Backflow is the unintended reverse flow of water from a property back into the drinking water supply. If there are contaminants in the water, backflow can cause serious or even fatal injuries to our customers and yours.

To mitigate this risk, we require every property connected to Sydney Water's drinking and recycled water supplies be fitted with an appropriate level of backflow prevention containment at the property boundary or directly after the master meter/s.

A backflow prevention containment device ensures that if there is a cross connection within a property between drinking water and any source of contamination, the drinking supply will be protected from contamination.

Customers are responsible for installing backflow prevention devices. They must have testable backflow devices tested every year.

All licensed and backflow accredited plumbers have certain responsibilities to their customers and to the community. You must consider these responsibilities when you're installing or testing backflow devices in Sydney Water's area of operations.

Your responsibilities as a licensed, backflow accredited plumber

You must:

- ensure that if you're completing backflow work within our area of operations, you have a backflow web lodgement account. All forms relating to backflow prevention are online
- ensure that only licensed and backflow accredited plumbers complete tests on backflow devices
- give your customer a copy of any reports
- return an audit rectification report online through sydneywater.com.au, if the customer has received an audit defect notice for the installation of a backflow device
- lodge the correct information online through sydneywater.com.au
- ensure all valves, components and pipe work meet all the requirements of *AS 3500* and have WaterMark™ certification
- retest backflow prevention devices after completing any work on your customer's water services.

Lodging backflow reports online

As a plumber, you create Sydney Water records, which are proof of customer compliance with regulations and standards. This means, you must provide us the correct information.

Double-check all of the information on your reports before you submit them.

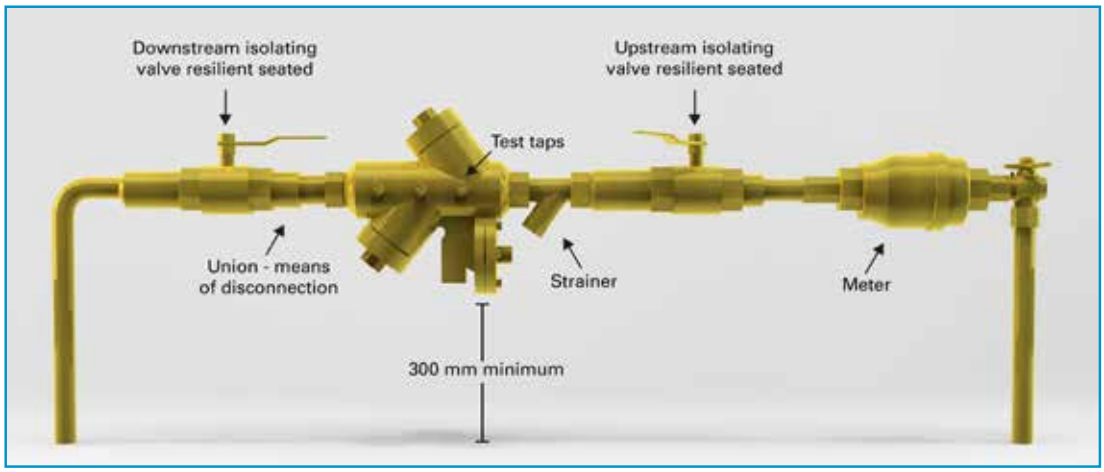
- Ensure your contact details, licence expiry date and testing gauge details are up to date at all times.
- If you see incorrect information on a customer's records, you must tell us by emailing businesscustomers@sydneywater.com.au
- Return correct information on your reports. You must select the correct device purpose (that is zone, individual or containment)

If you need help with the lodgement of backflow inspection and maintenance reports, contact Sydney Water.

Installing backflow devices

- Ensure the device you install has the correct watermark and complies with *AS/NZS 2845* and *AS/NZS 3500*.
- Do not install containment devices in pits, or below ground level.
- Install the appropriate device(s) on the outlet side of all master water meter(s) located at the property boundary. Ensure there are no connections between the master water meter and the device.

  If there is no meter, you must install the device on the water supply where it enters the property boundary (we call this a boundary connection). There should be no connections between the boundary connection and the device.
- There must be 300 mm between a reduced pressure zone device's relief port and the ground.
- Always check the water pressure and flow requirements before you install a backflow device. Once installed, these devices normally reduce water pressure.
- Always advise your customer, in writing, about any loss of water pressure and possible effects on any equipment connected to the water supply.
- Follow the manufacturer's installation requirements.



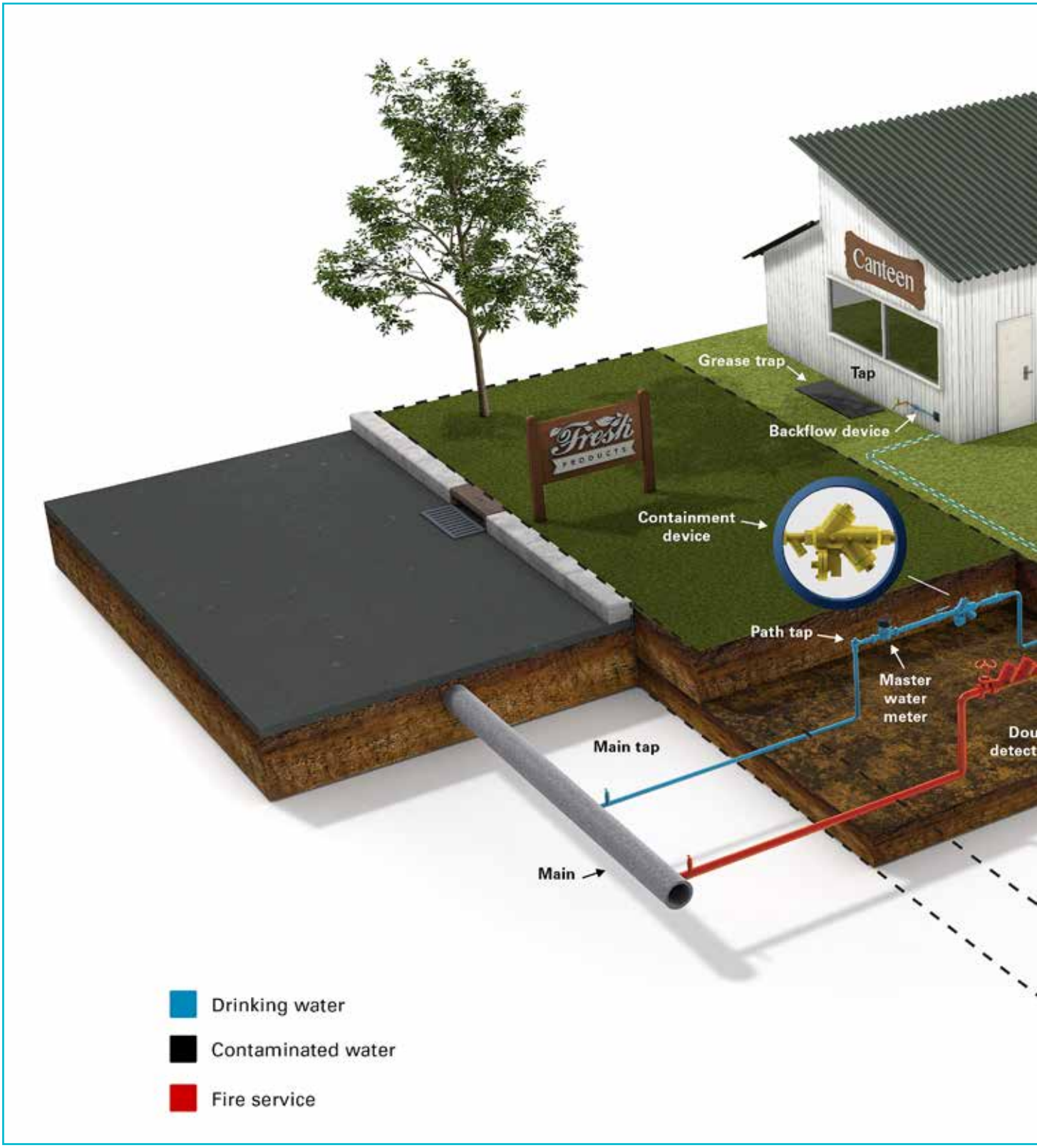
Residential

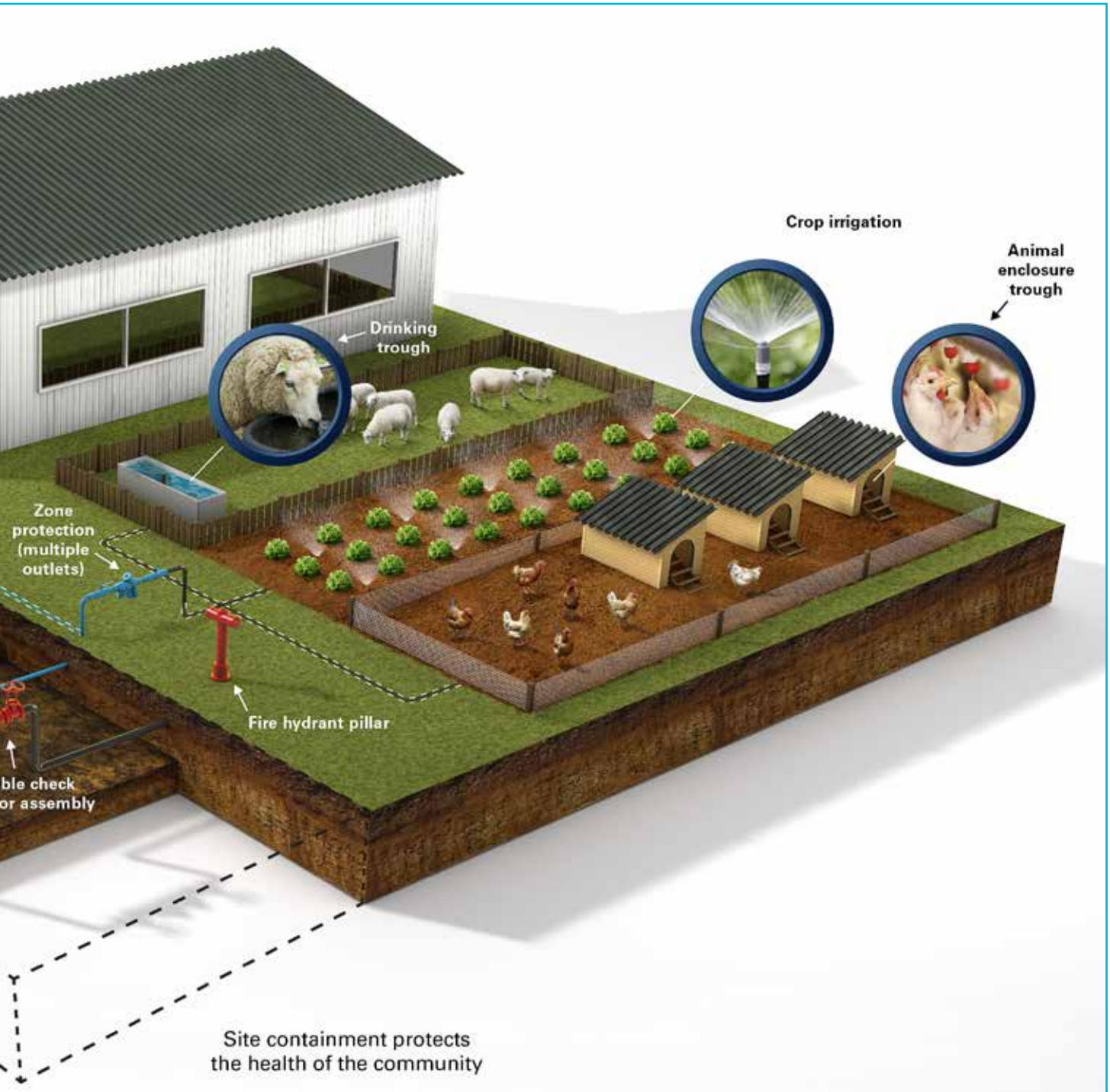
Water meters that are larger than 25 mm must have a dual check valve installed directly downstream of the meter set up.

Water meters that are 20 mm and 25 mm have an integral dual check valve (low hazard rating).

Zone/individual

Contact NSW Fair Trading about zone or individual backflow devices.




Crop irrigation
Animal enclosure trough
Drinking trough
Zone protection (multiple outlets)
Fire hydrant pillar
ble check
or assembly
Site containment protects the health of the community

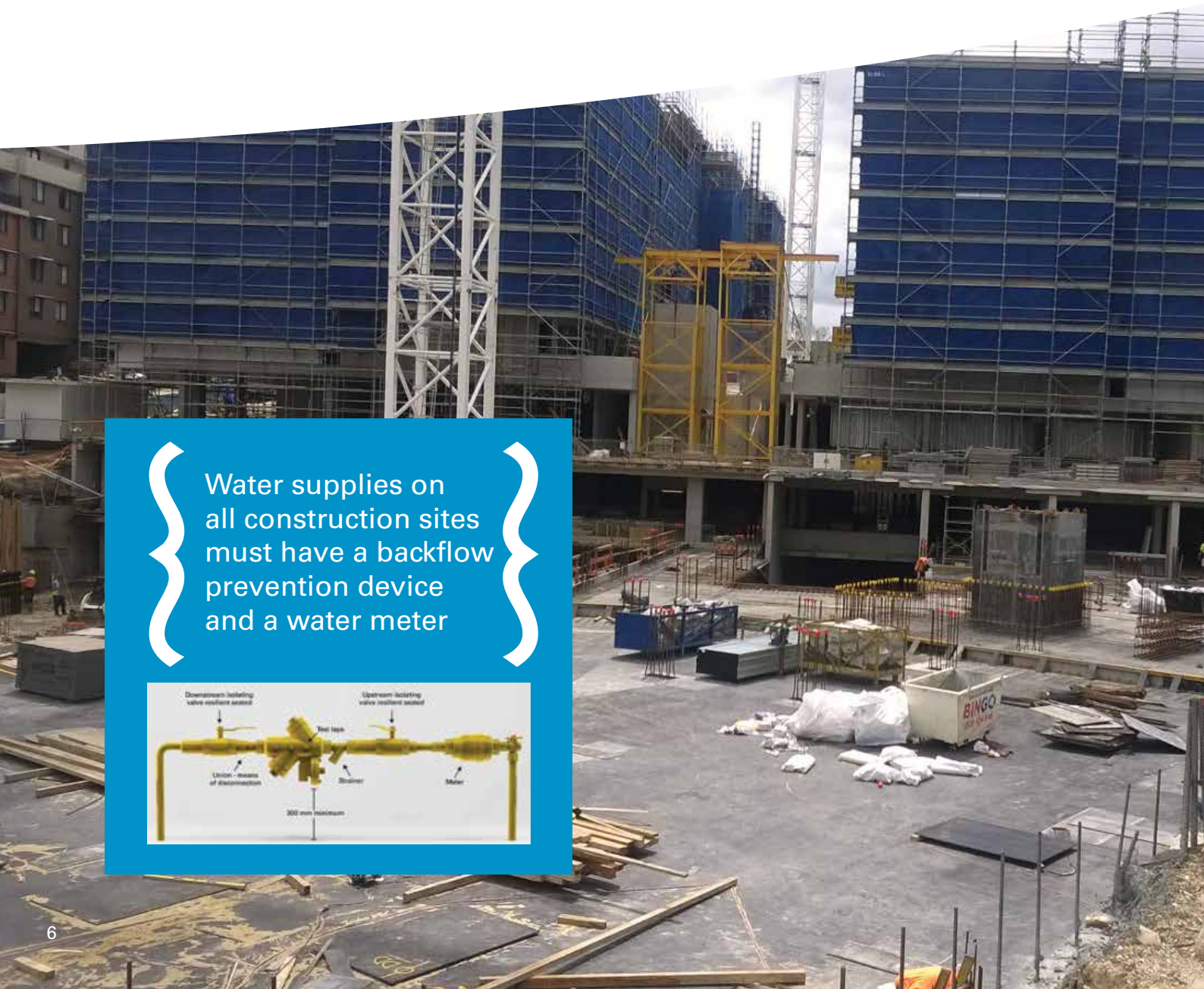
Construction sites

Water supplies on all construction sites must have a backflow prevention device and a water meter. Sydney Water regards unapproved temporary supplies installed on construction sites as water theft, and that is how we will treat them.

If you're building more than a single stand-alone house, we consider the site to be a high backflow hazard.

Remember, when construction is complete:

- you must remove construction meters and return them to Sydney Water through your Quickcheck agent
- you must re-register backflow prevention devices for the site on the correct meter and retest them
- you must lodge the test report using our online lodgement system at sydneywater.com.au



Water supplies on all construction sites must have a backflow prevention device and a water meter

How to determine hazards

The hazard rating of the processes carried out on your customer's property will determine the type of device you must install.

The three hazard ratings identified by *AS/NZS 3500.1* are:

- **High hazard** – any condition, device or practice which, in connection with the water supply system, has the potential to cause death.
- **Medium hazard** – any condition, device or practice which, in connection with the water supply system, could endanger health.
- **Low hazard** – any condition, device or practice which, in connection with the water supply system, is a nuisance but does not endanger health or cause injury.

- You, as the backflow accredited, licensed plumber, must do a site audit, and determine the hazard rating in line with *AS 3500*
- Where the hazards are unknown for a new commercial, industrial property or mixed development, the hazard rating defaults to high hazard.
- Properties identified as having a low hazard rating (and a meter 32 mm and above) must install a non-testable device.
- Sydney Water will install a 20 or 25 mm water meter with an integrated dual check valve as part of meter renewals and new connections.

Compliant fire service with double check detector assembly

Fire services

- Owners of properties with separate sprinkler and fire hydrant services must have a testable double check detector assembly installed on the connection.
- Where there is a booster assembly installed, the device must be fitted upstream of the booster assembly with no off-takes in between the double check detector assembly and the booster assembly.
- The double check detector assembly must be installed as close to the property boundary as possible, with a constant minimum differential pressure of 20 kPa.
- You must use drinking water quality materials up to the outlet of the backflow device. For example, no galvanised pipe – galvanised roll grooved joints/pipe are not approved materials for drinking water supply.
- Some older fire service set ups don't have backflow prevention devices, however if the fire service is moved or repaired (or if there is a redevelopment or upgrade of the service) then the service must be upgraded to current Sydney Water requirements.
- Window or wall drencher systems require a dual check valve installed at the control tap.

Rainwater tanks

- **Vented dual check valve with atmospheric port are required for all below ground tanks accepting rainwater only.**
- **Above ground rainwater tanks are a low hazard. Properties with a 20 or 25 mm water meter do not require additional backflow prevention.**
- **High hazard applies to alternate water supplies, for example stormwater or greywater.**

Glossary

Customer	The property owner.
Containment protection	Installing a backflow prevention containment device on the water service(s) at the property boundary to prevent backflow from the property entering the main water supply.
Zone protection	Installing a backflow prevention device at the connection point of specified sections of a plumbing system with a building or facility.
Individual protection	A backflow prevention device installed at the water connection to a fixture or appliance.
Australian/New Zealand Standards 3500.1	A guideline for installing and maintaining a backflow prevention device, consistent with Sydney Water's *Requirements for connected customers*.
Australian/New Zealand Standards 2845	A standard of design and performance requirements for backflow prevention devices, consistent with Sydney Water's *Requirements for connected customers*.
Licensed plumber	A plumber with a licence issued by NSW Fair Trading.
Backflow accredited, licensed plumber	A licensed plumber who has competently completed a TAFE NSW backflow prevention course.

Notes

Notes

Contact us

- Email: businesscustomers@sydneywater.com.au
- Call: 13 20 92

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