

REGULATION ROUNDUP

ISSUE 53 | February 2024

A bulletin for Electrical, Gas and Plumbing industry workers brought to you by the Office of the Technical Regulator

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Technical Regulator

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of Regulation Roundup.

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FOR TECHNICAL ENQUIRIES:

Electrical

P: (08) 8226 5518 | (8:00am – 4:30pm)

Gas

P: (08) 8226 5722 | (8:00am – 4:30pm)

Plumbing

P: 1300 760 311 | (8:00am – 4:30pm)



Government of
South Australia

be energy safe

www.otr.sa.gov.au

Message from the Technical Regulator

Welcome to issue 53 of Regulation Roundup.

The OTR are looking towards a very productive year starting with a comprehensive series of roadshows across all the trade areas. One of the advantages of delivering Regulation Roundup electronically is that we can cover topics in a more comprehensive way.

This edition has a vast array of useful information for the industry. We hope we are hitting the mark and are always keen to get feedback to enable this publication to be improved. The industry is always changing and

we try to utilise Regulation Roundup as a means of making everyone aware of the key issues that will impact the industry.

Like always I really encourage everyone to have a read of Regulation Roundup. It would also be great if you could attend one of the roadshows. The roadshow is always an opportunity for us to get out and talk to industry in an informal environment.

Rob Faunt, Technical Regulator

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2024 ROADSHOW SEMINAR SERIES

The NECA SA/NT Roadshow Seminar Series is back for 2024! These seminars will be held at 15 locations across metropolitan and regional South Australia between March and May 2024 to provide electricians with relevant industry updates. With a new format, these seminars will now be commencing at 4:30pm and concluding at 7pm.

Various suppliers, manufacturers, and wholesalers will be on location with their products and services on display. NECA SA/NT staff will also be on hand to answer any questions in regard to how we can assist you and your business.

The dates and venues for the 2024 roadshows are as follows:

Date	Day	Location	Venue
18 March	Monday	Walleroo	Coopers Alehouse Wallaroo
19 March	Tuesday	Port Augusta	Standpipe Golf Motor Inn
20 March	Wednesday	Whyalla	Westland Hotel-Motel
21 March	Thursday	Port Lincoln	Port Lincoln Hotel
25 March	Monday	Seaford	Beach Hotel
3 April	Wednesday	Victor Harbor	Hotel Victor
8 April	Monday	Elizabeth	Grand Central
1 May	Wednesday	Morphettville	The Junction
6 May	Monday	Naracoorte	Naracoorte Hotel/Motel
7 May	Tuesday	Mount Gambier	The Commodore
8 May	Wednesday	Murray Bridge	Bridgeport Hotel
13 May	Monday	Barossa	Nuriootpa Vine Inn Hotel
14 May	Tuesday	Berri	Berri Hotel
20 May	Monday	Adelaide	Arkaba Hotel
22 May	Wednesday	Modbury	The Highlander Hotel

To register, please visit our [Eventbrite page](#). Alternatively, please visit the NECA SA/NT website, click on the Events tab, and select 2024 Roadshow Seminar Series. For further information, including any registration queries, please contact Jamie Phillips, Marketing, Communications and Membership Manager at NECA SA/NT, via jamie.phillips@necasa.asn.au or on 0402 384 999.

TRADIE TO TRAINER – REFRIGERATION LECTURERS

TAFE SA is also looking motivated lecturers to join their workforce.

The need for ever increasing numbers of Refrigeration and Air-conditioning technicians is becoming more and more apparent in our current market. Our industry is currently experiencing a shortage of quality and qualified workers. The answer to this ever-increasing demand is to ensure that more apprentices are trained to a high standard on the job and through their studies at trade school.

To ensure that learners have the best possible outcomes, TAFE SA invests in its lecturing staff by attracting the best possible candidates with relevant hands-on experience in the industry, along with educational qualifications and on the job training. As our apprentice numbers grow, so does the need to attract new qualified lecturers to teach these learners.

What qualifications do I need to have to be a TAFE SA lecturer?

- RAC01 Refrigerant handling license
- Certificate IV in Training and Assessing (TAE 40122)
 - don't already have this? – keep reading
- Five years of industry experience

TAFE SA is hiring new lecturers that hold the presenter skill set for the Certificate IV TAE 40122. TAFE SA can help you achieve this through in-house workshops and online self-directed learning. At the completion of this program successful trainees will graduate to the role of New Lecturer at TAFE SA.

Our program details are as follows:

- BSBCMM401 Make a presentation.
- TAEDEL301 Provide work skill instruction.
- TAFESA will support through the remainder of the Certificate IV TAE 40122 qualification.
- The full Certificate IV TAE is to be completed within 12 months of starting employment.
- Initial one-year contract with the opportunity to apply for ongoing positions as they become available.

If this is something that interests you, please send your resume to lena.marchesan@tafesa.edu.au and we can arrange a chat.



**Government of
South Australia**

Fact Sheet

Dangers of take-home lead from workplaces and hobbies

Working in a lead-related industry or hobby can also put your family at risk of lead exposure. There is no 'safe' level of lead exposure. Lead can be harmful to people of all ages, but the health risk is highest for unborn babies, infants and young children.

Lead can enter your body by breathing air that contains very small particles or fumes, or by swallowing lead-contaminated dust or paint chips. Lead-contaminated dust from your workplace or hobby space can attach to your clothes, shoes, hair, skin, work gear and other items such as bags, mobile phones, water bottles and lunch containers.

This dust can readily transfer into your vehicle and baby/child car seats, and onto your carpets, floors, furniture and other surfaces at home. This transfer is known as **take-home lead**.

Precautions to prevent take-home lead

It is important that you take precautions to protect yourself and your family from the dangers of take-home lead.

These precautions include:

- > taking care throughout your work day or hobby activity by:
 - washing and drying your hands thoroughly before eating, drinking, smoking and touching your face and personal items
 - keeping your personal items out of the work area
 - preventing transfer of lead dust to your vehicle during breaks
 - not going home for lunch in work clothing.
- > showering and changing into clean clothes before going home or before contact with your family after your hobby activity
- > changing your shoes before leaving work or your hobby area, and leaving work shoes at work or in your hobby area, if possible
- > avoiding activities that may re-contaminate you and your clothes, once clean
- > not having baby/child car seats or any baby/child equipment in vehicles that you take to your workplace
- > keeping your family and pets out of your hobby area
- > washing your work or hobby clothes separately from all other regular washing, especially children's clothes and bed linen
- > keeping your work or hobby equipment and personal items you take to work or your hobby area, including food containers, mobile phones, car keys and work gear, away from children.

High risk lead-related jobs and hobbies

High risk jobs and hobbies include:

- > Lead mining and smelting and other industries that use lead
- > Dry machine grinding, discing, buffing or cutting lead
- > Manufacturing or recycling lead-acid batteries
- > Repairs to radiators or vehicle exhaust systems
- > Melting or casting lead or alloys containing lead, such as lead dampcourses, trophies, yacht keels, leaded brass
- > Removal of lead paint from surfaces by dry sanding, heat or grit blasting
- > Construction, renovation, demolition involving oxy-cutting of structural steel primed with lead paint
- > Fire assay involving lead
- > Handling lead compounds causing lead dust, such as from dry lead pigments, lead UV stabilisers
- > Spray painting with lead paint (> 1% lead by dry weight)
- > Restoring homes, boats, cars and furniture that are coated with lead-based paints
- > Casting lead (e.g. to make ammunition, fishing sinkers/tackle)
- > Burning of lead-stabilised plastics or materials coated with lead-based paints Soldering (radiators, stained glass, electronics)
- > Exposure to lead dust at firing/shooting ranges and during hunting
- > Recycling of objects containing or coated with lead products (e.g. motor vehicle bodies, batteries, electronic/computing equipment)
- > Antiques and furniture restoration
- > Glazing and firing pottery and ceramics
- > Lead-lighting/stained-glass making
- > Eating animals hunted using lead shot.

How can lead affect my health?

The central nervous system is the main target for lead toxicity in both adults and children. In adults, long-term exposure to low levels of lead may be associated with weakness in fingers, wrists and ankles, headaches, fatigue, small increases in blood pressure, anaemia, and damaged nerve and renal function. People with diabetes have a higher risk of adverse effects associated with the kidney.

In pregnant women, high levels of exposure may cause decreased birth weight or miscarriage. In men it can damage the organs responsible for sperm production. In children, long-term exposure to low levels of lead may be associated with reduced growth, learning difficulties, behavioural problems and reduced IQ. It can cause hearing difficulties and affect the nervous system outside the brain. These effects are most likely not reversible.

Effects of high blood lead levels may include colic, muscle weakness, lack of appetite and brain damage with seizures. At very high levels, lead can severely damage brain and kidney function and ultimately cause death.

Risk of health effects from lead exposure is highest for unborn babies, infants and children.

What do I do if I think I have been exposed to lead?

If you think that you or your family have been exposed to lead or may have lead poisoning, it is important to see your doctor and discuss having a blood lead test. This assesses the level of

exposure and determines if further steps are necessary to reduce the health effects and minimise further exposure.

Occupational exposure

You and your employer must comply with work health and safety legislation (lead risk work notifications and blood monitoring) and occupational exposure standards for lead (airborne lead in the workplace and workers blood lead levels) to prevent and reduce lead fumes and lead dust by:

- > monitoring your lead exposure by blood testing (discuss with your employer and doctor)
- > following Lead-Aware Work & Hygiene practices
- > wearing appropriate Personal Protective Equipment (PPE).

For information about these laws and your legal responsibilities relating to lead risk work contact SafeWork SA (ph: 1300 365 255)

More information

SafeWork SA

www.safework.sa.gov.au/workplaces/work-tasks-and-projects/lead-risk-work

SA Health

www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/conditions/chemicals+and+contaminants/lead

www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/healthy+living/protecting+your+health/environmental+health/lead+reducing+your+exposure/lead+reducing+your+exposure

For more information

Scientific Services Branch
Health Protection and Licensing Services
PO Box 6, Rundle Mall
Adelaide SA 5000
Telephone: 08 8226 7100
www.sahealth.sa.gov.au

Public-I1-A1

Last updated 7 July 2020

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www.ausgoal.gov.au/creative-commons



CONSUMER and BUSINESS SERVICES



ACTION TO ADDRESS SOLAR CONCERNS

Many consumers are baffled by the range of solar possibilities and deals on offer, and it doesn't help when there are instances of solar companies failing to meet their legal responsibilities. To help counter this, Consumer and Business Services (CBS) is running a campaign to raise consumer awareness about purchasing or upgrading solar equipment, and CBS is also investigating allegations of unlawful conduct with solar energy sales.

Numerous consumers have contacted CBS in recent months with concerns about a particular solar company, and the initial investigation led CBS to warn the company about its conduct. It appeared the company was not operating with the relevant licence, had not complied with the mandatory cooling-off provisions for door-to-door sales, and had made false and misleading representations about the financial benefit of its solar products. However, despite the formal warning, the company continued to engage with consumers without the appropriate licence. CBS issued a public warning not to deal with the company while the investigation continues.

To help consumers better navigate the solar energy market and avoid unscrupulous operators, CBS is encouraging consumers to do their research before investing in a new or upgraded solar product. It's important to check independent reviews about the company and products and consider the power and money-saving claims by retailers to see if the cost savings stack up.

Consumers are also advised to be cautious of unsolicited sales over the phone, at their door, or if approached in a shopping centre. Consumers are also reminded that even if they do invite a trader to come to their home to provide a quote, there is no obligation to sign up to anything at that time. But if they do, then the Australian Consumer Law provides them with protections including cooling off periods. It's usually best to take the time to do some homework and get several quotes from suppliers before signing up, particularly for products or services that involve significant expense or a high level of 'technicality', like solar products.

The campaign also seeks to address some knowledge gaps, by pointing consumers to reliable and independent sources of information about solar energy. It seems that some consumers are not aware that power saved in their solar system battery can, in some circumstances, be used by their solar retailer. Some customers of Virtual Power Plants (VPP) also don't understand certain contract conditions or the loss of existing feed-in tariffs when upgrading an existing solar system.

Both the consumer education campaign and compliance focus by CBS aim to improve outcomes for consumers who purchase solar panels or batteries or choose to join a VPP.

Anyone with concerns about unlicensed or other unlawful activity by a solar business can report these to CBS via the online form at cbs.sa.gov.au/contact or call CBS on 131 882.

More information, including a guide for solar panel installers, is available at cbs.sa.gov.au/solar.

CONSUMER and BUSINESS SERVICES

RAISING CONSUMER AWARENESS TO ALWAYS USE A LICENSED PLUMBER

The message 'remember to check their licence' featured prominently in a consumer education campaign about hiring a plumber which ran from 22 September to 3 November 2023. Consumer and Business Services (CBS) developed the campaign following a number of reports, particularly from seniors, over concerns with the quality and price of plumbing work. The campaign sought to address the issues raised in these reports and also to invite anyone with information about unlicensed activity to notify CBS.

Key metrics for the campaign have been evaluated, with more than 260,000 South Australian consumers having been reached and reminded of the importance of hiring a licensed plumber. Many plumbers may have seen the campaign promotions on social media, heard the discussions on talkback radio, or read about the campaign in the CBS Connect e-newsletter. This newsletter is distributed to a broad audience, including occupational licence holders who have an email address registered with CBS, provided they haven't unsubscribed.

Other key messages of the campaign were:

- Avoid a DIY nightmare and hire a licensed plumber so the job can be done safely to a suitable standard.

- Before hiring a plumber check their reputation. Look at independent reviews online and ask friends and family which plumbers they would recommend.
- Avoid a plumbing bill shock. Some plumbers charge thousands more than others, so get 3 quotes to compare – even for urgent repairs needed in the evening or on a weekend. Make sure the quotes itemise the tasks to be performed.

During the campaign, there were 18 reports to CBS involving allegations of people operating without a plumber's, gas fitter's or electrician's licence or outside the scope of such a licence. A number of warning letters have already been issued, while other matters are under assessment.

Industry members must always comply with their requirements under licensing and consumer protection laws, otherwise, they may face compliance action from CBS, such as court action, public naming, expiation, issuing a written warning or receiving a written assurance from the business or individual.

For more information about the campaign visit cbs.sa.gov.au/campaigns/always-use-a-licensed-plumber and please report any unlicensed activity by traders to CBS via the online form at cbs.sa.gov.au/contact or call CBS on 131 882.





Electrical Bulletin

LG recall

This recall document can be found in the following weblink:

<https://www.productsafety.gov.au/recalls/lg-energy-solution-australia-pty-ltd-formerly-lg-chem-australia-pty-ltd-%E2%80%94-94-lg-ess-home-energy-storage-system-batteries>



Product Safety Recall



Do you own this product?

LG Home Energy Storage System Batteries

These are large batteries that allow capture and storage of energy from solar panels. Multiple affected battery models installed in LG, SolaX and other branded and non-branded systems. See [recall notice](#) for full details.

Dates sold: January 2016 onwards.



Why the product is recalled: Batteries may overheat and catch on fire.

Hazard: A fire may cause serious injury or death and/or damage to property. Incidents have occurred and caused damage to property.



1. Visit <https://www.lgessbattery.com/au>, click on 'Electrical Safety Recall' and follow the instructions to find out if your battery is affected by the recall.
2. If your battery is affected, **immediately** register your details with LG Energy Solution Australia Pty Ltd and follow their instructions.



Contact LG Energy Solution Australia Pty Ltd on 1300 677 273 or productau@lgensol.com.



Sold nationally through multiple retailers. See the [recall notice](#) on the Product Safety Australia website for a full list of retailers.



Scan the QR code for information about this recall.



Set yourself a reminder to check at home

- Take a photo of this notice
- Set a reminder on your phone

PRA 2022/19550

See [productsafety.gov.au](https://www.productsafety.gov.au) for
Australian product recall information

ACCC Lithium-ion Battery Safety



Lithium-ion Battery Safety

DID YOU KNOW?



- Most laptops, mobile phones, e-bikes, e-scooters, power banks and power tools contain a lithium-ion battery.
- Lithium-ion batteries are more dangerous than traditional batteries because they use different chemicals and internal processes.
- Whilst incidents are rare relative to the number of batteries in use, the ACCC saw a 92% increase in reported lithium-ion battery incidents including swelling, overheating and fires in 2022 compared to 2020.
- Ensuring the charger you are using is suitable for the battery in the product being charged can reduce risks

Your actions can prevent fires, explosions, serious injuries, and property damage

DO



Monitor products on charge and unplug products once fully charged (consider using timers as a reminder to unplug products)



Follow manufacturer instructions



Charge batteries or products away from combustible materials such as beds, sofas or carpet



Check recyclemate.com.au or bcycle.com.au for safe disposal options near you



Purchase replacement batteries from the original supplier or a reputable supplier where possible

DON'T



Leave batteries or products on charge once they are fully charged



Use batteries, products or chargers that show signs of damage such as overheating, swelling or venting gas



Leave products in hot places such as in direct sunlight or parked vehicles



Put products with lithium-ion batteries in household rubbish, recycling bins or kerbside hard waste collections



Modify a lithium-ion battery or use it in the incorrect product

For more information visit [Product Safety Australia](https://www.productsafety.gov.au)



In any case of emergency contact **000** immediately. For more information on what to do in case of fire or explosion contact your state or territory fire department.

For further safety information relating to Lithium-ion batteries, please refer to the following ACCC Product Safety Australia weblinks: Lithium-ion batteries: [Lithium-ion batteries | Product Safety Australia](https://www.productsafety.gov.au/lithium-ion-batteries)
Lithium-ion batteries and consumer product safety report: [Lithium-ion batteries and consumer product safety | ACCC](https://www.productsafety.gov.au/lithium-ion-batteries-and-consumer-product-safety)



Product Safety Recall



Electrical Safety Recall

Growatt New Energy Australia Pty Ltd

Growatt solar power inverters

Models: SPH3000TL BL-UP SPH3600TL
BL-UP SPH4000TL BL-UP SPH4600TL
BL-UP SPH5000TL BL-UP SPH6000TL
BL-UP

Identification:

Solar power inverter used in domestic rooftop solar systems.

Sold at: Go Solar (<https://gosolar.com.au/>)

Solar Mart (<https://www.solamart.com.au/>)

Why the product is recalled:

The inverters have been supplied with an emergency power supply (EPS) port with a plug that can be removed by hand without the use of a tool. If the plug is removed or if it is not connected during the installation process the user has access to live hazardous voltage.

Hazard:

There is a risk of serious injury or death from electric shock if consumers remove the EPS port plug and access live parts.

Action required:

Consumers should switch the inverter off immediately and contact Growatt Australia on australia@ginverter.com or by phone on 1800 476 928 to arrange for the permanent securement of the EPS port connector so that it cannot be removed without a tool. A warning label will be affixed to the connector advising of the dangers of live parts if removed.

For further information: Please direct all calls and any queries concerning this recall to Growatt on australia@ginverter.com or by phone on 1800 476 928

See productsafety.gov.au for
Australian product recall information

This recall document can be found in the following weblink:

<https://www.productsafety.gov.au/recalls/growatt-new-energy-australia-pty-ltd-%E2%80%94-solar-power-inverters-models-sph3000tl-bl-up-sph3600tl-bl-up-sph4000tl-bl-up-sph4600tl-bl-up-sph5000tl-bl-up-sph6000tl-bl-up>



Product Safety Recall



Electrical Safety Recall

Goodwe Australia Pty Ltd — Goodwe MS-30 solar inverter

Solar Inverter MS-30 with model numbers:

- GW5000-MS-30
- GW6000-MS-30
- GW8500-MS-30
- GW10K-MS-30

Model numbers are located on the side of the inverter.

Identification: The affected Goodwe inverters were sold between 13 May 2023 – 16 November 2023 via the following wholesalers:

- | | | |
|-----------------------|-------------|--------------------|
| • One Stop Warehouse | • BayWa R.E | • Supply Partners |
| • MEM Greentech | • Marubeni | • Krannich Solar |
| • L&H (Sonepar Group) | • Tradezone | • Sol Distribution |
| • | | • Panasonic NZ |

Why the product is recalled: The inverters have been supplied with an AC plug that does not comply with requirements of the relevant electrical safety standard. The AC plug can be removed without the use of a tool and expose consumers to live terminals.

Hazard: There is a risk of serious injury or death from electric shock if consumers remove the AC plug and access the live terminals.

Action required: Consumers must not attempt to remove the AC plug on the inverter.

Consumers should switch off the inverter at the

- “INVERTER A.C. ISOLATOR” switch (if there is one installed adjacent to the inverter) and
- “MAIN SWITCH (INVERTER SUPPLY)” on the switchboard.

Contact Goodwe Australia on MSG3support@goodwe.com or by phone on 0488 851 481 (9:00 am - 5:00 pm, Monday to Friday) to arrange for the permanent securement of the AC connector so it cannot be removed without a tool.

PRA - 2023/19986

See productsafety.gov.au for
Australian product recall information

This recall document can be found in the following weblink:

<https://www.productsafety.gov.au/recalls/goodwe-australia-pty-ltd-%E2%80%94-goodwe-ms-30-solar-inverter>



Product Safety Recall



Electrical Safety Recall

Jinko Solar Australia Holdings Co. Pty Ltd.

SunTank Hybrid Inverter

Single-phase 5 kW hybrid power inverter used in domestic rooftop solar systems and with batteries.

Brand: Jinko

Model number: JKS-5HLVS-ABI

Identification:

The affected inverters were sold between 7 July 2022 – 8 December 2023

Sold at:

- Gosolar
- Bluesun Group
- Austra Energy Group
- Raystech

Why the product is recalled:

The inverter has been supplied with an emergency power supply (EPS) plug that can be removed without the use of a tool and expose consumers to live terminals.

Hazard:

There is a risk of serious injury or death from electric shock if consumers remove the EPS plug and access live terminals.

Action required:

Consumers should switch the inverter off immediately.

Consumers must not remove the EPS plug from the inverter.

Consumers should contact their retailer or Jinko Solar Australia on bess_au@jinkosolar.com or by phone on 1300 326 182 to arrange for the permanent securement of the EPS plug so that it cannot be removed without a tool.

A warning label will be affixed to the plug advising of the dangers of live parts if removed.

See productsafety.gov.au for
Australian product recall information

This recall document can be found in the following weblink:

<https://www.productsafety.gov.au/recalls/jinko-solar-australia-holdings-co-pty-ltd-%E2%80%94-suntank-hybrid-inverter-jks-5hlvs-abi>

Electric Shock Incident List

Shock Source	Cause	Contributing Factors	Injuries	Action to Make Safe
Steel roofing sheets	Overhead high voltage powerline.	New house being built under SWER line, before high voltage power line had been permanently removed.	Roofing worker received electric shocks to hands due to an induced voltage.	Work stopped until powerline de-energised and removed.
Caravans gas bottles	Extension cord supplying caravan.	Extension cord had become damaged and due to its location was not visible to owner.	Owner received electric shock to hands.	Electrical contractor identified fault and replaced extension cord.
Pump used to transfer wine between vats	Extension cord.	Workers had not realised portable pumps flexible cord was damaged.	Worker received electric shock to arm.	Electrical Worker identified fault and removed item from service.
Steel probe with T-bar style handle	Underground powerline.	Civil workers were trying to locate underground sewer pipe but struck the underground cable.	Worker received electric shock to hands.	Network Operator located and repaired underground cable.
Electric cooktop	Electric cooktop.	Owner unaware cooktop had short to earth. The earth conductor on the cooktop was not functional.	Owner received electric shock to hands.	Network Operator investigated and isolated cooktop until Electrical Contractor could repair or replace it.
Conductive underground water pipes	Deteriorated street mains neutral connection.	Plumbers maintaining underground water supply failed to install bridging cable before cutting pipe.	Plumber received electric shock to hands.	Network Operator advised plumber of correct procedure and repaired corroded neutral connection.
Oven rangehood	Build-up of grease and grime.	Occupier would not have known grease build up would allow electricity to track to the frame.	Occupier received electric shock to hands.	Electrical contractor investigated and removed rangehood from service.
Roofing sheets	Tech screw penetrated cable laid in prohibited area below roof sheet.	Owner contacted air conditioner metal frame whilst working on the plumbing.	Owner received electric shock to hands.	Electrical contractor investigated and located tech screw damaging cable effecting repairs.
Meter box	Neutral conductor had open circuited.	Owner experienced power flickering on and off went to meter box not realising it was now live because the mains neutral had failed.	Owner received electric shock to hands.	Electrical contractor investigated and reported it to Network Operator who repaired the connections.
Welding bay in workshop	Welding earth clamp.	Assistant was repositioning earth clamp when welder proceeded to weld.	Assistant received electric shock to hands.	Workplace procedures reviewed to ensure risk is controlled.
Commercial clothes dryer	Active cable fault within dryer.	Housekeeper retrieving clothes from dryer would not know centre drum was now live due to internal cable damage caused by vibration.	Housekeeper received electric shock to arms.	Electrical Contractor repaired dryer resolving issue permanently.
Coffee grinder	Appliance had a fault with the internal cable insulation.	Homeowner would not have realised appliance was faulty.	Homeowner received electric shock to hand.	Network Operator attended identified fault with appliance advising owner to cease using it.
Underground cable system	Civil worker cut through electrical conduit.	Civil workers used a volt stick device to decide if circuit was live enclosed in conduit, as they got no glow, they decided to cut the conduit. The cable was still live.	Worker received electric shock to hand.	Builders' Electrical contractor isolated circuit correctly before further work continued.
Light switches	Damp cloth used to wipe down switches.	Cleaners wiped down surfaces including light switches with damp cloth not realising that the moisture would conduct electricity.	Cleaner received electric shock to hands.	Electrical Contractor attended replaced light switches and advised staff of issue.
Outside water tap	Corroded mains neutral connection.	Homeowner using outside water tap would not know neutral connection in service fuse enclosure had corroded.	Homeowner received electric shock between hand and feet.	Network Operator investigated and repaired connection.

TYPE A RCDs – Why they changed

In a previous issue of Regulation Round-Up, we advised that from April 30th 2023 as a minimum, only Type “A” RCDs will be allowed to be installed, other types may be required dependant on the type of supply, and that Type “AC” RCDs shall not be installed.

We have had a large number of enquiries in relation to why the installation of Type AC RCD’s is now prohibited. So we have provided some of the reasoning below to advise the importance of this change.

With the introduction of more DC driven supplies (inverters) and DC operated equipment (digital washing machines, LED lights etc.) a large amount of DC noise is being injected into the AC sub-circuits, this DC noise has the capability of “Negating or Blinding” the function of a Type “AC” RCD and may cause it to trip at a higher mA level, or not to trip at all. This is why Type “AC” RCDs are no longer allowed to be installed.

A good example of this “Blinding Effect” is demonstrated with newer types of fault loop testers, when they were originally introduced, as the test was performed, it would trip a type “AC” RCD. Newer models got around this nuisance tripping by injecting DC noise and effectively “Blinding” the RCD to perform the test.

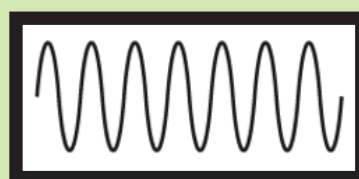
So, as the licensed Electrical Contractor, it is your responsibility to ensure the RCD installed is compliant and capable of operating correctly on the waveform it is expected to be subjected to (AS/NZS 3000:2021+A3 Clause 2.6.2.2.2), and consideration should be made to the final use of the circuits being installed, as a different type of RCD may be more appropriate.



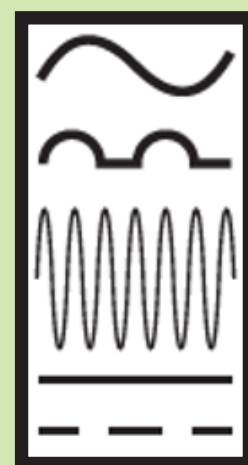
TYPE “AC” RCD



TYPE “A” RCD



TYPE “F” RCD



TYPE “B” RCD



Safety Alert

Apprentice suffers electric shock and falls from roof

The purpose of this Safety Alert is to remind electrical contractors and workers of the electrical risks within ceiling spaces and the requirement to manage the risk of falls. The alert is also a reminder for home and business owners of the need to regularly test Residual Current Devices (RCDs) fitted to their property.

Background

On 6 December 2023, a third year apprentice electrician working at a residential property was attempting to locate electrical wiring located above the eaves in the ceiling space. The apprentice was unable to reach the wiring from the manhole, so climbed onto the roof to unscrew and lift a roofing sheet to reach the wiring.

The apprentice received an electric shock and fell off the roof, onto a fence and into the neighbouring yard.

Preliminary findings indicate a connector used to insulate the wiring was damaged, exposing live parts which the apprentice grabbed. WorkSafe Inspectors also found the RCD protecting the circuit had failed.

The worker received electrical burns to both hands and was also injured from the fall.



Image: The apprentice fell from the roof, onto the fence and landed in the neighbouring yard after an electric shock. **(Insert)** A connector used to insulate the wiring was damaged, exposing live parts.

... continued over page

Safety Alert: Apprentice suffers electric shock and falls from roof

cont...

Safety Alert – Apprentice suffers electric shock and falls from roof

Possible contributing factors

- Power was not switched off at the switch board.
- The electrical wiring was damaged with live parts exposed.
- The RCD protecting the circuit had failed.
- The pitch of the roof was steep.
- Fall protection was not used when the apprentice climbed on the roof.

Action required

- Always lock out and tag out the switch board and ensure the power is off before entering the ceiling space or handling electrical wiring located in the ceiling space.
 - Electrical wiring in ceiling spaces may deteriorate due to high temperatures, or become damaged due to vermin or from sharp objects in roof trusses and ceiling joists, such as protruding screws and nails.
- Before entering a ceiling space, advise someone onsite when you are entering and how long you expect to be in the ceiling space.
- Be mindful that electrical wiring supplying the switchboard will be live unless the property has been disconnected.
- Supply cables from the solar panels to the inverter unit will also be live when the solar panels are generating electricity.
- When working on a roof or at heights, manage the risk of falls by using:
 - a fall prevention device; or
 - if it is not reasonably practicable to provide a fall prevention device, provide a work positioning system; or
 - if it is not reasonably practicable to comply with either A or B, provide an alternative fall arrest system, so far as is reasonably practicable; and
 - ensure the safe system of work selected is deemed fit for purpose by a competent person, such as an engineer or used in accordance to the manufacturers guidelines or relevant Australian Standards.

Supervision of apprentices

- Electrical Contractors are reminded that they must comply with the requirements for the supervision of apprentices. In South Australia, these requirements can be resourced via the following link: <https://skillscommission.sa.gov.au/legislative-framework/regulations-and-standards/south-australian-skills-standards>

Information for home owners and business owners

- Home and business owners must test the RCD's fitted to your property regularly. NT WorkSafe recommends testing every three months.
- Press and release the test button on the RCD.
- If the RCD fails to operate, contact a licensed electrical contractor to test and replace the RCD, if required.

Disclaimer

This Safety Alert contains safety information following inquiries made by NT WorkSafe about an incident or unsafe practice. The information contained in this Alert does not necessarily include the outcome of NT WorkSafe's action with respect to an incident. NT WorkSafe does not warrant the information in this Alert is complete or up-to-date and does not accept any liability for the information in this report or as to its use.

Pressure from customers to energise unsafe Electrical installations

Electrical Workers and Contractors in the industry are regularly pressured to energise parts or the entire electrical installation to meet time frames and customer expectations, this is often before they are safely ready to be energised.

Juggling customer expectations and providing a competitive service will always play a role in the industry, it is important to explain to your customer that the electrical worker and contractor are the responsible party in charge of the electrical installation and safety must come first.

Remind the customer of achievable outcomes regarding the work you have been engaged to perform and for your clients to be aware of the responsibility that sits with the electrician to provide an electrically safe environment and to not energise installations that are not safe or ready to be energised.

When unsafe installations are energised in breach of the Electricity Act 1996. This can result in potential fatalities, costly fines and further enforcement action taken against the responsible party involved.

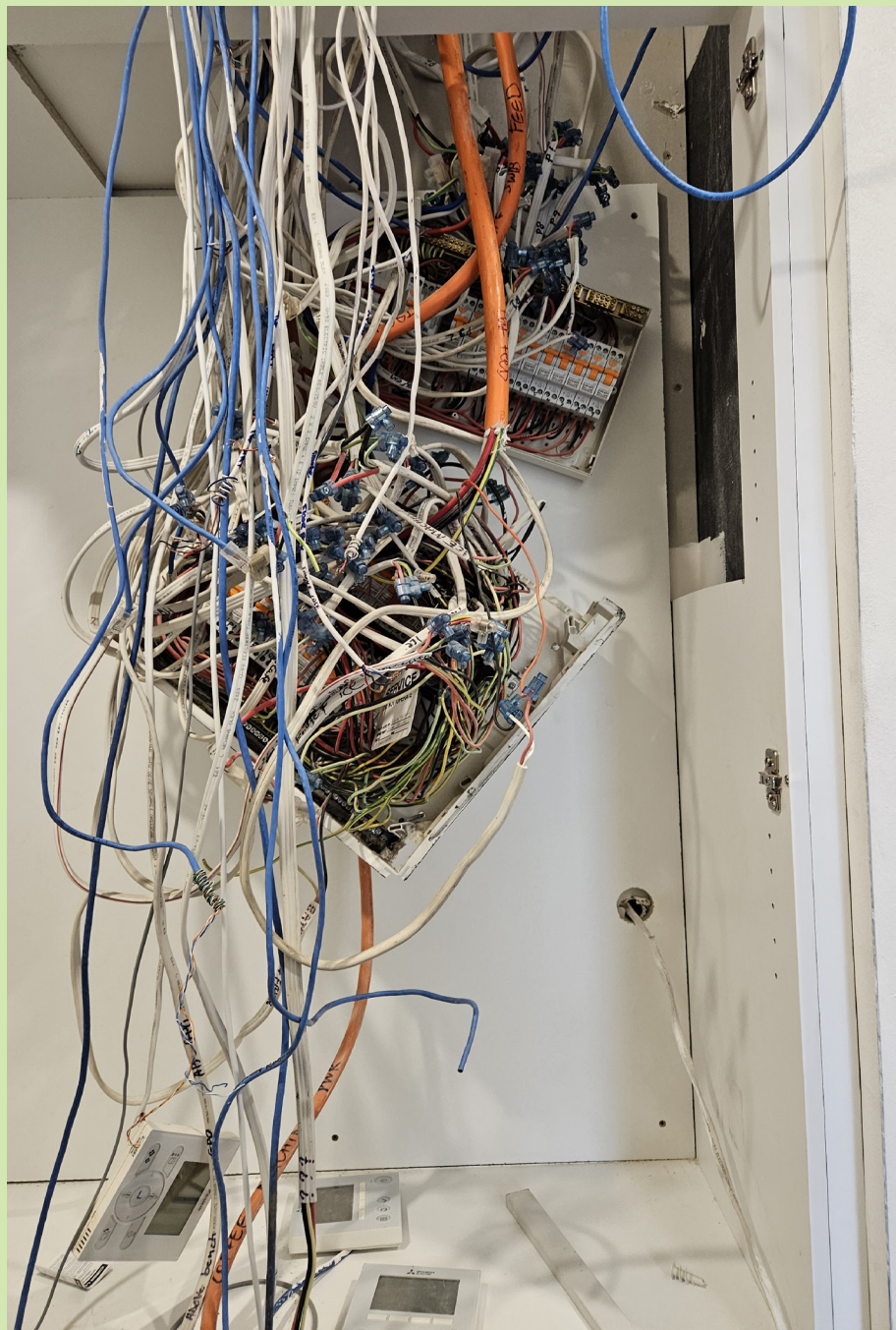


Photo of an energised switchboard at a commercial property.

Ground Mounted Solar Farm Maintenance

Ground mounted solar farm operators and electricians: it's still fire danger season, so remember to regularly inspect these assets, following the manufacturer's recommendations. Check whether plugs show any signs of corrosion or damage and manage vegetation underneath the panels.



Gas Bulletin



Flue terminals under covered areas

Almost 18 months into the adaptation of AS/NZS5601.1:2022, we are still seeing gas fitting work performed to the 2013 standard.

The transition period of six months and all the additional extensions that were granted have well and truly lapsed, so we cannot stress enough that you should be performing your gas fitting work to the 2022 version. One of the significant changes that we saw in the 2022 standard, was the location of flue terminals under a covered area (**6.9.4 Flue terminal under a covered area, in a recess or on a balcony**) and in particular, the location of Hot water Services (HWS) on balconies. Due to the footprint of houses changing, the balcony (if the property has one) seems the ideal solution for builders when locating hot water services.

Below photos 1 to 3 show hot water services located on balconies and covered areas enclosed on 3 sides that meet the requirement of the above clause, the flue terminal extends beyond the edge of these covered areas. These are great installs by gas fitters who not only have read the new clauses but put in the extra effort to ensure compliance when installing. This ensures products of combustion are readily dispersed safely; this also prevents the balcony or covered area from being fully sealed by the installation of café blinds as shown in photo 6.

Photos 4 and 5 below show hot water services that do not meet the requirements of Clause 6.9.4.

When the builder or an owner presents plans for a HWS installation that have it located in a balcony or a veranda or any location with a covered area enclosed on 3 sides check to see if the plans allow for the flue terminal to extend beyond the edge of the covered area. If the plans show a non-compliant location (flue terminal does not extend past the covered area) you need to advise the builder or owner to change the plan and have the HWS located so the flue terminal location complies with the standard. If the builder or owner doesn't want to

change the plans, contact our office and we will direct the builder/owner to ensure the appliance is compliant or a stop-hold will be put on the gas meter installation until compliance has been reached.

Remember it is much simpler to change the HWS location at the design/plan stage than to retrofit a non-compliant HWS. Relocating the HWS to another wall, channelling pipework, adding a flue diverter, or replacing it with an internal model flued to atmosphere will be a costly and time-consuming event for you!



Photo 1: Compliant water heater location with flue side diverters, note flue terminals extending past the covered area.



... continued over page

Flue terminals under covered areas (cont.)



Photo 2: Compliant water heater location with flue side diverters, note flue terminals extending past the covered area.



Photo 3: Compliant internal model water heaters installed in an area enclosed on 3 sides under a covered area, note flue kit flue terminals extend past the covered area and down pipe.



Photo 4: Non-compliant flue terminal location, flue side diverter does not extend past the covered area, the owner could potentially have pull-down blinds installed blocking the flue terminal, creating ventilation hazards.

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Flue terminals under covered areas (cont.)

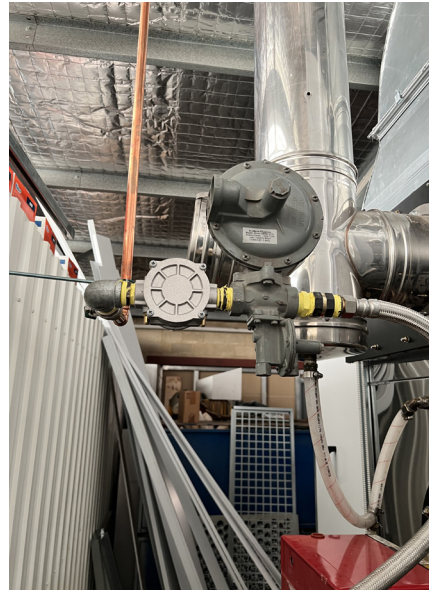


Photo 5: Non-compliant external model water heater installed on a balcony enclosed on 3 sides under a covered area causing a ventilation hazard.



Photo 6: Water heaters installed in balconies that have 2 sides open under a covered area become non-compliant when pull-down blinds are installed, creating ventilation hazards.

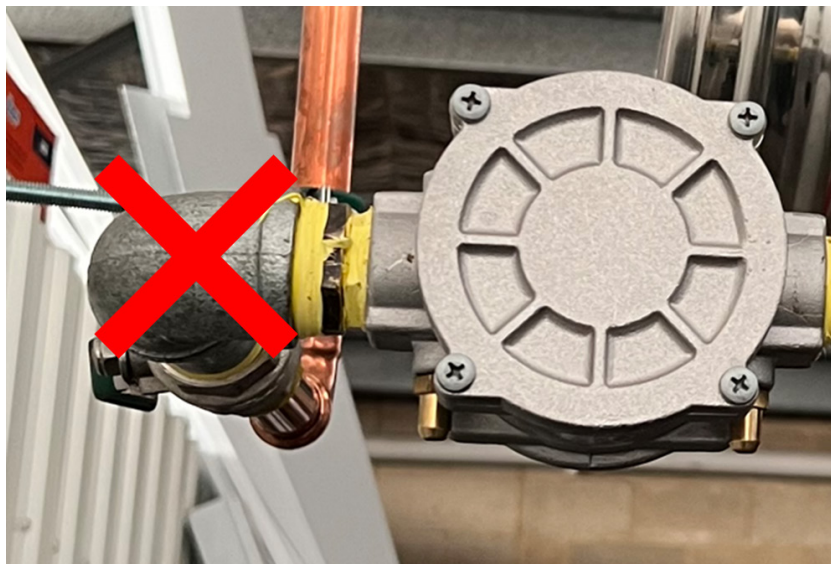
Are you selecting materials and components that are appropriate for use?



When selecting materials, fittings, and components for a gas installation ensure they are compatible with the intended application. At times, we may become complacent with the importance of referring to AS/NZS5601.1:2022

Section 4 Means of conformance – Materials, fittings and components, but doing so can be vital in ensuring compliance, and saving costly expenses in rectification. Table 4.2 is an invaluable quick reference that could be bookmarked or saved for quick reference.

Having a look at the installation above, on the surface everything may appear compliant, a 15kPa gas outlet service in copper tube, with an isolation valve, gas filter, and OPSO Regulator. But, after comparing the materials, components, and fittings used with Table 4.2 are you able to identify the non-compliance? When considering the limitations of Galvanised steel, you will notice that the operating limit of pipe is 100kPa, but standard malleable cast iron fittings (galvanised elbow in image) have an operating limit of only 7kPa. In this instance, the 25mm malleable cast iron galvanised elbow is exposed to an operating pressure of 15kPa. Therefore, to achieve compliance the 25mm malleable cast iron galvanised elbow will need to be replaced with an elbow that is compatible and suitable for the application, with an operating limit above 15kPa. What material and fitting would you use in this instance?



Am I working within my gas license endorsements?

If you are performing work in the gas industry, then you will require a 'Workers Licence' issued by Consumer Business Services (CBS). The scope of work you can perform will be listed on the licence and is based on the qualifications you have presented to CBS on your application.

During audits by the OTR, we are finding considerable numbers of gas fitters working outside of the scope of their licence as well as individuals completing gas fitting work without holding a current gas fitting licence.

In such situations, we will refer the matter to CBS for investigation.

If you are unsure what the scope of your licence is, take a few minutes to read the back of your licence for the specific endorsements/limitations. If there are any concerns or you are unsure what your endorsements include, it is in your best interest to contact

CBS on 13 18 82 and get them to explain the limit of the endorsement listed.

If you have attended and successfully passed recognised certificate courses applicable for your trade, you must provide these certificates to CBS so they can be applied to your licence, if you don't provide these certificates your qualifications will not be included on your endorsement. This will prevent you from legally performing such work that you have been trained for and invested valuable time and money to achieve.

Contractors' Licenses are required for individuals, including partners in a business, and companies if they run a business that carries out or organises plumbing, gas, and electrical work.

To submit an eCoC there must be certification by a **Worker and Contractor** with the appropriate endorsement on their licenses.

Gas leaks detected on appliance connection unions.

Many of our audits are finding gas leaking at appliance connection unions, simple soapy water bubble tests are showing leaks of all sizes from small 'fish egg' bubbles to bubbles blowing off the union.

Contacting the gas fitters involved, they advised they pressure tested the outlet service which they found to be gastight, reinstate gas and purge the gas at the HWS disconnection union but unfortunately left a leak at the union because they didn't complete a simple soapy water test.

It is a requirement that gas installations are gastight before the gas supply is to be reinstated and the service put into operation, leakage tests must comply with Appendix E from the AS/NZS5601.1-2022 gas installation standard including Appendix E.7 testing a connection made after a test procedure.

It is your responsibility to ensure the gas installation that you have been working on is gastight. For gas leaks that already exist in an existing service, you are responsible to advise the owner of the

leak, note it on the gas ECOC, the owner may engage you to rectify the leak.

The OTR recommends gasfitters adopt best practices and (manometer) pressure test all existing gas installations prior to commencing any gas fitting work. If a leak is present the owner can be advised of the fault prior to disturbing the service.

This action avoids disputes as problems are highlighted before work is commenced.



Photos showing different levels of gas leaks at appliance connection points after installation work.

Electronic Above 3kPa submission

August 2022 saw the OTR introduce an electronic above 3kPa submission form to steer away from the existing method of corresponding via email. The electronic form has been a success with contractors, and we have received positive feedback. There may be occasions where we will have to revert to the old method due to the complexity of the submission, but generally, these occasions will be few and far between.

**As a reminder, when the outlet pressure at a gas meter is required above 3kPa, written approval is required from the Technical Regulator.
Please see the process below for an above 3kPa submission.**

The application for above 3kPa should be submitted via the gas fitter. Quite often, business owners or consultants will send the OTR information for the above 3kPa submission, for the electronic submission to work, we only want the gas fitter to send submission details to us, this stops confusion and the misinterpretation of information, by using the form, the OTR will be dealing with one applicant.

How the form works.

1. A gas fitter makes an enquiry to the OTR regarding an above 3kPa submission.
2. A link will be forwarded to the gas fitter via email.

Above 3kPa Submission

3. The gas fitter answers **all** questions on the form and 'submits' the form - the form has the ability for files to be uploaded if needed.
4. An automated email will be sent to the OTR for an inspector to review the application.
5. If the application meets the intent of the standards the OTR inspector will approve the submission, a PDF summary of the application will be sent back to the gas fitter and the gas supplier will be notified that gas can be turned on if the installation meets the requirements of the gas supplier.

(If there is a type B appliance installed, a commissioning gas letter will be required first).

6. If more information is required for the above 3kPa submission, two emails will be sent back to the gas fitter, one advising the gas fitter to create an iApply account, the other advising the gas fitter that more information is required. It is important you create the account first prior to clicking the link in the second email. Once your account is created, you can click on the link in the second email and continue editing your form..
7. Once the gas fitter submits the edited submission, the OTR will be notified the submission is ready for review.
8. This process can go back and forth between the OTR and gas fitter until the inspector is satisfied the submission is complete.

Please remember, the OTR only want to review relevant information regarding the installation, please don't add information for the sake of it as this will only slow the review process down. The OTR also endeavour to review all submissions within two weeks, if the OTR require more information for the submission, this will reset the two-week review process.

Multilayer piping appliance connection restriction

Following up from the last edition of the Regulation Roundup in September 2023 (Issue 52) changes for general gas installations article on multilayer piping when installed as part of a gas service - it is now a requirement that metallic pipe is to be used within the last 1m to the nearest part of the appliance.

Inspections of new homes at 1st fix stage show installers are not complying with this requirement, audits are finding multilayer piping being installed within 1m where a gas appliance will be located. This is a breach of the AS/NZS5601.1-2022 gas installation standard.

The OTR has published Gas Bulletin #60 Multilayer piping-restrictions and limitations [Multilayer piping restrictions and limitations](#) which explains the restriction on appliance connection.

In a nutshell, there is a 1m exclusion zone around gas appliances (including flue systems) from multilayer pipe. When using multilayer pipe, you must transition to metallic piping at least 1m away from the gas appliance. See Figures 1 and 2 below.

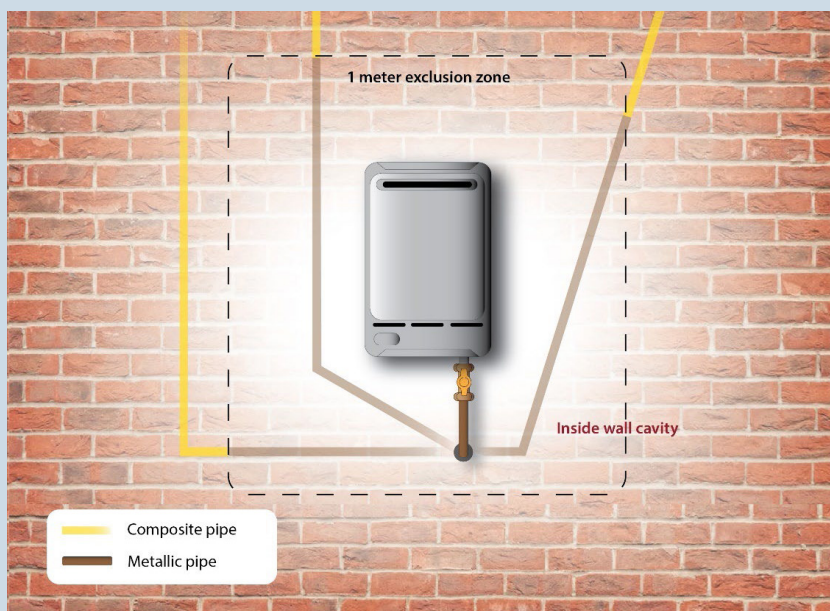


Figure 1: Diagram showing compliant 1-metre exclusion zone around an external model gas appliance.

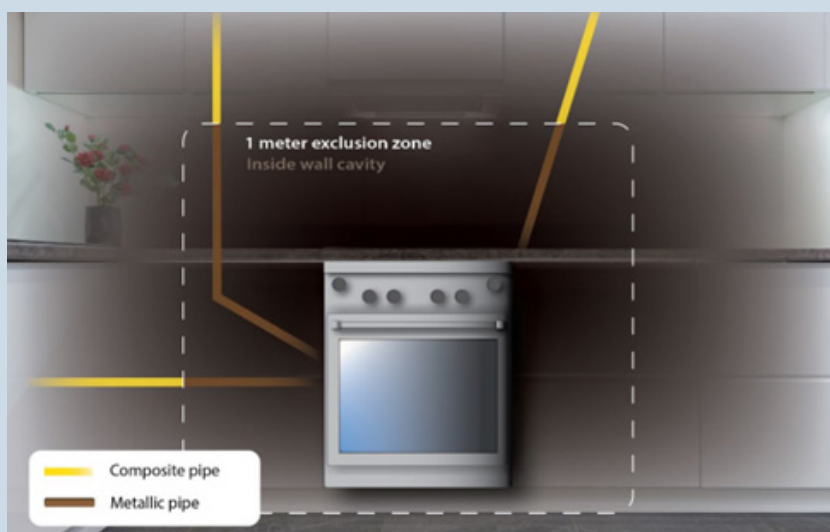


Figure 2: Diagram showing compliant 1-metre exclusion zone around an internal model gas appliance.

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Multilayer piping appliance connection restriction (cont.)

The OTR highly recommends that you transition from multilayer piping in the ceiling cavity to metallic pipe droppers this will ensure there is no multilayer pipework near a gas appliance, see Figure 3 diagrammatical example below.

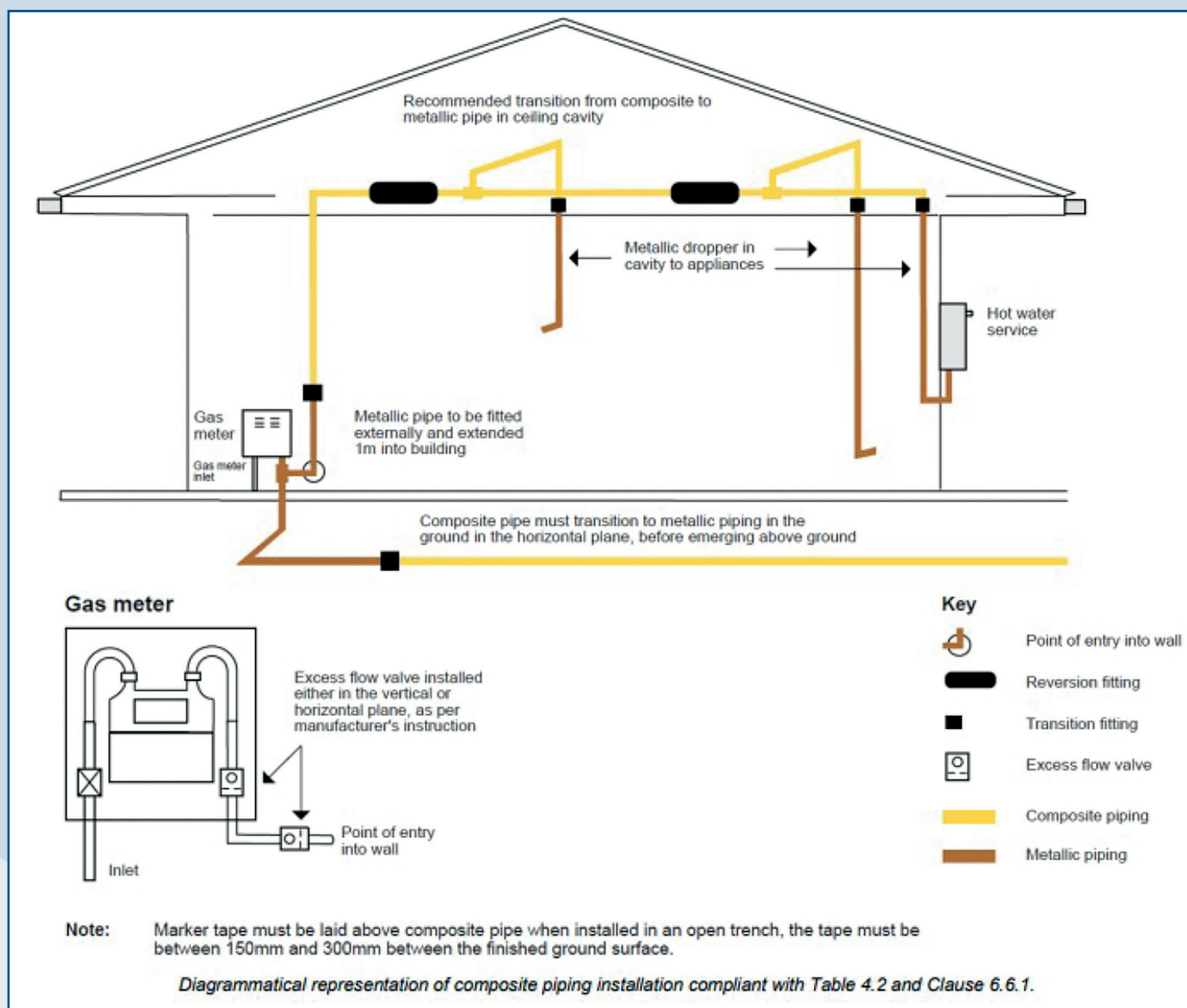


Figure 3: Diagrammatical example of multilayer piping transitioning to metallic pipework.

2024 OTR & Master Plumbers Association Roadshow

The Gas Team will be joining our Plumbing colleagues when presenting this year's Roadshows. Our presentation will be short but to the point. Our focus will be on the changes to multilayer piping, flue terminal locations and clearances between range hoods and domestic cookers in the **new AS/NZS 5601.1-2022 Gas Installation Standard** published on 30 September 2022 and implemented on 31 March 2023. And yes, we will cover the popular audit/incident feedback. Any questions you do have please come and see us after the presentation. We look forward to seeing as many of you as possible.

Recent Gas Safety Recall Notices

Product Safety Recall



Gas Safety Recall **Rinnai**

Gas Storage Water Heater

Which models are affected:

Rinnai Hotflo gas storage 135L water heaters with model code GHF4135N and a Production Code within the following ranges:

RLN135WPA221121 **257** to RLN135WPA221121 **500** and RLN135WPA221230 **001** to RLN135WPA221230 **006**

No other Rinnai products, including electric storage water heaters, are affected.

Where can I find the Model Code and Production Code?

Both are shown on the data-label on the left hand side panel (see **red arrow** on the left). If you are unsure visit gasstoragecheck.rinnai.com.au or call on 1300 364 559.

Why the product is recalled: An internal gas connection may not be adequately secured. This may cause an internal gas leak during operation which will stop the water heater operating. Any subsequent attempts by consumers at re-lighting the burner in accordance with the instructions may result in a flame flash which presents a risk of injury.

Hazard: There is a risk of serious burn injury when a consumer attempts to re-light the product burner.

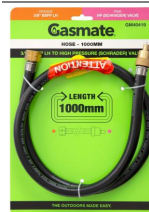
What should I do:

If your water heater is affected, visit gasstoragecheck.rinnai.com.au or call Rinnai on 1300 364 559 to arrange for an authorised service technician to conduct a free in-home safety check on your water heater. If your recalled water heater stops operating you must not attempt to re-light the burner until the technician has completed the safety check. If the burner remains off, the product will be safe. If your recalled water heater is operating normally, it can continue to be used until the technician visits you.

For further details visit gasstoragecheck.rinnai.com.au or call 1300 364 559.

See productsafety.gov.au for Australian product recall information

Product Safety Recall



Gas Safety Recall

Sitro Group Australia Pty Ltd
Gasmate Hose 1000mm High Pressure with Schrader Valve
Model GM40419

Dates sold: 2 October 2023 – 11 October 2023

Identification:

Gasmate replacement hose for use with camping stoves.

3/8" BSPP LH to high pressure (Schrader) valve.

The hose is marked AGA 7309 2Q/23. No sticker or colour disc on the hose or fitting.

Sold from 2 October 2023 - 11 October 2023 in Bunnings only.

Why the product is recalled

The Schrader valve end of the hose may leak when connected to a high pressure camping stove.

Hazard:

There is a risk of serious injury or death if the leaking gas ignites, which may cause a fire and/or explosion.

Action required:

1. Consumers should stop using the hose immediately.
2. Consumers should return the hose to the place of purchase for a full refund.

For further information

For more information, consumers can call Sitro Group Australia on 1300 174 876, 8:00am to 5:00pm Monday to Friday, or email productsafety@sitro.com.au.

PRA2023/19965

See productsafety.gov.au for Australian product recall information

Keep yourself updated by looking on the [ACCC website](http://ACCC.gov.au) for the latest gas safety recall notices.

Commissioning LP Gas Regulators

Gas inspectors undertaking audits are finding many LPG gas regulators are not being commissioned. Generally, testing the operating pressure at the appliance's inlet test points shows the pressures lower than the prescribed 2.75kPa, resulting in gas appliances operating at lower pressures than specified by manufacturers, thus the appliances are not performing to their maximum efficiency.

It is the installer's and service person's responsibility to ensure there is adequate supply to the gas appliances.

The main reasons for supply being diminished are:

- An undersized gas service
- Gas regulator undersized
- Gas regulator not commissioned *
- Or a combination of these

* Normally the outlet of the integral 2-stage regulator located at the cylinder should be set to an operating pressure of 3kPa, this allows for the correctly sized outlet service with an allowable pressure drop of 0.25kPa to provide 2.75kPa to the appliance inlets.



THIS TAG MUST NOT BE REMOVED

If an inspector from the OTR has isolated the gas supply to an installation and placed a danger tag on it, if you have been engaged to rectify and eliminated the **DANGER**, you need to contact the OTR and advise of the rectification work. An eCoC must be submitted immediately outlining full works carried out and photos must be attached. Only then will you be instructed by the inspector that the tag can be removed if satisfied with rectification.

Removal of a **DANGER** tag without contacting the issuing officer is an offence under the Gas Act 1997 Section 68 – Disconnection of the gas supply.



Warning for LP Gas Cylinder Adaptors

LPG barbecue cylinders caused significant safety incidents in the past. As a result, a transition to safer LPG cylinder valves and new LPG appliance connections occurred across 2021-2022.

Those new cylinder connections are known as Type 27 (LCC27) and do not allow for gas to flow when the valve is open unless the appliance hose assembly is securely connected to the cylinder.

From April 2021, a transition to replacing Type 21 (POL) valves on cylinders, up to 10Kg and portable gas appliances' connecting to Type 27 (LCC27) connections was introduced.

From 1 April 2022, the Type 27 (LCC27) connections were mandatory on all new BBQs and other outdoor LPG appliances with a hose assembly, only appliances made before this date can still be sold with the old Type 21 (POL) connection.

The new LCC27 cylinder valve is compatible with both Type 21 (POL) and LCC27 appliance hose connectors.

The old POL cylinder valve is only compatible with Type 21 POL connectors, it is not compatible with LCC27 connectors (see figure 1).

Those existing cylinders and appliances with the POL connectors can continue to use these POL valves until the test date of the cylinder and throughout the life of the appliance.

Those with new appliances, with the LCC27 hose connection, must ensure they upgrade their cylinders, with the old POL valve, to the new LCC27 valve.

Cylinders with the new LCC27 valve are readily available at cylinder "swap and go" retailers making it extremely easy to upgrade to the new valve.

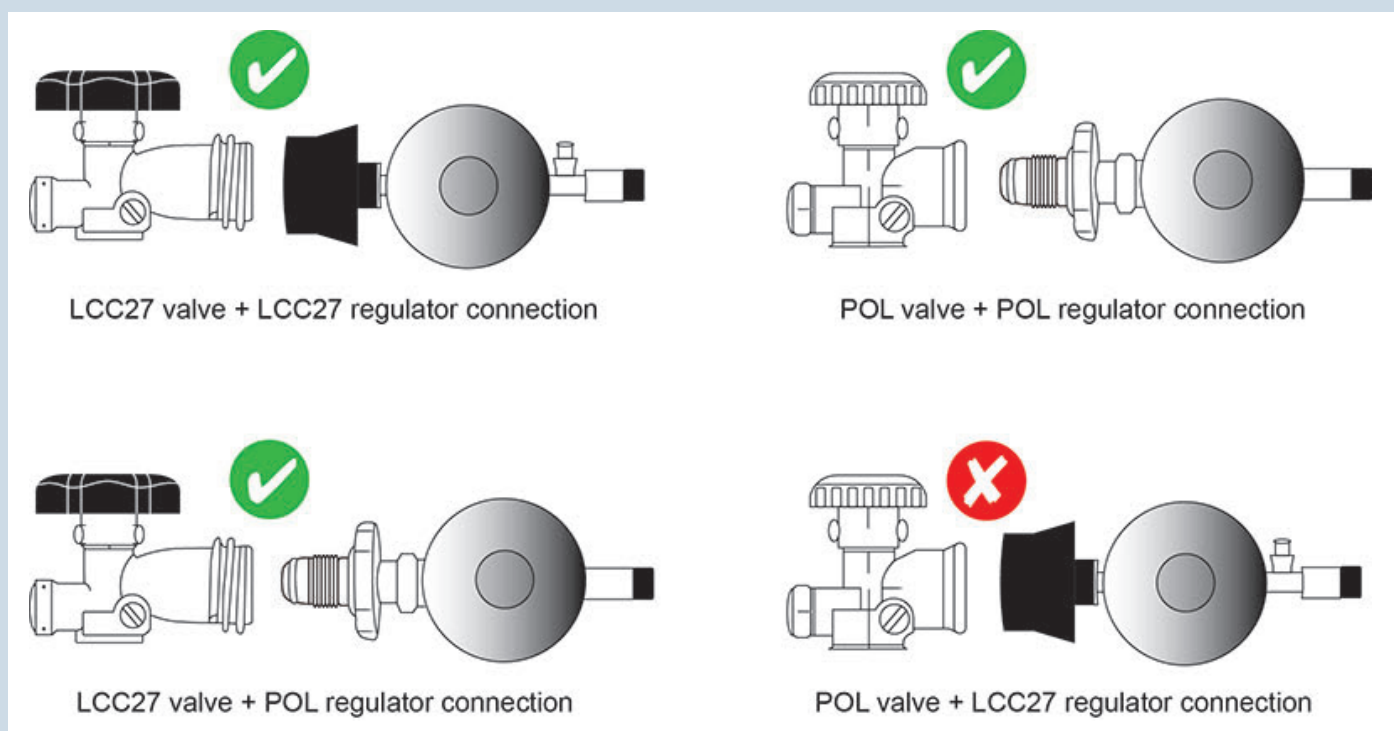


Figure 1: Valve and POL connection compatibility

Since the transition occurred, adaptors started to appear on the market. They connect new Type 27 (LCC27 – see Figure 2) appliance hose connections to older gas LPG cylinders with Type 21 (POL) cylinder valves (see Figure 3).

These adaptors create a safety risk to consumers, overriding the improved safety features of the new LCC27 valves.

A homeowner recently received burns as a result of a fire at an LPG gas cylinder in Western Australia. The injured person was hospitalised for further treatment.

It is known that an adaptor was used to convert an old Type 21 (POL) cylinder valve outlet to the new Type 27 (LCC27) hose connection.



Figure 2: Regulator/hose assembly with Type 27 (LCC27) and Type 21 (POL) appliance connection

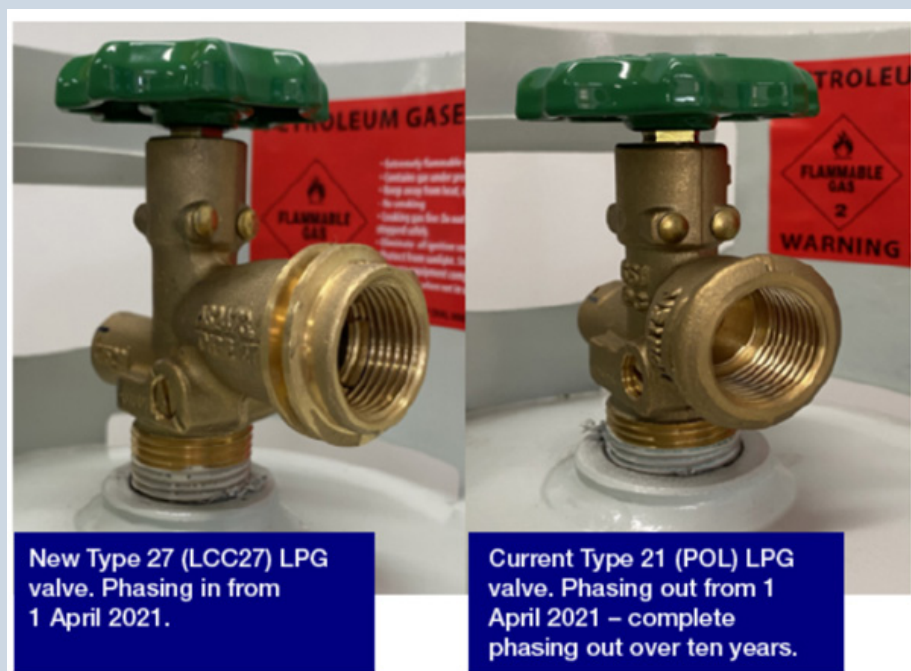


Figure 3: Type 27 (LCC27) and Type 21 (POL) cylinder valve

Safety risk when using adaptors: These adaptors (Figure 4) are connected between newer appliances and older gas cylinders.

The Type 21 (POL) LPG cylinder valve has a left-hand thread. The Type 27 (LCC27) appliance connection has a right-hand thread. This makes it extremely difficult to seal them together – tightening the LCC27 appliance hose connections loosens the adaptor for the Type 21 (POL) cylinder valve thus creating the risk of a high-pressure gas leak.

Adaptors that connect the new and safer LCC27 appliance hose connectors (hose fittings of new BBQs and other LP gas appliances) with the old Type 21 (POL) LP gas cylinder valves can cause gas leaks potentially causing serious injuries to people and damage to property.

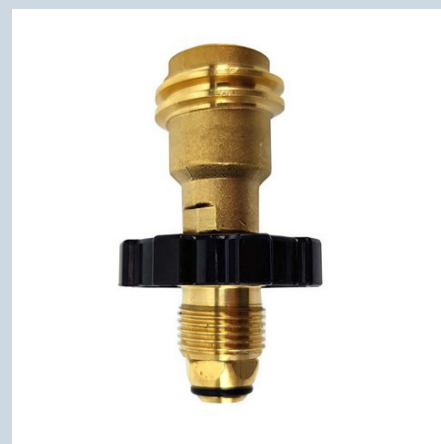
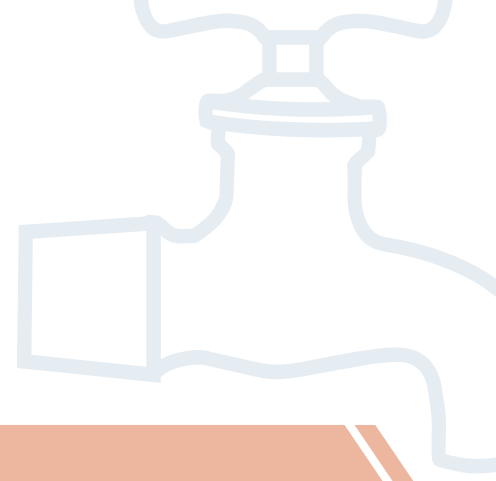


Figure 4: LCC27 to POL adaptor



Plumbing Bulletin



Plumbing Team – Under New Management – Mr Todd Lewis

The Office of the Technical Regulator, Plumbing Inspectorate is proud to announce the appointment of the New Manager of Plumbing Regulation, Todd Lewis.

After a diverse 30+ year career in the plumbing industry, Todd's second-generation plumbing pathway began with Western Plumbers in 1990, and subsequently started his own plumbing business, after completing his apprenticeship. Following this saw a return to Hindmarsh Plumbing for approximately 7 years. Moving on to Bestec and then Systems Solutions Engineering. During which time, provided documentation for several iconic projects both in SA and nationally.

In 2017, Todd turned his focus to a regulatory environment and joined the OTR, where he enjoyed conducting audits, educating plumbers and consultants in the field, on the practical application of the Australian standards and National Construction Code. Todd's ability to negotiate equitable outcomes, saw him highly regarded among his peers, as his eye for detail and unequalled fairness soon earned him respect among the greater plumbing industry. Alongside his colleagues, Todd took the lead, charging into many of the complex

plumbing audits, including significant projects such as the new Royal Adelaide Hospital and the Adelaide Airport.

September 2023 saw Todd jump up to backfill the Plumbing Regulation Manager's position. His knowledge and understanding played a pivotal role in ensuring a smooth transition from the previous manager, as he continues to be a dynamic force in upholding the regulatory standards.

Reflecting on his auditing career, Todd recognizes the daily challenges he faced early on as a Plumber as a period of professional growth and personal fulfilment. As such he has dedicated his career to the future development of our industry.

Todd regularly expresses his gratitude for the opportunities he has been given throughout his career. Especially to all those who have shared his trench, he looks back on his great foundations, with a sense of excitement for the future.

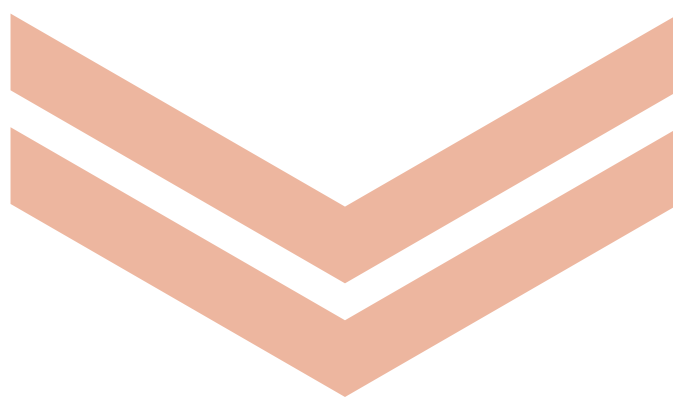
We all express our genuine appreciation for his dedication, new leadership, and the positive influence he will have on our organisation and the plumbing industry.

NEW Non-Drinking Water PAN

OTR Plumbing has recently published an updated Plumbing Advisory Note on Non-drinking water installation. This note details the requirements for the design, construction, installation, replacement, repair, alteration, and maintenance of any part of a drinking water service.

South Australian Non-drinking water installations are deemed fit for purpose when applied in conjunction with the Plumbing Code of Australia (PCA), The SA variation, which is supported by AS/NZS3500.1 and the OTR's Non-drinking water guidelines.

Non-drinking water installations should be treated with a high degree of caution. Understanding the risks associated with the type of non-drinking water and utilising recommended control methods, such as colour coding or markings, physical separation of pipework and separation tests.



Office of the Technical Regulator

Installation of non-drinking water (recycled water)

Plumbing Advisory Note

Revised December 2023

The Office of the Technical Regulator (OTR) regulates onsite non-drinking (recycled) water installations.

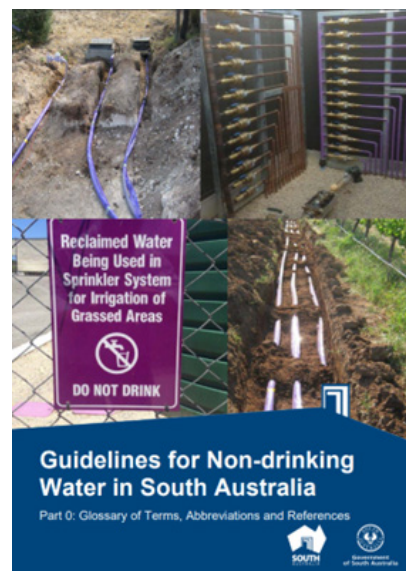
The *National Construction Code (NCC), Volume 3 - Plumbing Code of Australia (PCA)* sets out the requirements for design, construction, installation, replacement, repair, alteration and maintenance of any part of a non-drinking water service (recycled water).

Plumbing and appropriately licensed irrigation contractors carrying out work on non-drinking water services (recycled or reclaimed water) for residential, commercial, industrial and recreational properties/areas in South Australia **must**:

- Ensure all work complies with the PCA and AS/NZS 3500.1
- Use non-drinking water service pipework that is a purple colour no darker than P24 Jacaranda or P12 Purple and not lighter than P23 Lilac.
- Ensure all underground pipework has marking tape that conforms to AS/NZS 2648.1. The tape must be run above the pipe longitudinally and attached to the pipework every 3 meters.
- **Marking tape should be labelled:**
RECYCLED OR RECLAIMED WATER - DO NOT DRINK.
 - When purple coloured pipework is not installed underground (eg blue line PE) the pipe must be easily identified by additionally installing close fitting durable purple sleeving, netting or spirally wrapped tape completely covered.
- Book an audit with the OTR for:
 - All above ground, in-wall and in-ground non-drinking water installations.
 - If making an authorised connection to a non-drinking water meter.
 - Non-drinking water supply pipework for irrigation purposes, including backflow prevention requirements.
 - Drinking water supply pipework for irrigation purposes, including backflow prevention requirements.

Booking an audit with the OTR

- You can book an audit by calling 1300 884 055 or online at plumbbooking.sa.gov.au no later than 3pm the day before the audit is required.
- You must ensure the property is accessible at the nominated inspection time for in-wall and in-ground pipework.
- If the work is not inspected within 20 minutes of the booking time, plumbers may proceed backfilling or concealing pipework within the walls or ceilings.
- You must also provide the OTR and the owner/occupier of the property with an electronic Certificate of Compliance (eCoC) within seven days of completing the work.



Guidelines for non-drinking water installations can be found by visiting the following link and selecting the non-drinking water tab:
[Plumbing trades \(otr.sa.gov.au\)](http://otr.sa.gov.au)

otr.sa.gov.au



Government of
South Australia

Temporary bypass adjacent to meters

When the non-drinking water has not been activated by the water industry entity, a temporary bypass must be installed for the purpose of testing and commissioning.

This bypass must be adjacent to the water meters and in an accessible location. Examples of the temporary bypass can be seen in Figure 1. The bypass must be removed when the non-drinking water service is activated. This can only occur upon confirmation that there are no cross-connections within the property by following and verifying the non-drinking water commissioning procedure detailed in AS/NZS 3500.1 and with the network utility operator's authorisation.

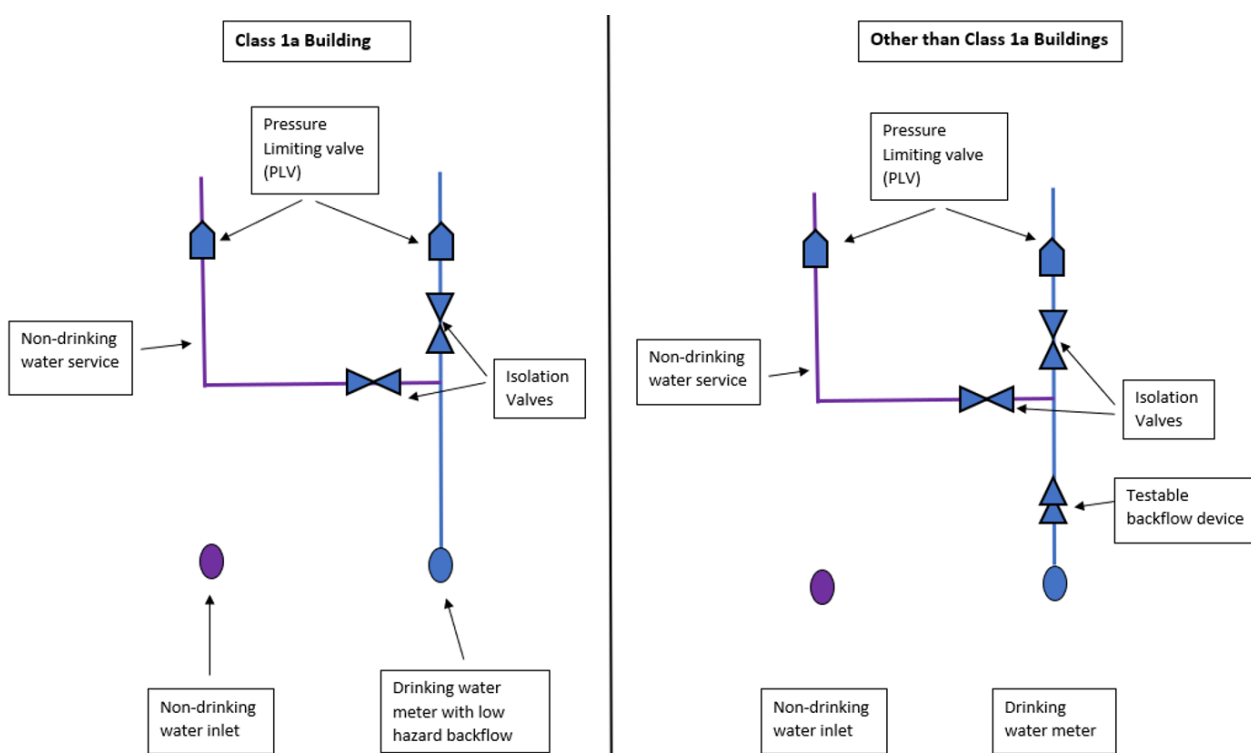


Figure 1: Examples of connection between non-drinking water and drinking water services

Temporary bypass in a secondary alternative location

As building envelopes will sometimes cover the entire boundary of the property, the temporary bypass may have to be installed in a secondary alternative location. This may happen when the water meters are located in the footpath and there is no available garden bed to facilitate a temporary bypass adjacent to the meters. In situations where the temporary bypass cannot be installed adjacent to the water meters, it can be installed in a secondary alternative location as follows:

- Attached above ground to an external wall of the building, or
- Inside a garage, or
- In an accessible location that will not cause nuisance or undue damage.

Figure 2 on the next page provides an example of a temporary bypass in cases where it cannot be provided at the meter locations.

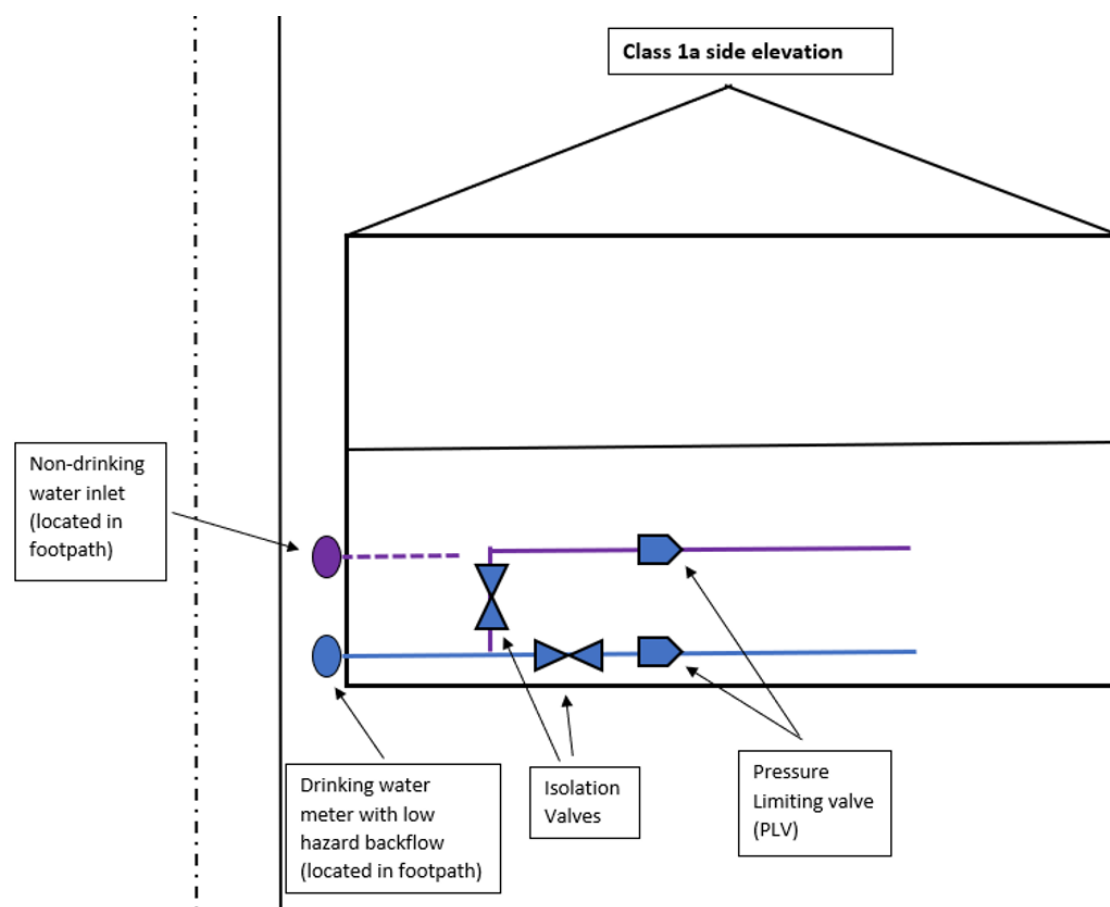


Figure 2: Connection between non-drinking water and drinking water services in secondary alternative location.

Cross-connection test (SA Water sites)

A cross-connection test must be conducted by the plumbing contractor who installs the non-drinking water system. In addition, plumbing contractors are required to book a cross-connection test with SA Water by calling 7424 1360 by 3pm the day before the test is required.

Cross-connection test (other water entity sites)

A cross-connection test must be conducted by the plumbing contractor who installs the non-drinking water system. An additional cross-connection test is to be performed by the water entities plumbing contractor at the time the non-drinking water meter is installed. It is the responsibility of the plumber, builder or owner to contact the developer to arrange for the cross-connection test.

An eCOC for the non-drinking water (in-wall or in-ground) and cross-connection test is forwarded to the owner/developer of the property and the OTR within seven days of completing the work.

Plumbers are required to:

- Install a temporary bypass to ensure that only drinking water is used to conduct the cross-connection test.
- Install compliant signage and taps (as per Figure 3 on next page)
- Ensure all pipework, including the risers to garden taps, is identified as non-drinking water
- Ensure all exposed plastic pipework is protected from direct sunlight.



Figure 3: Non-drinking (recycled) water signage and tap

Maintenance

Property owners with non-drinking water (recycled) services are required under the *Water Industry Act 2012 (S69)* to ensure that those services are maintained in operational compliance.

Compliance

The OTR conducts audits of non-drinking water installations including final inspections. The *Water Industry Act 2012* has provisions for the OTR to expiate/prosecute plumbers for non-compliant plumbing installations and or for not booking the appropriate inspections.

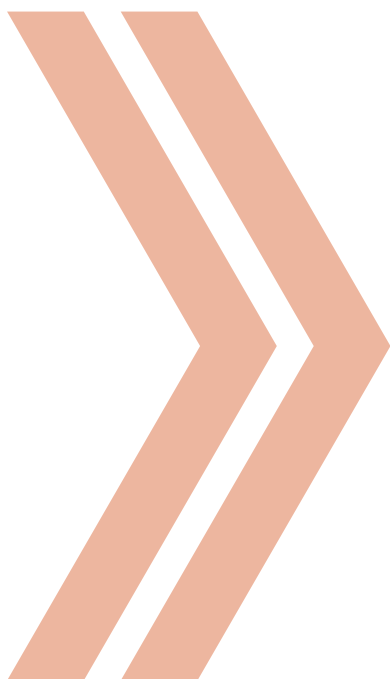
For more information, please contact the OTR Plumbing trades team using the details in the footer below.

Contact the Office of the Technical Regulator for more information

Online otr.sa.gov.au

Email otr.plumbregulator@sa.gov.au

Phone 1300 760 311



eCoCs – Housekeeping

All Plumbers will need to check their eCoC portal and finalise any old draft certificates of compliance as an urgent priority. Your prompt attention on this matter is appreciated.

A search of the Office of the Technical Regulator's (OTR) electronic Certificate of Compliance (eCoC) database has revealed eCoCs that have been created. However, not submitted or certified, many of which our outstanding for a period exceeding 12 months.

By creating an eCoC, and not finalising the certificate, you could risk being expiated for not certifying and submitting the eCoC, within the prescribed timeframes under the *Water Industry Act*.

The Scheme for Plumbing Certificates of Compliance published pursuant to section 69(2) of the *Water Industry Act 2012* (the Act), requires eCoCs to be submitted within 7 days of completion of work.

To comply with your obligations under the Scheme, please finalise all outstanding eCoCs and submit the eCoCs at your earliest convenience.

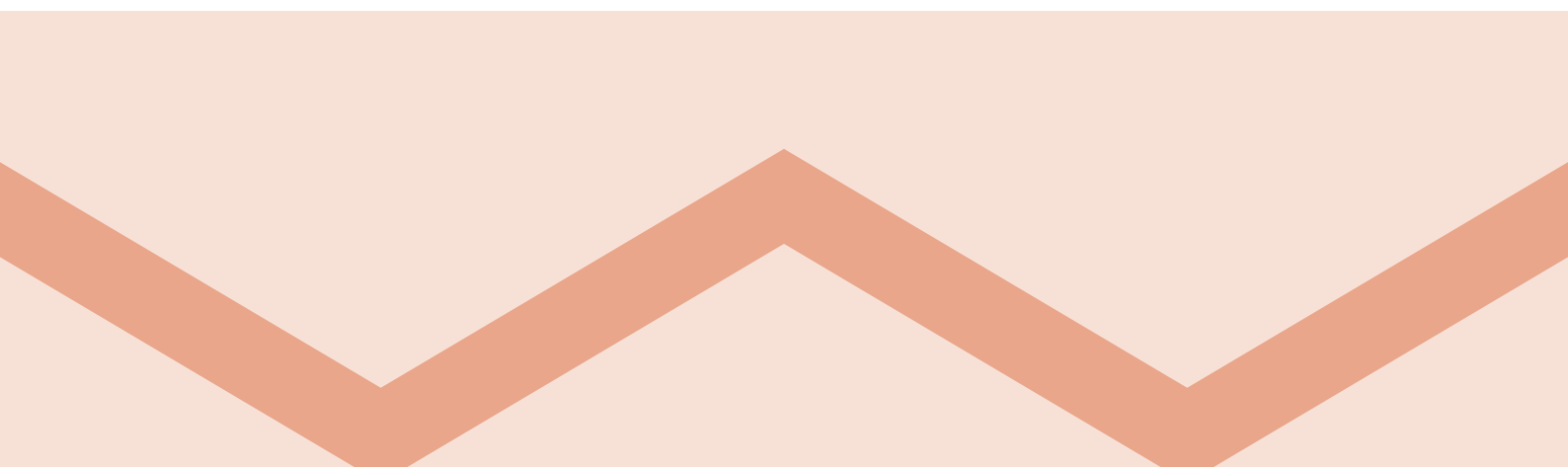
If you have any eCoCs are no longer valid, please either:

- Deactivate the draft eCoCs by clicking on the eCoC number on your My eCoCs screen, and then clicking the button marked Deactivate eCoC; or
- Contact the OTR's eCoC team on otr.ecoc@sa.gov.au with a list of eCoC numbers to de-activate them accordingly.

All eCoCs must be Certified by an appropriately Licenced Plumbing Worker (registered as an advanced plumber who is "able to perform any plumbing work") and by a Licensed Contractor (who can contract for plumbing).

Further information pertaining to who can certify plumbing work can be found on the Consumer and Business Services (CBS) website:

<https://www.sa.gov.au/topics/business-and-trade/licensing/building-and-trades/licensing>



Separation of below ground Drinking Water services

OTR Plumbing regulation team auditors have noted an increase in non-compliant common trench water service installations.

When multiple water services are proposed to be contained in one trench, the separation of each service must always be achieved.

The intent of separating services is to provide a means to allow repair and extension of the services in the future.

The minimum below-ground separation of Drinking water services is 100mm. This includes Communications, Gas, Electrical or any other service, the larger the service, so are the separation requirements.

Note: Regulation 34 of the *Water Industry Act & Regulations 2012* states “*pipes **must** not lie across allotment boundaries*”. Each property should be serviced with a network utility supply to avoid remote indirect connections.

SERVICE TYPE	WATER SERVICE Size Type	
	Drinking Water LESS than 65 mm Separation distance	Drinking Water EQUAL to or GREATER than 65 mm Separation distance
Below ground Consumer GAS – As per 3500.1:2021- 5.3.3.2 (a)&(b)	100 mm	300 mm
Below ground ELECTRICAL supply cable As per 3500.1:2021 - 5.3.3.1 (a) &(b)	100 mm	300 mm
Below ground DRAINAGE . As per 3500.1:2021 - 5.3.3.4.(b) (i)	100 mm	300 mm
Underground unprotected ELECTRICAL i.e. Direct buried greater than 1000v As per 3500.1:2021 - 5.3.3.1.(c)	500 mm	500 mm
Underground Earth electrode less than 1000v As per 3500.1:2021 - 5.3.4	500 mm	CONTACT REGULATOR
Underground Earth electrode greater than 1000v As per AS/NZS3500.1:2021 – 5.3.3.1 (c) NOTE 3	CONTACT REGULATOR	CONTACT REGULATOR
Below ground NON-DRINKING WATER AS/NZS 3500.1:2021 – 9.3.2.2	300 mm	300 mm
Underground water service and any other service other than consumer gas, electrical, communication service As per AS/NXZS 3500.1:2021- 5.3.9 (b)	100 mm	300 mm
Underground obstructions As per 3500.1:2021 cable 3500.1 - 5.3.5	100 mm	300 mm
Any underground service crossing over another service. As per AS/NZS3500.1:2021 5.3.4	100 mm	400 mm

Separation of below ground Drinking Water services (cont.)

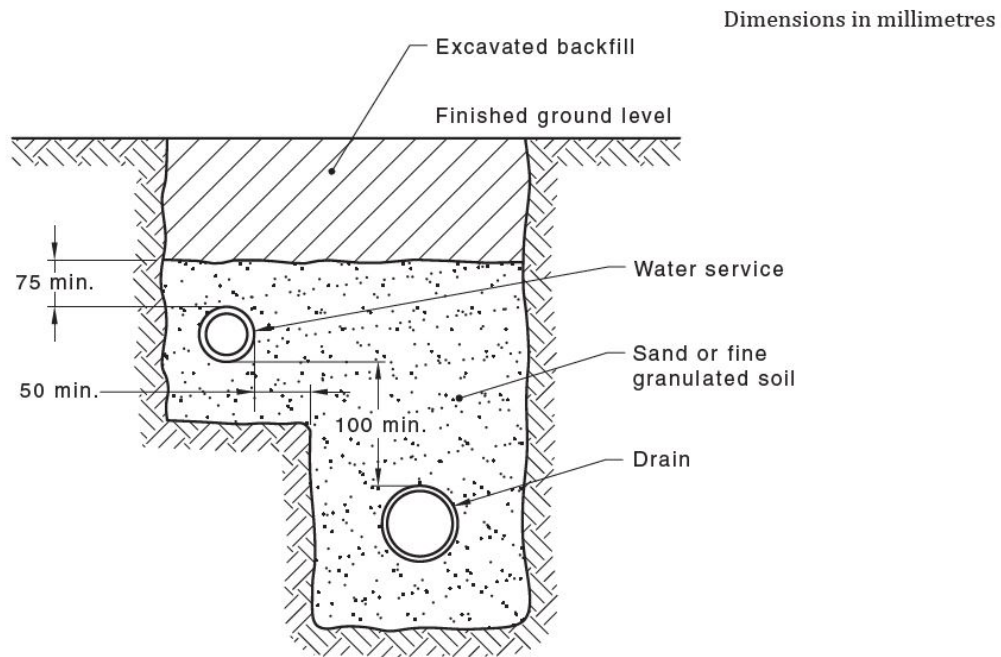


Figure 3.6.6 — Typical shared trench

See below examples of what the OTR is finding when conducting audits on-site. When it comes to the maintenance and or repair of these types of installations, how does the practitioner identify what each pipe is serving?

This is not acceptable.



Expiation Notices

The OTR Plumbing Inspectorate has issued multiple expiations to Plumbing Contractors for failing to comply with their obligations under the *Water Industry Act*. One of the most common faults has been the failure to request an audit.

The eighteen audit categories available to book can be found at:

[Plumbing Advisory Note - Categories for plumbing audit bookings \(energymining.sa.gov.au\)](http://energymining.sa.gov.au)

Location	Non-Regulatory action committed	Result
Aldgate	No Plumbbooking Inspection request lodged	Expiation notice issued
Lightsview	No Plumbbooking Inspection request lodged	Expiation notice issued
Aldinga Beach	No Plumbbooking Inspection request lodged	Expiation notice issued
Hope Valley	No temperature control	Expiation notice issued
Magill	No Plumbbooking Inspection request lodged	Expiation notice issued
Marleston	No Backflow prevention device	Expiation notice issued
Para Hills	Cross connection	Expiation notice issued
Lightsview	Non-drinking water not identified	Expiation notice issued
Edinburgh	No Plumbbooking inspection request lodged	Expiation notice issued
<p>N.B: One non-compliance could include up to three expiable offences. Expiation notices start from \$414. Re-inspection fees may apply</p>		

Common Plumbing Non-Compliance

The inspectors have compiled a list of common faults that we see all too often. Take note of some of these simple errors, it may save you some time and money. The table also shows the related plumbing legislation.

Plumbing Category	Common non-compliance in each category	Note
Sanitary Plumbing Systems	<ul style="list-style-type: none"> - Oblique or 45° junctions not set up correctly. - Installation not tested prior to backfilling. 	<ul style="list-style-type: none"> - See AS/NZS3500.2:2021 4.9.1.2 - See AS/NZS3500.2:2021 15.2
Sanitary Drainage Systems	<ul style="list-style-type: none"> - Insufficient fall - Overflow relief gullies without sufficient height - Sanitary drainage not transferred to a network utilities operators drainage system or other approved disposal system. - Sanitary drains insufficiently supported with concrete - Installation not tested prior to backfilling 	<ul style="list-style-type: none"> - See AS/NZS3500.2:2021 table 3.4.1 - See AS/NZS3500.2:2021 4.6.6.6 - See PCA section C part C1P1 Disposal - See AS/NZS3500.2:2021 5.3 - See AS/NZS3500.2:2021 15.2
Drinking Water Services	<ul style="list-style-type: none"> - Insufficient backflow protection - Insufficient support with brackets, clips, or hangers - No pressure limiting valves (PLV) 	<ul style="list-style-type: none"> - See PCA part B5. - See AS/NZS3500.1:2021 Table 5.7.4 spacings - See AS/NZS3500.1:2021 3.3.4
Non-Drinking Water Services	<ul style="list-style-type: none"> - Cross-connection with drinking water services, separation test not correctly performed - Insufficient separation between services - Location of loop - No identification of pipes with lilac colour and no appropriate marking of buried pipes 	<ul style="list-style-type: none"> - See AS/NZS3500.1:2021 9.8.2 - See AS/NZS3500.1:2021 9.3.2.2 (a) - See AS/NZS3500.1:2021 9.5 - See AS/NZS3500.1:2021 9.6.3
Heated Water Services	<ul style="list-style-type: none"> - Insufficient support - Drain lines not discharging in an approved manner - Expansion/pressure relief valves - No temperature control at outlets used primarily for personal hygiene purposes - Insufficient thermal insulation 	<ul style="list-style-type: none"> - See AS/NZS3500.4:2021 Table 4.5.4 - See PCA SA B2D9 (c) - See PCA SA B2D9 (a) - See PCA SA B2D5 - See AS/NZS3500.4:2021 8.2.1
General	<ul style="list-style-type: none"> - Pipes lying across allotment boundaries. - Non-WaterMarked products used. - Pipes in sleeves not lagged, nil separation of services 	<ul style="list-style-type: none"> - See Water Industry Regulations, Part 7 section 34 - See PCA A5G4 (1) - See AS/NZS3500.1:2021 5.3.2 to 5.3.5

Buried Pumped Discharges or Rising Mains

Pumped Discharges or Rising Mains Installation and Identification Requirements.

Pumped discharge installations are only permitted where it is not possible to gravitate to the network utility operator's sewer connection. Connection of pumped discharge to sewer infrastructure requires assessment of the proposed discharge and authorisation to proceed. Application forms may be downloaded from SA Water's website [Application-for-Private-Pumping-Installation.pdf](https://www.sawater.com.au/Application-for-Private-Pumping-Installation.pdf) ([sawater.com.au](https://www.sawater.com.au))

The OTR also requires a Hydraulic design submission [Hydraulic designs](https://www.energymining.sa.gov.au/Hydraulic-designs) ([energymining.sa.gov.au](https://www.energymining.sa.gov.au)) to be provided.

Where authorised, installation of a private pumping system including discharge pipework shall comply with all relevant sections of AS/NZS 3500 series of Plumbing and drainage standards and the Plumbing Code of Australia (PCA).

Materials selected for private pumping systems shall be in accordance with AS/NZS 3500.1 Plumbing and drainage standard – Appendix B – Demonstrating products and materials are fit for purpose.

Common materials selected for pumped discharge pipework:

- "Cream Stripe" Polyethylene (PE) pipes and fittings in accordance with AS/NZS 4130 and AS/NZS 4129
- Unplasticized polyvinyl chloride (PVC-U) pipes and fittings in accordance with AS/NZS 1477

NOTE: All Buried pumped discharge pipework and rising mains shall be placed in close-fitting durable sleeving or continually spirally wrapped. The sleeving or spiral wrapping shall be identified for the full length with the following statement: "Sewer Rising Main" or "Pumped Waste Discharge" in accordance with AS 1345.

All plumbing work associated with the private pumping installation and its connection to the sewerage system shall be undertaken by an appropriately licensed Plumbing Contractor who is required to book the installation with the OTR for an audit.

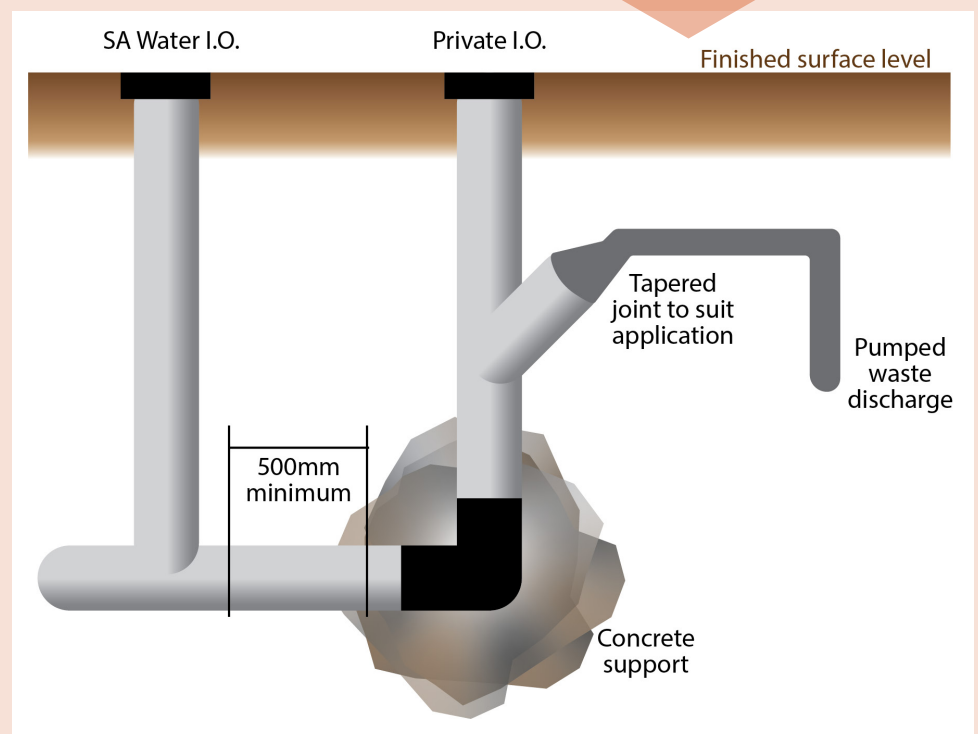
An electronic certificate of compliance and as-constructed sanitary drainage drawing must also be issued to the customer by the licensed plumbing contractor within seven days of completing this work.

If you have any questions about Pumped Discharges or Rising Mains Installation and identification requirements or the AS/NZS 3500 Plumbing and Drainage suite, please contact the OTR.

Pressure to gravity connection

Pumped discharges shall discharge into a drain, with the connection point being a minimum of 2.5m from any other connection and entering at 45°. At the point of connection allow 500mm before deviating the gravity sewer to accommodate a pressure discharge.

See Figure 1::



Feedback sought on Draft Updated Non-Drinking Water Guidelines

The [Office of Technical Regulator \(OTR\)](#) is seeking your input during the update to the Non-Drinking Water Guidelines.

You are invited to review the proposed draft and provide comments or feedback to ensure that the updates of the guidelines remain relevant to the current needs and practices within the water industry.

Key information

Below are the proposed updated guidelines in full. You can also view a [short summary \(PDF, 166.1 KB\)](#) of the proposed changes.

Part 0

[Part 0 - Glossary of Terms, Abbreviations and References \(PDF, 845.3 KB\)](#)

Helps with interpreting terminology and abbreviations used in parts 1 and 2 of the guidelines.

Part 1

[Part 1 - Infrastructure \(PDF, 7.3 MB\)](#)

Provides an overview of non-drinking water as an alternative water supply, and the requirements associated with non-drinking water infrastructure. This part includes

legislative requirements, planning and design, implementation, monitoring, management, reporting and auditing for non-drinking water infrastructure.

Part 2

[Part 2 - On-site Plumbing \(PDF, 9.0 MB\)](#)

Provides detailed information related to on-site non-drinking water installations. Please also visit our OTR Plumbing trades section for more information about on-site plumbing trades and installations.

Have your say

Comments or feedback can be provided to the OTR by:

- filling out this [Comment Template form \(DOCX, 143.7 KB\)](#)
- sending it via email to dem.otrwsinfrastructure@sa.gov.au.

Please provide any comments or feedback by Friday 8th March 2024.

Your input will ensure that any comments and/or feedback are adequately understood and considered during the update process of the Non-Drinking Water Guidelines.

How to prevent cross-connections

Across SA there are various areas where non-drinking water is piped alongside drinking water. To ensure that the right water is flowing through the right pipes, it is essential that [the Standard for dual reticulation infrastructure](#) is followed.

The purpose of the Standard, which came into effect on 1 July 2021 is to prescribe the minimum requirements and responsibilities of all parties involved in dual reticulation infrastructure to ensure the safety and reliability of the water services provided to South Australian consumers. The Standard provides clarity on mandatory requirements related to the installation and connection of dual reticulation systems to dwellings and standardises industry practice to prevent cross-connections.

The Standard for Dual Reticulation Infrastructure was developed in response to an increasing number of incidents and issues associated with dual reticulation supply in the State in recent years.

The Office of the Technical Regulator (OTR) identified inconsistencies in industry practice between the various parties (i.e. developer, builder, plumber), thus increasing the risk of incidents occurring.

The Standard for dual reticulation infrastructure provides a clear practice for industry to follow, removing the risk of misidentification of services and simplifying the responsibilities of each party. The aim of the Standard for dual reticulation infrastructure is to eliminate cross-connection and mis-connection incidents in dual reticulation supply.

If you are unsure don't make the connection

If something does not look right, it might not be. The Standard for Dual Reticulation specifies the following requirements for dual reticulation which affects the plumbing installation downstream of the meters.

2.1 – Water meter assembly and associated fittings

- (i) Prior to installation, non-drinking water meters including pipes and fittings associated with the meter shall be powder coated or epoxy painted in a permanent purple colour no darker than Jacaranda P24 or Purple P12 and no lighter than P23 Lilac.

- (ii) The non-drinking water meter shall not be interchangeable with the drinking water meter. NOTE: This may be achieved by dissimilar thread connections for the meter connections to the inlet and outlet tail pieces.
- (iii) There shall be a minimum of 300 mm separation between the drinking water and non-drinking water meters and the non-drinking water meter shall be located on the left-hand side of the drinking water meter, when facing the property from the street.
- (iv) Where the drinking water meter and non-drinking water meter are located in inground boxes, they shall be in separate boxes. The content of all inground boxes shall be clearly and permanently identified on the cover of the box.
- (v) In dual reticulation areas, backflow prevention devices shall be installed downstream of the drinking water meter connections at the property in accordance with the Plumbing Code of Australia. NOTE: Backflow prevention devices may be required to be installed to the non-drinking water meter connection points.

2.2 – Water infrastructure pipework

- (i) The drinking water meter shall be installed, activated, and commissioned prior to activating and commissioning the non-drinking water service.
- (ii) The non-drinking water isolation valve shall be locked off prior to commissioning.
- (iii) Non-drinking water infrastructure pipework shall be permanent purple colour no darker than Jacaranda P24 or Purple P12 and no lighter than P23 Lilac and labelled as non-drinking water.
- (iv) Labelling and identification of non-drinking water pipework shall be in accordance with AS 1345.
- (v) Purple marking tape identifying the content of the pipe shall be installed above the buried non-drinking water pipework. EXCEPTION: Marking tape may be omitted where below ground non-drinking water pipework is directionally bored provided that: (a) Clause 2.2.(iii) and 2.2.(iv) above are complied with; and (b) The location of non-drinking water pipework is recorded and documented so that it is readily available to any person involved with excavation work in the vicinity of the non-drinking pipework.

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How to prevent cross-connections (cont.)

- (vi) There shall be a minimum 300 mm separation between the inground drinking water and non-drinking water pipework.

NOTE: For further information on separation distances from other utility services, refer to the relevant Standards or Codes of practice.

If you are a plumbing industry practitioner and you cannot confidently differentiate between which service is the drinking water service and which is the non-drinking water service, do not continue with the installation. There is historical network utility infrastructure in South Australia that was installed prior to the uptake of the 2021 dual reticulation standard. If you come across this, please consult the network utility operators so they can provide confirmation of the service identification if it is not clearly visible or is not consistent with the dual reticulation standard.

For on-site plumbing installations relating to non-drinking water please refer to the OTR advisory note for this topic by visiting the following web page:

[Installation of non-drinking water \(recycled water\) \(energymining.sa.gov.au\)](https://energymining.sa.gov.au/installation-of-non-drinking-water-recycled-water)

To find out more information, follow the link to [Infrastructure technical regulation](#) and scroll down to Water and Sewerage Infrastructure, Standards, and Standard for Dual Reticulation Infrastructure.

The Standard is available at the following webpage:

[Standard for dual reticulation infrastructure](#)



List of Common Australian Standards



Australian Standard	Current Publication	Current Status
ELECTRICAL STANDARDS		
AS/NZS 3000: 2018 +Amend 1 & Amend 2:2021` <i>Wiring Rules</i>	30/04/2021	
AS/NZS 3000:2018 Amend 3 <i>Wiring Rules</i>	19/05/2023	
AS/NZS 3001.1 : 2022 <i>(Caravan) Electrical Installations – Site supplies for Connectable electrical Installations</i>	18/11/2022	
AS/NZS 3001.2:2022 <i>(Caravan) Electrical Installations – Connectable electrical Installations</i>	18/11/2022	
AS/NZS 3002: 2021 <i>Shows, Carnivals and Events</i>	25/06/2021	
AS/NZS 3003:2018 + Amend 1:2019 <i>Patient Areas</i>	29/06/2019	
AS/NZS 3004.1:2014 <i>Marinas and Boats</i>	27/06/2014	
AS/NZS 3004.2:2014 + Amend 1:2015 <i>Boat Installations</i>	17/07/2015	
AS/NZS 3008.1.1:2017 <i>Selection of Cables</i>	02/02/2017	
AS/NZS 3010: 2017 + Amend 1:2020 <i>Electrical Installations - Generation Sets</i>	24/04/2020	
AS/NZS 3012: 2019 + Amend 1:2020 <i>Electrical Installations - Construction and Demolition Sites</i>	20/03/2020	
AS/NZS 3017:2022 <i>Electrical installations – Verification by inspection and testing</i>	02/12/2022	
AS/NZS 3019:2022 <i>Electrical installations – Periodic assessment</i>	9/9/2022	
AS/NZS 4836:2011 + Amend 1:2017 <i>Safe working on or near Low-Voltage electrical Installations</i>	05/05/2017	Public comment has closed
AS/NZS 4777.1 <i>Grid connection of energy systems via Inverters</i>	30/9/2016	Currently under revision
AS/NZS 4777.2:2020 + Amend 1 <i>Grid connection of energy systems via Inverters – Inverter requirements</i>	01/10/2021	
AS/NZS 5033:2021 <i>Installation Safety requirements for Photovoltaic (PV) arrays</i>	19/11/2021	
AS/NZS 5139:2019 <i>Electrical Installations – Safety of Battery systems for the use with power conversion equipment</i>	11/10/2019	
AS/NZS IEC 60479.1 <i>Effects of Current on the Human beings & Livestock: General</i>	25/03/2022	
SAPN Service & Installation Rules Manual #32 <i>Amendment #1</i>	01/05/2023 01/05/2023	Currently under revision

List of Common Australian Standards continued...



List of Common Australian Standards cont...



Australian Standard	Current Publication Date	Current Status
GAS STANDARDS		
AS/NZS 5601 Part 1 General Installations	07/10/2022	
AS/NZS 5601 Part 2 Amend 1 <i>LP Gas Installations in Caravans & Boats non-propulsive purposes</i>	26/02/2021	
AS 4575 <i>Gas Appliances – Servicing Type A Appliances</i>	09/08/2019	
AS 3814 <i>Industrial & Commercial gas-fired appliances</i>	25/10/2018	
AS 1375 <i>Industrial Fuel Fired Appliances</i>	13/10/2013	New version published
AS/NZS 4645.1 <i>Gas distribution networks – Network Management</i>	28/02/2018	
AS/NZS 4645.2 <i>Gas distribution networks – Steel Pipe systems</i>	28/02/2018	
AS/NZS 4645.3 <i>Gas distribution networks – Plastic Pipe systems</i>	28/02/2018	
AS/NZS 1596 Amend 2 <i>The Storage & Handling of LP Gas</i>	01/10/2020	
PLUMBING STANDARDS		
*Plumbing Code of Australia	01/10/2022	
Plumbing Standard Issued by the Technical Regulator	2020	
AS/NZS 3500 Plumbing and drainage Part 0- Glossary of terms	14/05/2021	
AS/NZS 3500 Plumbing and drainage Part 1: Water services	28/05/2021	
AS/NZS 3500 Plumbing and drainage Part 2: Sanitary plumbing and drainage	28/05/2021	
AS/NZS 3500 Plumbing and drainage Part 4: Heated water services	28/05/2021	
AS/NZS 2845.2 Water supply- Backflow prevention devices Part 2: Registered air gaps and break tanks	30/06/2010	
AS/NZS 2845.3 Water supply- Backflow prevention devices Part 3: Field testing and maintenance of testable devices	14/02/2020	
AS 2419.1 Fire hydrant installations Part 1: System design, installation, and commissioning	03/09/2021	
AS 2441 Installation of fire hose reels (incorporating amendment 1)	2001	
FPA101D Automatic Fire Sprinkler System Design and Installation - Drinking Water Supply	2021	
Guidelines for Non-Drinking Water in South Australia Part 0: Glossary of Terms, Abbreviations and References Part 1: Infrastructure Part 2: On site Plumbing	31/07/2017	Currently Under Revision
AS/NZS 1260 <i>PVC-U pipes and fittings for drain, waste and vent applications Amdt 1</i>	2017	Current
AS 1428.1 <i>Design for access and mobility-General requirements for access - New building work</i>	2001	Current

At Standards Australia you can view the draft with latest comments and provide your feedback here: <https://comment.standards.org.au>



[Contact List]

Electrical Technical Advice

Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide SA 5000
(Reception on Level 4)
Phone: (08) 8226 5518 (8am – 4:30pm)
Fax: (08) 8226 5529
Email: otrmail@sa.gov.au

Gas Technical Advice

Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide SA 5000
(Reception on Level 4)
Phone: (08) 8226 5722 (8am – 4:30pm)
Fax: (08) 8226 5866
Email: otr@sa.gov.au

Plumbing Technical Advice

Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide SA 5000
(Reception on Level 4)
Phone: 1300 760 311 (8am – 4:30pm)
Email: otr.plumbenquiries@sa.gov.au

eCoC Team

Department for Energy and Mining

Phone: (08) 8429 3394 (8:30am – 4pm)
Email: otr.ecoc@sa.gov.au

General Information

Licence or Registration Applications and Address Changes

Consumer and Business Services
Phone: 131 882 (9am – 4:30pm)
Email: occupational@sa.gov.au
www.cbs.sa.gov.au

Appointments and Information

SA Power Networks

Builders & Contractors: 1300 650 014 (8am – 5pm)
Enquiries: 13 12 61 (9am – 5pm)
Fax: 1300 650 016
Email: customerservice@sapowernetworks.com.au
www.sapowernetworks.com.au

Australian Standards

Standards Australia

Phone: 1800 035 822 (9am – 5pm)
www.standards.org.au

Australian Gas Association (AGA)

Phone: (03) 9580 4500 (8:30am – 5pm)
Email: office@aga.asn.au
www.aga.asn.au

Training: Gas

Master Plumbers Association

213 Greenhill Road, Eastwood SA 5063
(PO Box 145, Fullarton SA 5063)
Phone: (08) 8292 4000 (8:30am – 5pm)
www.mpasa.com.au

Gas Services SA

2/16 Staite Street, Wingfield SA 5013
Phone: 1300 139 093 (9am – 5pm)
Fax: (08) 8162 5638
www.gasservicessa.com.au

Gastrain

Unit 1, 61-65 Tapleys Hill Road, Hendon SA 5014
(PO Box 83, Royal Park SA 5014)
Phone: 1300 955 583 (9am – 5pm)
Phone: (08) 8447 7783
Fax: (08) 8447 7753
www.gastrain.com.au

TAFE SA

Electrical and Gas
For all training enquiries
Phone: 1800 882 661 (9am – 5pm)
www.tafesa.edu.au/courses

PEER

Industry training and apprenticeships
1042 Port Road, Albert Park SA 5014
Phone: (08) 8348 1200 (7:30am – 5pm)
www.peer.com.au

Electrical

Powerlines and building/vegetation clearance zones

Contact the Office of the Technical Regulator
Phone: (08) 8226 5667 (9am – 5pm)
Email: otrmail@sa.gov.au

SA Power Networks

General Enquiries: 13 12 61 (9am – 5pm)
Faults & Emergencies: 13 13 66 (24/7)
Email: customer.service@sapowernetworks.com.au

Locations of Gas, Electricity or Telecommunications

Before You Dig Australia (BYDA)

Formerly Dial Before You Dig (DBYD)
Phone: 1100
www.byda.com.au

After-hours locations or Gas Emergency (including LPG)

Origin Energy LPG

24-hour hotline: 1800 808 526

Kleenheat

LPG emergencies (cylinders & tanks):
1800 093 336

ELGAS

Emergency response: 1800 819 783

APA

Emergency Gas Leak: 1800 GAS LEAK (1800 427 532)
LPG Leak: 1800 808 526
Gas Transmission Pipelines (SA): 1800 808 526

Gas or Electrical major incident reporting 24/7

Office of the Technical Regulator

24/7 SA Emergencies: 1800 558 811

Gas Trade contact

APA

Local Gas Distribution Network:
1800 GAS LEAK (1800 427 532)
Connections & Enquiries: 1300 001 001

[Additional websites for further information]

South Australian Parliament for Acts and Regulations

www.legislation.sa.gov.au

SafeWork SA

www.safework.sa.gov.au

Gas Energy Australia (formerly ALPGA)

gasenergyaustralia.asn.au

Australian Competition and Consumer Commission (ACCC)

www.accc.gov.au

Australian Gas Networks Ltd

www.australiangasnetworks.com.au

Elgas

www.elgas.com.au

Standards Australia

www.standards.org.au