

# REGULATION ROUNDUP

ISSUE 51 | March 2023

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

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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 | (8:30am – 4:30pm)



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# Message from the Technical Regulator

## Welcome to issue 51 of Regulation Roundup.

As you're all aware, we as a Regulation Team are always looking to improve the industry.

You will find packed information from our Electrical, Gas and Plumbing teams which are there to assist you in your workplace and make you aware of changes coming into the industry. We've also got some important input from SAPN throughout this edition.

We believe the Regulation Roundup is still packed with the latest information around the latest developments in the industry. It is shared in an effective form to keep SA's workers plugged in with the Governments latest concerns around our Electrical, Plumbing and Gas industry.

We hope you get a lot out of this edition.

**Robert Faunt, Technical Regulator**

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# Improvements Needed For New Builds, Renos and Repairs

Many builders and tradespeople have worked really hard in recent years, despite grappling with supply chain issues, labour shortages and other disruptions due to covid-19. However, the building and trades sector remains firmly in the sights of Consumer and Business Services (CBS) due to the high number of complaints and enquiries received from consumers.

Four out of the top 10 matters reported to CBS in 2022 relate to builders and tradespeople.

- New home builds topped the list (there were 1,339 reports).
- Home additions and repairs came in at number six (405 reports).
- Solar panel installation was at number eight (336 reports).
- Plumbing was in tenth spot (235 reports).

CBS is reminding the sector about its obligations to comply with consumer law and licensing requirements or risk expensive consequences.

## Court action

CBS investigated a range of breaches of legislation during 2022. Of particular note, three tradespeople who took on bathroom renovation projects had their day in court. All three were convicted of unlicensed activity and taking payment from customers but not supplying the services within a reasonable time, and one was also convicted of theft. Their cases are outlined below.

- A tradie operating in the Two Wells area was fined \$5,000 and ordered to pay compensation totalling \$3,000 to clients. Consumers had complained that the tradie's work was of very poor standard and cost them extra to have the work rectified.

- An Enfield man pretended that his father's licence was his and accepted large deposits from several customers but didn't complete the work. He was fined \$15,000 and ordered to pay compensation totalling \$24,450 to clients.
- A tradie from Royal Park left customers with shoddy workmanship due to his below-par skills. He received a five-month suspended sentence with a two-year good behaviour bond of \$500. He was also fined \$3,350 and ordered to pay compensation totalling \$5,520 to clients.

## Other compliance outcomes against plumbers, gas fitters and electricians

In 2022 CBS issued five warning letters to tradespeople who either worked without a licence or outside the scope of their licence. One licence was also suspended pending criminal charges being determined.

Potential breaches can come to light as a result of CBS' regular monitoring of the building and trades sector, or by reports from consumers or other concerned industry members.

Depending on the nature and extent of the breach, enforcement action may include a written warning, a written assurance that the tradesperson will stop the unlawful activity, issuing a public warning, an expiation notice, or taking disciplinary action or prosecution.

## More information about licensing and registration

To make sure you have the right licence or registration please visit [sa.gov.au/topics/business-and-trade/licensing](https://sa.gov.au/topics/business-and-trade/licensing), or contact CBS via [occupational@sa.gov.au](mailto:occupational@sa.gov.au) or phone 131 882.





## Electrical Bulletin

### TYPE A RCDs – Time to Change

24 months has almost passed since AS/NZS 3000:2018 amendment 2 was published (April 2021).

This means that as of April 30<sup>th</sup> 2023 all remaining changes which allowed for a 24 month adoption period will then become mandatory. This includes the requirements around Type A RCDs

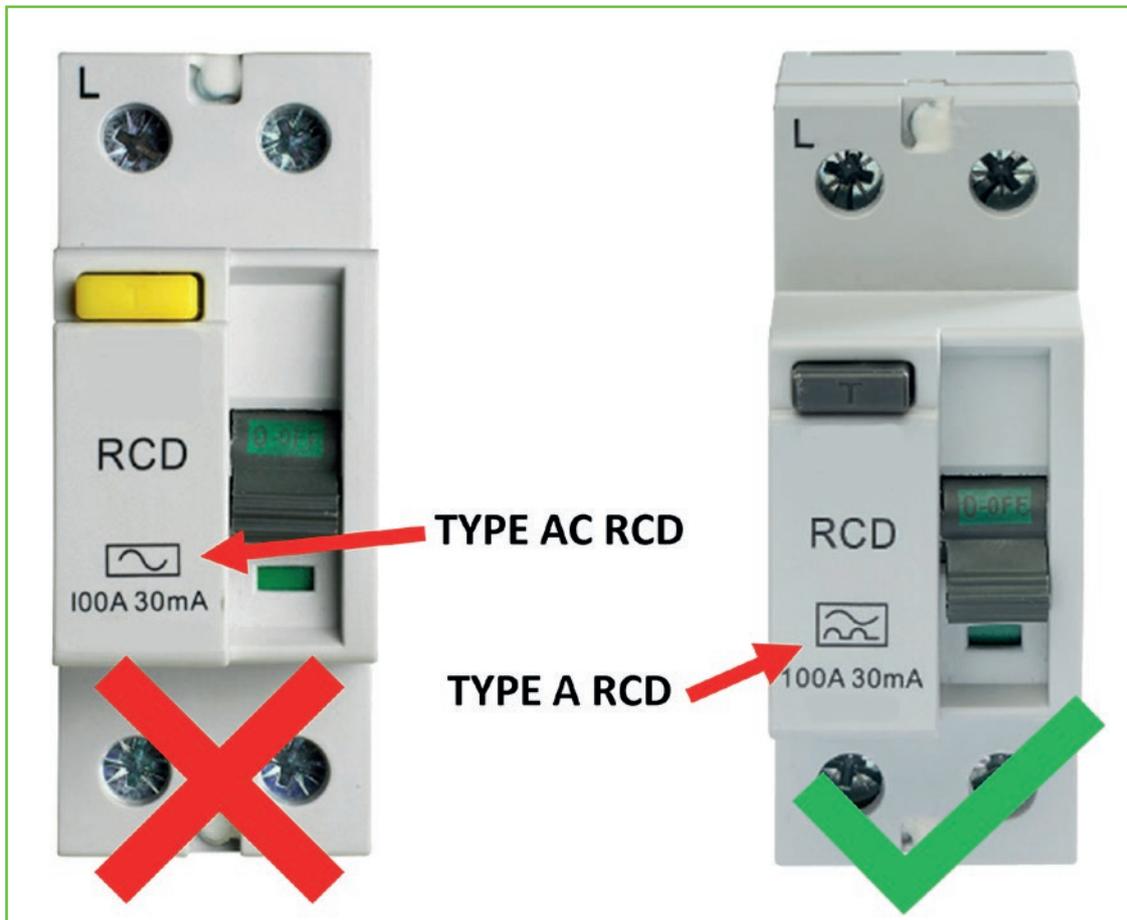
From April 30<sup>th</sup> 2023 as a minimum, only Type “A” RCDs will be allowed to be installed. Other Types may be required dependant on the type of supply, and Type “AC” RCDs **shall not** be installed.

This ensures RCDs will operate on all generated waveforms (eg. Inverter driven supplies).

AS/NZS 3000:2018 +A2 Clause 2.6.2.2.2 describes further requirements for RCDs.

This also includes the requirement to update / change the type of RCDs installed in switchboards used on construction sites and festivals / events, as they need to be certified to the current standards at the time of energisation.

As the regulator, we will be checking for compliance with this requirement, and due to the 24 month transition, we will breach any non-compliant new RCD installations in the first instance.



# Important Changes For The Installation Of Certain Air Conditioner Types In South Australia

Important changes are coming on 1 July 2023 in South Australia for certain air conditioner types that get installed or connected from this date onwards.

## Overview of the changes

From 1 July 2023, unless certain air conditioners are compliant with **demand response (DR) capabilities in a new [Technical Regulator Guideline](#)**, they must not be installed or connected to the South Australian electricity distribution network (distribution network).

## What air conditioners are covered by the requirements?

Air conditioners covered by these requirements include any of the following with a cooling capacity of up to 19kW:

- Single phase air conditioners
- Three phase air conditioners

The changes do not apply to:

- Close Control Air Conditioners
- Evaporative air conditioners
- Portable air conditioners
- Air conditioners that plug into a mains socket/wall socket. They don't need to be installed via hard wiring.

It is critical to note that whilst these changes legally require air conditioners to have DR capabilities, they do not require consumers to participate in DR programs. Consumer participation in these programs is voluntary.

We encourage installers to take the following proactive measures before 1 July 2023:

- Read [frequently asked questions for installers](#).
- Read the [Technical Regulator Guideline](#). This specifies the demand response capabilities that air conditioners covered by the requirements must be compliant with if they are installed on or after 1 July 2023.

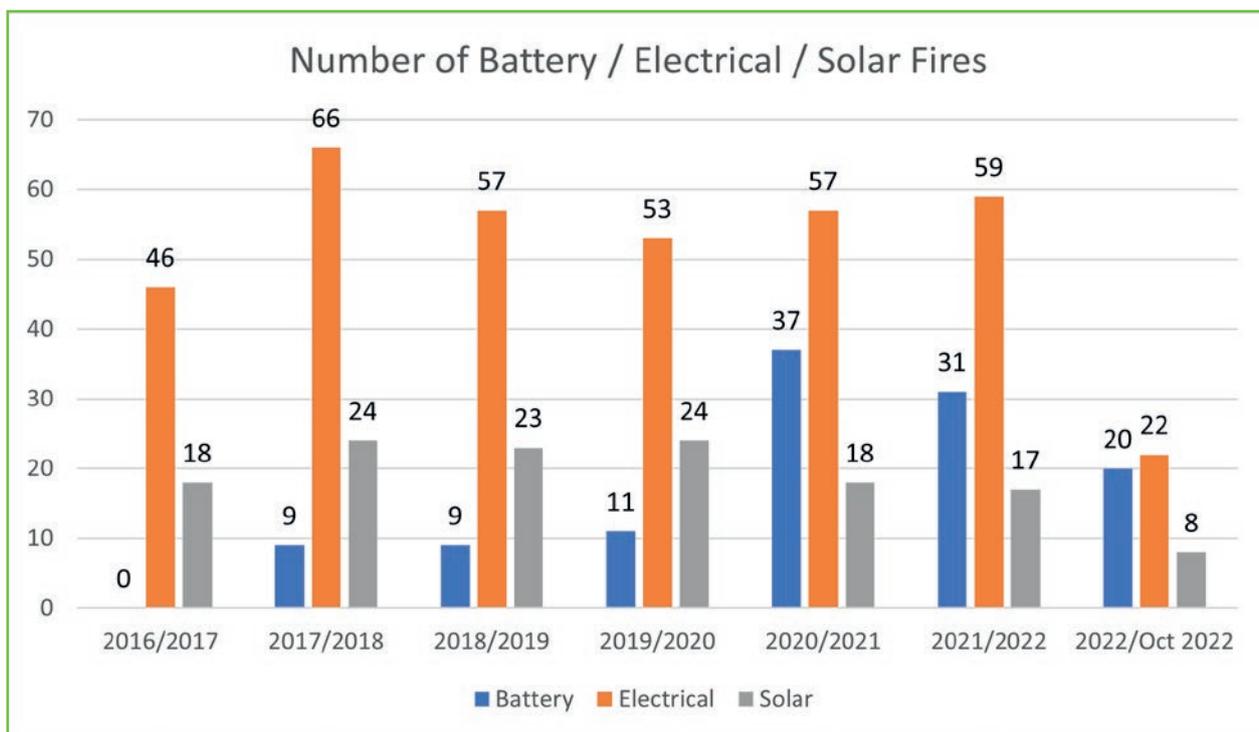
To assist with determining whether an air conditioner is compliant, familiarise yourself with the [Technical Regulator Compliance list](#). If you are aware that an air conditioner is not on the list, contact your product supplier or the manufacturer and ask them to apply to [register it](#) under the guideline.

Some parts of the air conditioning industry have recently sought clarity from the Technical Regulator about his approach towards pre-existing orders and purchases of products that will not be compliant with the requirements. The Technical Regulator intends to deal with these issues on a case-by-case basis and can provide transitional arrangements as he deems necessary. Please email [dem.smartappliances@sa.gov.au](mailto:dem.smartappliances@sa.gov.au) if you need to resolve these issues.

We are also planning a mix of seminars and webinars on the requirements. We will let you know when they are scheduled.

## Electrical Fire Report

Courtesy of MFS - Last updated 02/11/2022



# Have you commissioned your inverter correctly?

The OTR is aware that a significant number of grid-connected solar and battery inverters are not being commissioned correctly, in accordance with relevant standards.

In South Australia from 18th December 2021, grid-connected inverters must be set in accordance with:

- AS/NZS 4777.2:2020 Inverter requirements
- SA Power Networks Embedded Generation Technical Standards

**Grid-connected Inverters must be set to AS/NZS 4777.2:2020 Region: 'Australia A' default setting.**

Inverters set to the previous '2015' edition of AS/NZS 4777.2 or other unique DNSP settings, do not have additional inverter network security features that are required for grid stability.

If installers are not familiar with how to implement these settings, they are advised to contact their relevant inverter manufacturer/supplier for further advice.

The OTR cannot express the importance of these settings enough, we are actively auditing the commissioning of inverters to ensure compliance, penalties will apply for ongoing non-compliance.

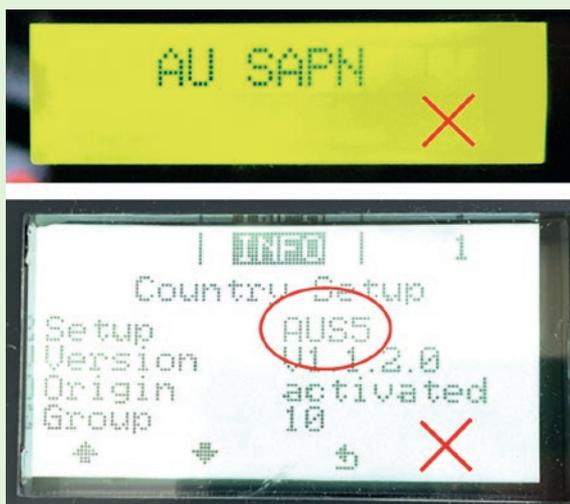


Figure 1 shows:  
Inverters set to incorrect settings - AU SAPN or AUS 5 (previous DNSP setting).



Figure 2 shows:  
Inverters set to correct settings - AS/NZS 4777.2:2020 Region: Australia A

“ The OTR is aware that a significant number of grid-connected solar and battery inverters are not being commissioned correctly, in accordance with relevant standards. ”

# Electric Shock Incident List

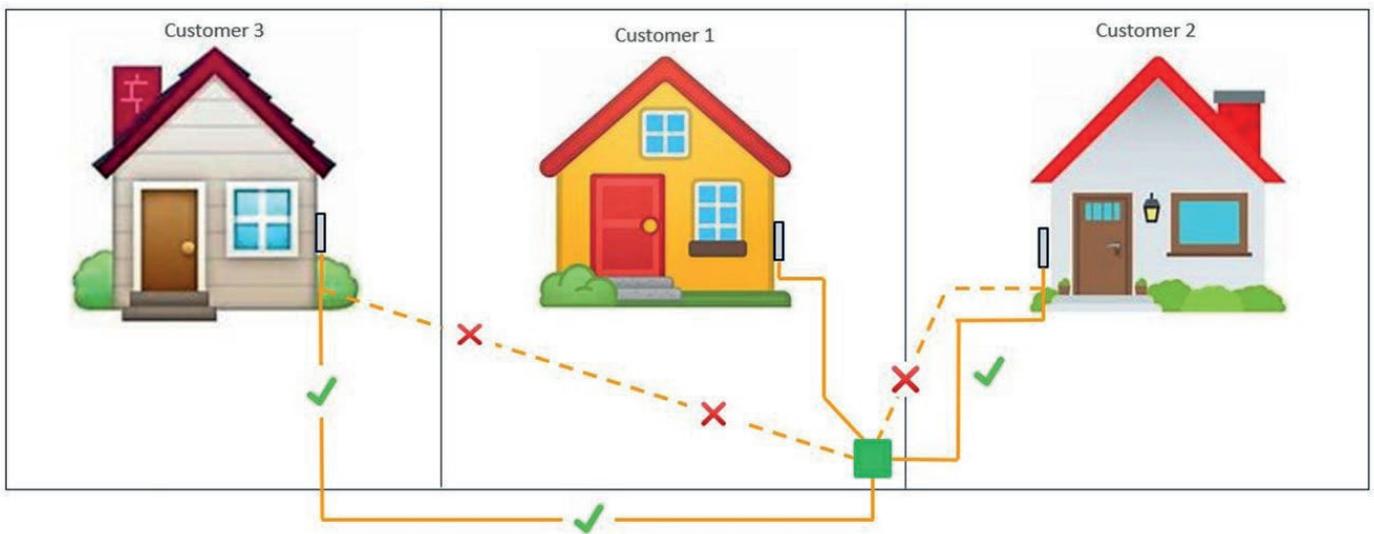
Shock Source	Cause	Contributing Factors	Injuries	Action to Make Safe
Water Meter.	High resistance neutral in pole top junction.	Plumber changing water meter did not apply bridging cable across meter during repairs.	Plumber received electric shock across hands.	Network operator repaired neutral connections. Plumber to review working procedures.
Bathroom light switch.	Light switch face plate cracked.	Homeowner did not realise that damaged light switch which was also damp could enable electricity to track.	Victim received electric shock between hand and foot.	Network operator disconnected light circuit so owner could organise an electrical contractor to effect repairs.
Underground consumer mains cable.	Metal pin driven into it.	Concreter did not check where cable was and drove a metal pin into the active conductor.	Worker onsite a week later received electric shock to hands.	Network operator disconnected supply until cable could be replaced or repaired.
Overhead powerlines.	During storm fallen tree had brought down power lines to ground level.	Resident was walking dog adjacent to the live downed powerlines.	Dog got to close and received electric shock.	Network operator disconnected and made safe damaged power lines.
Mineral sands screening plant.	Cable had rubbed through to expose active conductor.	Water and mineral sands had sprayed onto the cable permitting electricity to conduct to an accessible area.	Worker operating valves on plant received electric shock to hands.	Machine disconnected until repairs could be affected.
Switchboard frame.	No M.E.N. connection.	When a temporary supply was energised electrical workers left out M.E.N link causing return current to flow through the earthing system.	Electrical worker received electric shock to hands.	Electrical workers recognised issue and correctly connected the temporary supply switchboard.
Light Switch.	Mechanical damage.	Students had vandalised light switches in a bathroom and in the process contacted the exposed live parts.	Students received electrical shocks to hands.	School immediately arranged for an electrical contractor to make repairs.
Light fitting.	Worker contacted live parts.	Light fitting was being changed without the circuit isolated.	Electrical worker received electric shock to hands.	Lighting circuit correctly isolated. Work practices to be reviewed.
Refrigerator.	Faulty power circuit wiring.	Owner opening door on refrigerator did not realise there was a wiring fault with the power circuit supplying the appliance.	Owner received electric shock between hand and foot.	Electrical Contractor found faulty connections at a junction box in the wall after recent renovations causing issue and rectified this.
Electric Oven.	Exposed live terminals.	Homeowner was pulling on cables supplying the rear of the oven to stop it beeping.	Homeowner received electric shock between right hand and right arm.	Network Operator attended the site and disconnected the oven circuit.
House side access gate.	High resistance neutral in overhead service line.	Homeowner was opening metal side gate of house. They would not be aware the neutral cable in the overhead supply was damaged.	Owner received electric shock between hand and foot.	Network Operator attended and replaced overhead supply cable rectifying the fault.
Extension cord.	Dampness.	Extension cord had been run along the ground at an event permitting moisture to ingress into the plug tops.	Worker received electric shock to the hands.	Extension cords relocated to eliminate the issue reoccurring.
Light Switch.	Dampness and build-up of cleaning product.	Patient was steadying themselves on basin taps whilst operating light switch.	Patient received electric shock to hands.	Electrical contractor replaced light switch resolving fault.
Garden Tap	High resistance neutral in overhead street crossing.	Gardener was using tap to steady himself and placed the other hand on the ground. Unaware there was an issue with the street mains.	Gardener received electric shock between hands.	Network Operator repaired neutral conductor in street crossing.
Power circuit wiring.	Major water leak in wall.	Homeowner unaware of water leak in wall caused by shower was allowing electricity to track from an adjacent socket outlet to the shower floor.	Homeowner received electric shock between hands and feet.	Network Operator isolated power circuit. Owner to arrange for an Electrical contractor to complete repairs.

# SA Power Networks Supply Rights From Pits, Pillars, and Poles

## Clause 5.7 Service and Installation Rules 2022.

Over the past 12 months SA Power Networks has seen an increase in electricians' misunderstanding their rights with regards to accessing our service pits and pillars installed on a third parties' property.

Whereas SA Power Networks does reserve the right to supply other customers from pits and pillars installed on a third-party property, this does not imply you can cross a third parties' property without their permission.

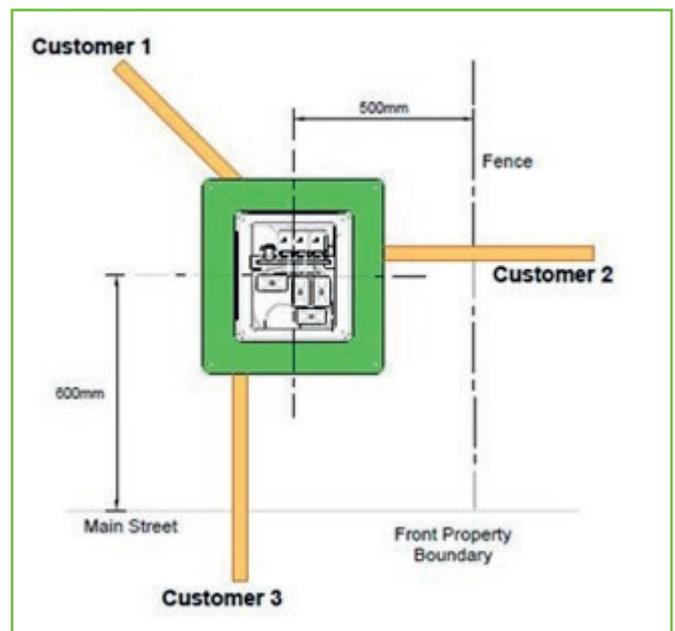


If the service pit or pillar is installed in the standard location, as shown, or within 1 metre of the property boundary, you may not need an easement, but you still have an obligation to contact the third party to seek permission to access their property.

In the situation where SA Power Networks pit or pillar is not installed in the standard location, or within 1 metre of the property boundary, and your consumer mains may need to extend further into the third parties' property, a private registered easement granted by the third-party property owner is required. However, the third-party property owner is under no obligation to grant this easement.

This registered easement is a private registered easement which SA Power Networks is not party to. However, an agreement shall be in place before a connection is completed.

If this access is denied or an easement will not be granted, please contact SA Power Networks and we will work with the customers to find an alternative connection point.



# [ SA Power Networks Plans To Offer Flexible Exports As A Standard Connection Option For Residential Solar Customers ]

As part of the [Smarter Homes Program](#), the [SA Government is introducing Dynamic Export Requirements from 1 July 2023](#), requiring most new and upgrade exporting solar generation systems to be capable of remotely updating their export limits. These regulations apply to both small embedded generation (SEG, under 30kVA) and MEG sized systems (31-200kVA), and means they must have the capability required to support SA Power Networks' [Flexible Exports](#) connection option.

Building on the success we have seen for our Flexible Exports trial, we plan to roll out more Flexible Exports eligible areas from 1 July, when more dynamic exports capable inverters become available.

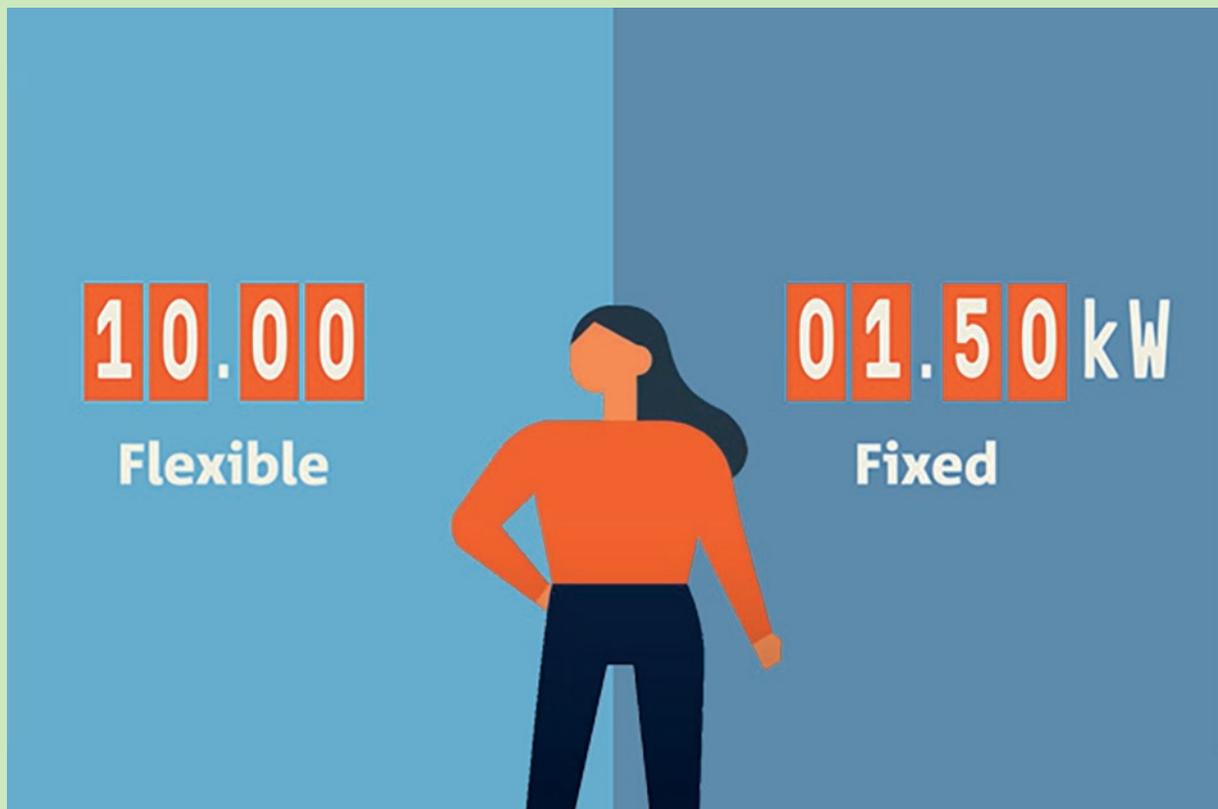
From 1 July, new or upgrading solar customers in suburbs within the Cities of Mitcham and Onkaparinga will be offered a choice of a Flexible Exports connection option, or a 1.5kW fixed export limit. There is no change for existing solar customers.

We plan to release more suburbs progressively across four phases over 12 months, with the Flexible Exports option being available state-wide from mid-2024. Flexible Exports is an innovative new service offering, with SA pioneering the world's first to roll out at this scale. We aim to start the rollout slowly to ensure the smooth rollout, then progressively ramp up thereafter.

## How can I keep up to date with upcoming information?

We plan to roll out installer training, more information and tools to help make this transition easier for the solar retailers and installers. More detailed information including installation requirements will be provided in another webinar.

Once we know more details, we will update [our website](#), and will let you know what's happening. Subscribe to our industry updates [here](#).



# Connection knockbacks

At the time of connection, a licensed electrician is presenting an installation which they believe is compliant to the Electricity Regulations and SA Power Networks Service and Installation Rules (SIR).

Prior to connection SA Power Networks requires an eCoC which is a declaration that the work they have completed complies with the Electricity Act, associated Australia Standards and the Technical Installation Rules (TIR), contained within the Service and Installation Rules. SA Power Networks does not inspect for compliance to the associated Australian Standards (e.g. AS/NZS 3000) compliance; however, if a breach is obvious during our connection process, the connection will not proceed.

A connection knockback is reported, when there is a breach of the Service and Installation Rules, including any noticeable breaches of the Australian Standards. When a knockback occurs the electrician may be charged a “wasted connection fee”.

Connection knockbacks are frustrating, time consuming and costly for the REC, customers, and SA Power Networks. Therefore, we are actively working to reduce the number of knockbacks by analysing the reports to

understand the root cause, so we can put measures in place to reduce them, and

educating and supporting our people and the REC.

SA Power Networks is continuing to listen through [SIR@ sapowernetworks.com.au](mailto:SIR@sapowernetworks.com.au) for feedback.

## Avoiding connection knockbacks

To ensure your connection proceeds, it is essential to understand and apply the SA Power Networks SIR.

The SIR uses the terms “should” and “shall” throughout the document and it is important to understand the context of these terms and how they are applied.

<b>Should</b>	Indicates a recommendation that will not be mandatory, but CAN be imposed as deemed appropriate by SA Power Networks.
<b>Shall</b>	Indicates a mandatory requirement

Variations to “should” requirements, although they are recommendations, still need to be discussed and agreed with SA Power Networks before proceeding.

Notes of these agreements are placed into our system which informs the Connect Officer of the variation to the SIR. Without this notification your connection may not proceed.

If there are non-compliance to “shall” requirements your connection will not proceed, and a “knockback” will be lodged and reported.

The table below highlights significant SIR non-compliances where any single one will instantly result in a knockback.



Reason	SIR reference
1 eCoCs not filled in correctly or not on site	Clause 5.2.2
2 Incorrect address on paperwork	
3 Consumer mains failed testing	
4 MSBs not correctly earthed, bonded to neutral, or no MEN link installed	Clause 6.1.3
5 Inadequate clearance between MSB and property fence/wall	Section 8, Clause 8.1.3, Figure 8 & 9
6 Use of non-UV stabilised conduit into connection points on poles and customer structures	Clause 7.6.1
7 No mechanical protection installed over consumer mains	Clause 7.5.1.2 (New Clause for 2023 revision of the SIR)
8 Meter Isolator has not been labelled as “Main Switch” (single domestic)	Clause 7.4.3.2 & Figure 5
9 Ends of consumer mains in MSB or pits have not been colour coded	Clause 7.5.3.1
10 Incorrect type of consumers mains installed	Clause 7.2.2 & 7.2.3
11 Metering neutral link needs to be sealable	Figure 5
12 Labelling	Clauses 5.17, 7.4.2.1, 7.4.2.2, 7.4.3.2, 7.5.3, 8.4.3,

# NECA 2023 Roadshow Seminar Series

## Calling all Electricians!



NECA SA/NT will be running their 2023 Roadshow Seminar Series across South Australia in March, April and May and we encourage all electrical contractors and workers to attend to find out the latest developments within the industry. The seminars will cover updates to Australian Standards, Smart Meter requirements, changes to the REX system, updates to eCoC and test results, the upcoming Continuous Professional Development (CPD) program and much more.

This annual seminar series is a significant training resource for the electrotechnology industry. The event this year is designed to provide licensed electricians with a greater understanding of the following topics:

- *NECA SA/NT on the upcoming Continuous Professional Development (CPD) program for electricians*
- *SA Power Networks on changes to the REX system, export programs, compliance and more.*
- *Office of the Technical Regulator on Smart Meter requirements, updates to Australian Standards, test results and eCoCs, FAQs and more.*

Thanks to the Office of the Technical Regulator and SA Power Networks for their support and involvement in this initiative.

Suppliers, manufacturers and wholesalers will be on location with their new products and service displays and NECA SA/NT staff will also be on hand to answer your questions about what NECA can do for you and your business.

To attend for the NECA 2023 Roadshow Seminar Series, please register via Eventbrite here: <https://bit.ly/NECA2023Roadshow>

NECA members and their employees can attend for free with a promo code that was issued via email. Non-member tickets are \$30 per person plus booking fee. Please register to attend 7 days prior to the event so we can provide adequate catering and seating for the event.

For further information, visit our website [www.neca.asn.au/sa](http://www.neca.asn.au/sa) or call NECA SA/NT on (08) 8272 2966.



# Tradie To Trainer

The need for ever increasing numbers of electrical tradesmen 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. TAFE SA is also looking for new, motivated lecturers to join their workforce.

So, what qualifications do I need to have to be a TAFE SA lecturer?

- Unrestricted electrical license
- Certificate IV in Training and Assessing (TAE 40116) – don't already have this? – keep reading
- Five years of industry experience

TAFE SA has recognised that it is not always possible to study and work full time, so working alongside the CITB a program called "Tradie to Trainer" has been developed. This program allows new trainee lecturers to be employed on a full-time basis and undertake study, and to develop their lecturing skills under the guidance of experienced mentor lecturers. At the completion of this program successful trainees will graduate to the role of Lecturer at TAFE SA.

Our program details are as follows:

- TAFE SA would consider hiring new lecturers that hold the presenter skill set for the Certificate IV TAE
  - BSBCMM401 Make a presentation
  - TAEDEL301 Provide work skill instruction
- TAFESA will support through the remainder of the Certificate IV TAE 40116 qualification
- One day a week is dedicated to course work for the Certificate IV TAE
- 3 days a week mentored by experienced lecturers in class
- One day of induction courses for the first month
- Personal mentoring from a senior lecturer.
- The full Certificate IV TAE is to be completed within 12 months of starting employment
- Initial two-year contract with the opportunity to apply for a permanent position once the Certificate IV is complete, as they become available.

If this is something that interests you, please send your resume to [ashley.clarke@tafesa.edu.au](mailto:ashley.clarke@tafesa.edu.au) and we can arrange a chat.

TAFE SA is also looking to recruit lecturers that already hold the required qualifications, so if this appeals to you as well, please send your resume to the above email address as well.



# Smoke Alarms – Save lives

It has been proven that smoke alarms save lives. They are the most practical device to give people the earliest warning about the presence of smoke in their homes or places of residence.

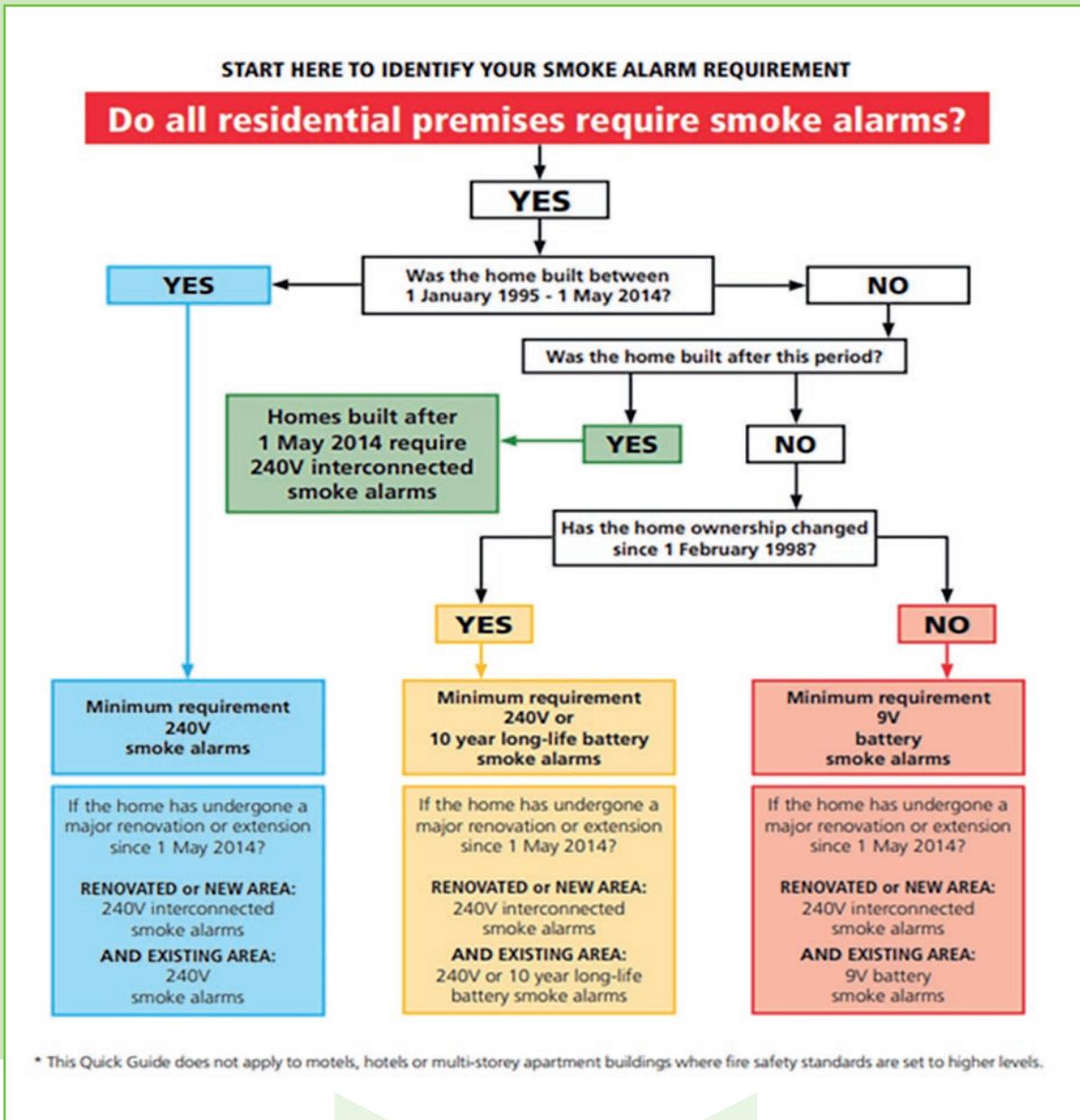
Smoke obscures vision and causes intense irritation to the eyes. This, combined with the effects of the poisons in the smoke, can cause disorientation, impaired judgement, and panic, reducing the victim's ability to find an exit.

Most fire-related deaths result from the inhalation of toxic fire gases rather than from direct contact with flame or exposure to heat.

Correctly located smoke alarms in your home give early warning of fire, providing you with the precious time which may be vital to your survival. Therefore, reducing the risk of inhaling any dangerous smoke or toxins, with the advantage of calling for emergency help at the earliest possible time.

Smoke alarm legislation has changed several times over the years. The type of smoke alarm required in a home is dependent on when the home was built and whether it has changed ownership.

Your advice to your clients is invaluable to assist them keeping safe in their homes. Use this flow chart to assist in determining which smoke alarm to install.



## Smoke Alarms – Save lives ... continued

For extra protection, install more than just the minimum number of smoke alarms in your home and have them interconnected.

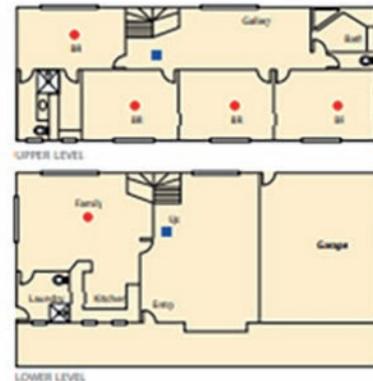
Notwithstanding the legal requirements, the SA Metropolitan Fire Service (MFS) always recommends that interconnected 240V photoelectric smoke alarms are installed to provide the best protection across a range of fires.

The sample house plans below display suggestions of where to position smoke alarms in your home.

### Single storey homes



### Two storey home



**LEGEND:**

*(applies to all diagrams)*

■ Minimum required smoke alarms

● Recommended additional smoke alarms

### Further Information

For further information and advice contact the MFS Community Safety and Resilience Department

Phone: 8204 3611

Country callers: 1300 737 637

Web: [www.mfs.sa.gov.au](http://www.mfs.sa.gov.au)

Email: [samfscommunitysafety@eso.sa.gov.au](mailto:samfscommunitysafety@eso.sa.gov.au)



### Hearing or speech impaired?

Contact us via the National Relay Service

TTY 133 677



## Gas Bulletin

# Introducing The New AS/NZS5601.1–2022 Gas Installation Standard

The OTR is pleased to announce the new **AS/NZS5601.1–2022 Gas Installation Standard** has been published, this new standard replaces the old AS/NZS5601.1-2013 version. Standards are reviewed or amended periodically to ensure standards keep pace with; design innovation on gas installations consumer product development new engineering / industry practices appliance manufacturer requirements.

### Legislation – Implementation

SA legislation automatically calls up referenced Standards including subsequent revisions and amendments. The new 2022 edition of the AS/NZS 5601 Part 1 was published on the 30/9/22. Technical Regulators allows for a transition period of 6 months for industry to transition to a new standard. We do this as stakeholders need time to adjust as such the OTR will implement the new standard on the [31/3/2023](#)

The new standard is not retrospective. Installations performed prior to the published date of a new standard fall back to the standard of that era.

The exception is where an existing gas installation is modified, i.e., addition, replacement or removal of an appliance or pipe work, the installation needs to be brought up to current requirements so the gas contractor can certify the installation.

### Major changes in the new AS/NZS5601.1-2022 gas installation standard

- New definition for an “ignition source”.
- Section 2 has been separated into “Essential safety requirements” and “Performance based design requirements”.
- Brazing prohibited within 1m of a joint with non-metallic components.
- New drawings for consumer piping located in cavities.
- Prohibition on the installation of multilayer pipe above-ground external to buildings.

- *Provision of emergency isolation for multilayer pipe, including a new definition for a fire safety system.*
- Increased clearance requirement between domestic cooking appliances and rangehoods, new clearance is now 650mm unless the manufacturer specifies a greater distance.
- Restriction on the use of semi-rigid connectors in the installation of commercial catering equipment.
- New requirements for the protection of combustible surfaces adjacent to commercial catering equipment.
- New pipe sizing graphs and tables based upon the Churchill friction factor equation.
- Effect of altitude on gas supply pressure for high rise building installations.
- *Revised requirements for the location of flue terminals under a covered area, in a recess, or on a balcony.*
- *New requirement for the isolation of installations in educational institutions.*
- New requirements for freestanding commercial catering equipment with under-equipment connection.
- *New requirements for the connection of freestanding commercial catering equipment using a hose assembly.*

For the italicised dot points above I’ve added additional information on these key changes below.

### Clause 5.2.11 Provision of fire emergency isolation for multilayer pipe.

Multilayer pipe installations are now required to be fitted with a system that shuts off the gas supply when there is a fire emergency. Multilayer pipe doesn’t have the durability and mechanical strength of metallic piping when subjected to fire.

... *continued over page*

# Introducing The New AS/NZS5601.1–2022 Gas Installation Standard ... cont.

For commercial / industrial buildings / restaurants / high rise apartments:

- Installation to be fitted with a system that will shut off gas supply when the fire safety system operates.
  - Protection must be provided with a solenoid safety shut off valve that incorporates a pressure proving system before restoration of the gas supply.
  - Integrated into the buildings fire management system.
  - A single, class 1, safety shut off valve is to be used which operates only when the fire safety system operates.
- Be located upstream of multilayer pipe and as close as possible to the gas supply point and readily accessible.

For residential Class 1a buildings in Australia where there is no fire safety system, a device is to be installed that will shut off the gas supply if the gas tightness is adversely affected by fire

- Be installed in a readily accessible location
- Be installed prior to the multilayer piping
- Devices that sense pressure loss – under pressure shut off valve UPSO
- Devices that sense excessive gas flow conditions - excess flow valve EFV



EFV examples



Example UPSO valve

**Note 1:** This clause also applies to the alteration of consumer piping using multilayer pipe in existing installation but does not apply to the replacement of a gas appliance in an existing installation.

**Note 2:** Some EFV have a maximum capacity operating range and not all valves will operate with a low inlet gas supply pressure, it is important you follow the manufacturers sizing guide to ensure the valve you intend to install is fit for purpose, additional valves may be required when sizing in accordance with the manufacturer's installation requirements. Fitting an incorrectly sized EFV will deem the installation non-compliant.

**Note 3:** UPSO suitable for all inlet supply pressures, are adjustable, must be set as per manufacturer's instruction and are manually reset after a under pressure event.

## Standards Australia

The new standard is published by Standards Australia, to purchase a copy please follow the link below.

[Discover AS/NZS 5601.1:2022](#)

## Clause 6.9.4 Flue terminal under a covered area, in a recess or on a balcony

Fan assisted appliances located under a covered area now require the flue terminal to extend beyond the covered area discharging towards the open side.



Flue outlet terminating before opening now no longer acceptable



Flue outlet terminating outside opening acceptable

## Clause 5.2.9.1 Isolation for installations in educational institutions

In installations where a number of appliances without flame safeguard systems are used, such as a school laboratory, a means of isolation shall be fitted.

- Readily accessible quarter turn manual isolation valve, and
- Solenoid valve supply gas to the installation controlled by timing device, and
- A readily accessible emergency e stop button, and
- Operating instructions, and
- Pressure proving

## Clause 6.10.2.7 Connecting free standing commercial cookers with a hose assembly

Where a hose assembly is to be used to connect a commercial freestanding appliance:

- Appliance be designed and certified for hose assembly
- Only Class B or Class D hose assemblies to be used
- Hose installed in U shape configuration, similar to a domestic upright cooker installation
- Both connection points to face downwards
- Hose restraint fitted, no longer than 80% of the hose assembly
- Stoppers installed to prevent the appliances from being pushed up against gas components and hoses



Correct installation method for free standing commercial cooking equipment

## Contacts

Should you require further information or assistance, please contact our office on 08 8226 5722 or email us at [otr@sa.gov.au](mailto:otr@sa.gov.au)

## Meet the team

- Ron Meakins Manager Gas Installation and Appliance Safety
- Andrew McCann Senior Inspector, Complex Gas Installations and Appliances
- Joe Martino Senior Gas Installation and Appliance Inspector
- Steve Millane Gas Installation and Appliance Inspector
- Brendan Purton Gas Installation and Appliance Inspector

- Chris Scott Gas Installation and Appliance Inspector
- Cacia Eglinton Senior Regulatory Compliance Officer

There has been a restructure within the OTR gas team, along with three new additions. **Ron Meakins** now heads the gas inspectorate as manager, with **Andrew McCann** as senior, **Steve Millane** as inspector and **Cacia Eglinton** has been appointed to the new role as Senior Regulatory Compliance officer. **Joe Martino** joins the team as a new Senior Inspector along with recent new members **Brendan Purton** and **Chris Scott** as Inspectors. We're sure the new guys will settle in and become an integral part of the team.

## Prohibition of Sale – Open Flued Gas Space Heater (OFGSH)

As of 31 March 2023, manufacturers will no longer be able to sell open-flued gas space heaters (OFGSHs) in South Australia that have been manufactured prior to 1st of January 2022.

Since the 1st of January 2022, OFGSHs must comply with amendments introduced to Australian Standards AS/NZS5263.1.3 which require that OFGSHs shut down automatically if they spill combustion products for more than 15 minutes where there is a continuous negative pressure environment.

The Office of the Technical Regulator has determined that OFGSHs lacking the new safety features have an increased risk of becoming unsafe in the future. This is due to modern houses being more efficient, exhaust fans becoming more

powerful, and the risk of negative pressure environment being elevated. Under such environment, dangerous levels of carbon monoxide can build up inside the building and can result in poisoning or death.

In summary, from the 31st of March 2023 in South Australia:

- OFGSHs manufactured prior to 1 January 2022 can be installed however manufacturer can no longer sell them
- OFGSHs manufactured after 1 January 2022 comply with new safety requirements and can be installed normally

It is strongly recommended that OFGSHs are serviced every two years to ensure that they are in working order and confirm that no exhaust fans have been added since their installation.



# [ How To Convert A Room Sealed Appliance Into An Open Flued Appliance ]

It's amazing what lengths some people will go to to save a few dollars, this is an example of DIY gas fitting at its best, this is so wrong on so many levels it's not funny. The once room sealed appliance was now operating as an open flued appliance. The pipe that carried the products of combustion out, has been adapted and now has a galv pipe attached to it, this galv pipe is then screwed into a rectangular 'open' flue section which goes on to terminate on the roof (see circled area below). The air for the appliance is now being sourced from behind the heater.

There is no draught diverter and it wouldn't take much down pressure for the products of combustion to enter back into the room and then there's the non accessible hose. Of course this appliance was disconnected and tagged out of operation and thankfully no one was injured.

This installation was picked up by a gas fitter who noticed something wasn't quite right with the installation. Room sealed appliance installed on an internal wall and an open flued cowl in the location where the room sealed flue cowl should be on the roof. Gas appliances must be installed as per the manufacturers installation instruction and the requirements of AS/NZS5601.1:2022 gas installation standard.

Section 55 of the Gas Act 1997 requires that the owner / operator of a gas installation shall take reasonable steps to ensure that is safe and safely operated and the installation complies with, and is operated in accordance with, technical and safety requirements. To ensure their installation is safe owners must rely on a licence gas worker to install and commission the installation, the submitted ECOC is their assurance from the installer the installation complies with the latest gas installation standards. Owners must wary if they complete any type of gas fitting work they will be in Breach of the PGE Act (working unlicensed), any faulty gas work could land them a \$10,000 fine under the Gas Act and they may potentially void their building insurance if there is a gas related incident.



# Saved By The Summer!!

Quite literally the intervening Summer could have saved our next Homeowners from a catastrophic situation. Fine weather reno's and a building inspection highlighted the need of immediate attention to the flue installation of a freestanding space heater. A concerned Gas Fitter notified the OTR of the situation is a lesson that we should always be vigilant. While conducting routine maintenance, it is easy to over-see the basics and become somewhat complacent. The Owner claimed that the heater had been serviced several times in its life, but the flue obviously had not been sighted. With the heater being used during next winter or a cold snap, it may have had life threatening consequences.

The timber had been subjected to intense heat from the products of combustion over the years and Pyrolysis (the thermal decomposition of combustible materials exposed to heat) had formed. In this case the timber beam could have ignited very easily with continued further use of the space heater.

AS/NZS 5601.1:2013 Stated that you were allowed to terminate flues into a roof providing certain requirements were met.

Whereas Clause 6.9.5 from the current AS/NZS 5601.1:2022 states\_ – A flue terminal SHALL NOT be located in a roof space.



1  
Photo 1



2  
Photo 2

These owners were lucky to escape with just charred timber, unlike another case the OTR had cause to investigate. The owners of the property below could also have very easily lost everything due to clearances from a single skin flue to combustibles not being adhered to. (Featured in Reg Roundup #40) The 40mj/h wall furnace would have had flue temperatures ranging from 180'c–200'c demonstrating the

importance of compliance with the minimum clearances outlined in EVERY appliance installation and service manual.

Table 6.8.11 – Required clearance between single wall flue and a combustible surface for flues not exceeding 150mm ID requires a 25mm clearance between the flue and combustible surfaces and that includes protected or unprotected combustible surfaces.



3  
Photo 4



4  
Photo 4

... continued over page

## Saved By The Summer!! ... cont.

It's worth a reminder of the clearances from other electrical services as many roof spaces are being filled with more Data, CCTV and Alarm cables etc as technology progresses, let alone general household wiring. (Note the domestic wiring behind the flue in photo 5)

Clause 6.8.14 Clearance from wiring and other surfaces specifies electrical, telephone, communication wiring and plastic water pipe there must be a clearance from the flue and appliance—75mm if the appliance has a draught diverter or 150mm if there is no draught diverter.



Photo 5



Photo 6

The scorched timber in photos 1 and 2 show open end flues venting directly onto beams, photo 5 shows a flue cowl has been installed but still venting flue gases onto combustible materials (note the blow in insulation on top of the flue and around the outlet) and photo 6 flue contacting combustible materials (needs 25mm minimum clearance).

## Meter Fix Hang and Wad Trial

APA Group and the OTR have agreed to trial a new arrangement for meter fix installations for new residential connections.

The requirements of the AS/NZS5601.1 -2022, clause 6.11.2 requires Type A appliances shall be commissioned by a suitably licensed person who installs the appliance when gas is available at the completion of an installation.

As the 1st of May 2023 APA Group will hang and wad meters for all new connections in South Australia. The meter fix can only occur after the first fix gas installation has been completed. It will be the gas installers responsibility to connect the outlet service to the meter and complete the purging and commissioning of the appliances as required by Clause 6.11.2.

The gas installers will be required to issue an ECOC covering the installation and commissioning of the appliances on completion as required by the Act Gas 1997.

This trial will be for 6 months where it will be reviewed by the OTR and APA Group. For gas appliances installed by second party gas fitter during a new build (normally when a homeowner engages another gas fitter to install a decorative gas log fire or a pool heater as examples separate from the original gas install) the commissioning of these appliances will be the responsibility

of the person who has installed them. If these appliances are installed before the gas is connected, the installers will need to return to site to commission the appliances after the gas has been connected. A separate ECOC covering the installation and commissioning for these appliances will be required.

APA Group will provide information guideline cards at each hang and wad instructing the installer how to connect to their gas meter infrastructure and for the installer to instruct the customer to contact the gas fitters who have installed other additional appliances so they can return and commission those appliances.

APA will set the working and lock up pressures on the service regulators during the hang and wad process, they will also do a visual inspection of the outlet service to ensure meter box and outdoor appliance location/ventilation will be suitable. If a meter fix is not completed due to a non-compliance, APA will communicate through their normal channels so the gas fitter can rectify the issue and then request another meter fix.

The OTR will conduct proactive random audits on these new installations to ensure compliance with the AS/NZS5601.1 – 2022 gas installation standard is being met and ECOC have been submitted.

# [ LPG Regulators Over Pressure Protection ]

In Queensland, an LP gas regulator failed to safely control gas pressure supplied to the gas system of a domestic residence.

The excessive pressure within the gas system caused the system to leak which build up and exploded causing the severe burns to two people, one subsequently died from the injuries, and significant damage to the appliance and the property.

The gas pressure regulator design did not include over-pressure protection (OPP) resulting in excessive pressure (>150Kpa), which caused valves and joints within the appliance to leak and build up within the appliance and cabinet below.

**Gas workers** should check the first gas pressure regulator on all LP gas installations to ensure over-pressure protection complies with relevant safety requirements and commission gas pressure regulators and over-pressure protection devices to ensure safe gas pressures are not exceeded.

Further information can be found on [Resources Safety and Health Queensland](#).



## Pipework Embedded In Concrete

Pipework transitioning through a concrete or paved footpath is required to be protected by using appropriate proprietary wrapping as shown in the example below where Denso Tape has been used for protection.

For pipework embedded in concrete we refer to Clause 5.3.13 'Piping embedded in concrete' which the following applies:

The piping shall be –

- Copper tube, plastic coated or covered with an appropriate proprietary wrapping acceptable to the OTR, any joints are to be a minimum and be brazed
- Multilayer pipe installed without joints; or
- Plastic coated stainless steel (Grade 316) without joints

The gas operating pressure must not exceed 7kPa, the piping must not reduce the design strength of the concrete slab and piping must not extend through expansion joints in concrete.



# “If You Are Going To Do Something, Do It Right The First Time”!

Avoid having to return to jobs for minor non-compliances and spend 5 minutes more on getting it right.

It has come to our attention that some contractors are cutting corners, missing fixings, not commissioning appliances, pipework not protected and test points not being accessible.

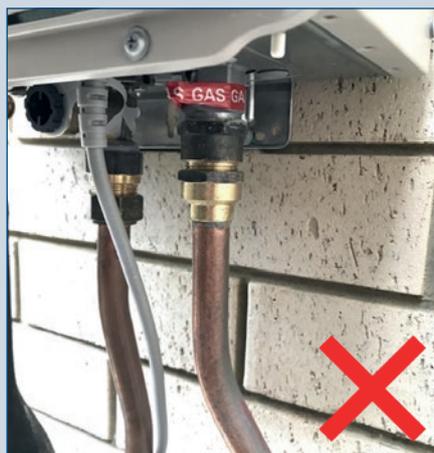
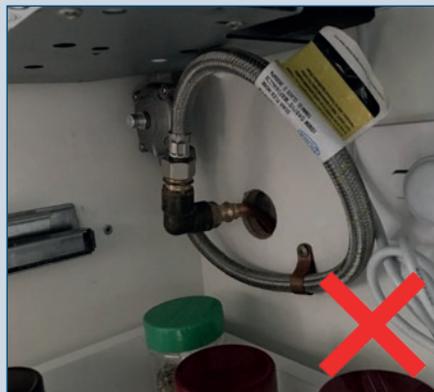
Galvanic corrosion (also known dissimilar metal corrosion) is an electrochemical process in which one metal corrodes preferentially when it is in contact with another. When penetrating or attaching copper tube to galvanised sheet iron please ensure to protect the pipe from potential effects of galvanic corrosion.

For pipe penetration use silicone seal or a grommet to protect the pipe and when attaching copper to the surface of the sheet iron use suitable clips that separates the pipe from the sheet or lagging.

Only one screw supporting the hot water service, Clause 6.2.2 Manufacturer's installation instructions specify how their appliances are to be installed and supported, fixings used to support the appliance must be of suitable durability and strength, in this case the manufacturer specifies 2 screws in both the top and the bottom.

Test point inaccessible, making regulator adjustments and testing impossible. Clause 6.6.5 requires pressure regulators be installed as close as possible to the appliance and be made accessible for servicing and adjustment.

These Hot Water Services have not been commissioned, which are clearly identified as the tags are still clearly visible over test points. Type A gas appliances are required to be commissioned by the installer before they go into operation, this applies both to new and existing installations. Existing installations need to be re-commissioned after modifications to the service or when undertaking servicing or repair activities. Appendix N has guidelines for commissioning appliances.





## Plumbing Bulletin



### Plumbers and Gasfitters, Have You Considered Upskilling?

The Federal and State government announced in the Budget that 480,000 TAFE and community based vocational education courses will be fee free starting 1<sup>st</sup> Jan 2023. This includes several plumbing and gas courses.

- Certificate II in Plumbing (Pre-apprenticeship)
- Certificate II Program in Pathways to Plumbing and Automotive
- Certificate III in Water Industry Operations
- Certificate III in Water Industry Operations (Networks)
- Certificate III in Water Industry Operations (Treatment: Water and Wastewater)
- Certificate III in Water Industry Operations (Water Treatment)
- Certificate III in Water Industry Operations (Wastewater Treatment)
- Certificate IV in Plumbing and Services (Hydraulic Services Design)
- Certificate IV in Plumbing and Services (Operations)

If you have considered starting or finishing your Certificate IV in Plumbing now is a great time to take advantage.

Once you have completed your Certificate IV in plumbing, your licence can be updated with Consumer Business Services (CBS) to an Advanced Plumber that will entitle you to certify work on a Certificate of Compliance (COC) and provide technical direction.

Further information can be found on the TAFE SA website below.

<https://www.tafesa.edu.au/courses/fee-free-tafe-courses>

**Note:** This initiative has been very popular and some course at the time of writing are already booked out for 2023.



# UPSKILLING

# Installation Of Thermostatic Mixing Valves (TMV)

Changes to AS/NZS 3500:2021 have made it clear that TMV's shall not be installed in roof spaces or any location that requires the use of a tool to access.

TMV's are a serviceable item that require maintenance every 12 months. To assist maintenance plumbers in servicing and repairing TMV's they must be *readily accessible*, this includes all associated valves and line strainers connected to the TMV.

The definition of *readily accessible* is, accessible without hazard, undue difficulty, or use of a tool.



## Examples of approved locations:

- TMV wall box (can be lockable with key).
- Underneath a sink or basin provided there is clear access for servicing.
- In a service duct which can be accessed without a tool.

## Examples of non-approved locations:

- Roof spaces.
- In a wall or cavity where tools are required to remove panel.
- Under the sub floor of a building.

## Water heaters with a thermostatic mixing valve (Non circulatory)

The heated water may be reduced to 45 degrees in temperature where required via a temperature delivery control device such as a TMV.

Heated water downstream of a TMV set at 45° Celsius can create a legionella risk .

Legionella risks may be reduced if the TMV's are located in close proximity to the outlet(s) they serve.

To minimise water stagnation, heat loss and the growth of microorganisms, including Legionella, it is recommended that the length of tempered water pipe work from a TMV outlet to each of its supplied fixture outlets does not exceed six metres.

## Circulatory heated water Systems

Circulatory heated water systems are complex systems that circulate heated water from a water heater, bank of water heaters or a heated water storage vessel at a temperature of not less than 60° Celsius.

Thermostatic Mixing Valves installed on a branch off-take of the circulatory system should be installed as close as practicable to the fixture outlet points serviced by the off-take branch.

Please refer to AS/NZS 3500.4:2021 Section 10 for further information relating to Circulatory heated water reticulation installations.

In most cases it is recommended circulatory heated water systems are designed by a Hydraulic consultant or engineer.

## Warm Water systems

Warm water systems that distribute or circulate warm water at 45° Celsius are identified as Tepid Warm Water Systems. Tepid warm water system requirements are captured by the Legionella Regulations.

The risk from Legionella can be managed through the proper design, installation, operation, and maintenance of heated water systems.

Please refer to SA Health's website for further information regarding warm water [www.sahealth.sa.gov.au](http://www.sahealth.sa.gov.au)

In most cases it is recommended a Hydraulic consultant/engineer is involved in designing of warm water systems.

Office of the Technical Regulator

## Backflow prevention requirements for dental surgeries

Plumbing Advisory Note

Revised February 2023

Recent changes to the *National Construction Code - Volume 3, Plumbing Code of Australia (PCA)* has increased the hazard rating for dental consoles and dental procedure rooms.

### Expert advice

Plumbing installations associated with medical facilities, such as a dental surgery, are complex. A suitably recognised expert, e.g. a hydraulic consultant, should undertake installation designs.

### Installation requirements for backflow devices

#### Individual protection

The National Construction Code - Volume 3, Plumbing Code of Australia (PCA) defines the hazard rating for dental consoles as a **medium hazard** for the purpose of individual protection.

Multiple dental chairs plumbed from a common water service must be installed with individual **medium hazard** backflow prevention valves to ensure there is no cross contamination between the individual dental chairs and the drinking water service.

#### Zone protection

The drinking water supply in rooms containing groups of dental equipment such as Autoclaves or Disinfectors must be protected by a **high hazard** backflow device.

**Note:** Fixtures used for personal hygiene must not be connected to a water supply downstream of an individual or zone backflow prevention device (eg. a hand basin or kitchen sink).

### Legislative requirements

The *National Construction Code - Volume Three, Plumbing Code of Australia (PCA)* sets out the cross-connection hazards and corresponding Hazard Ratings in Specification 41.

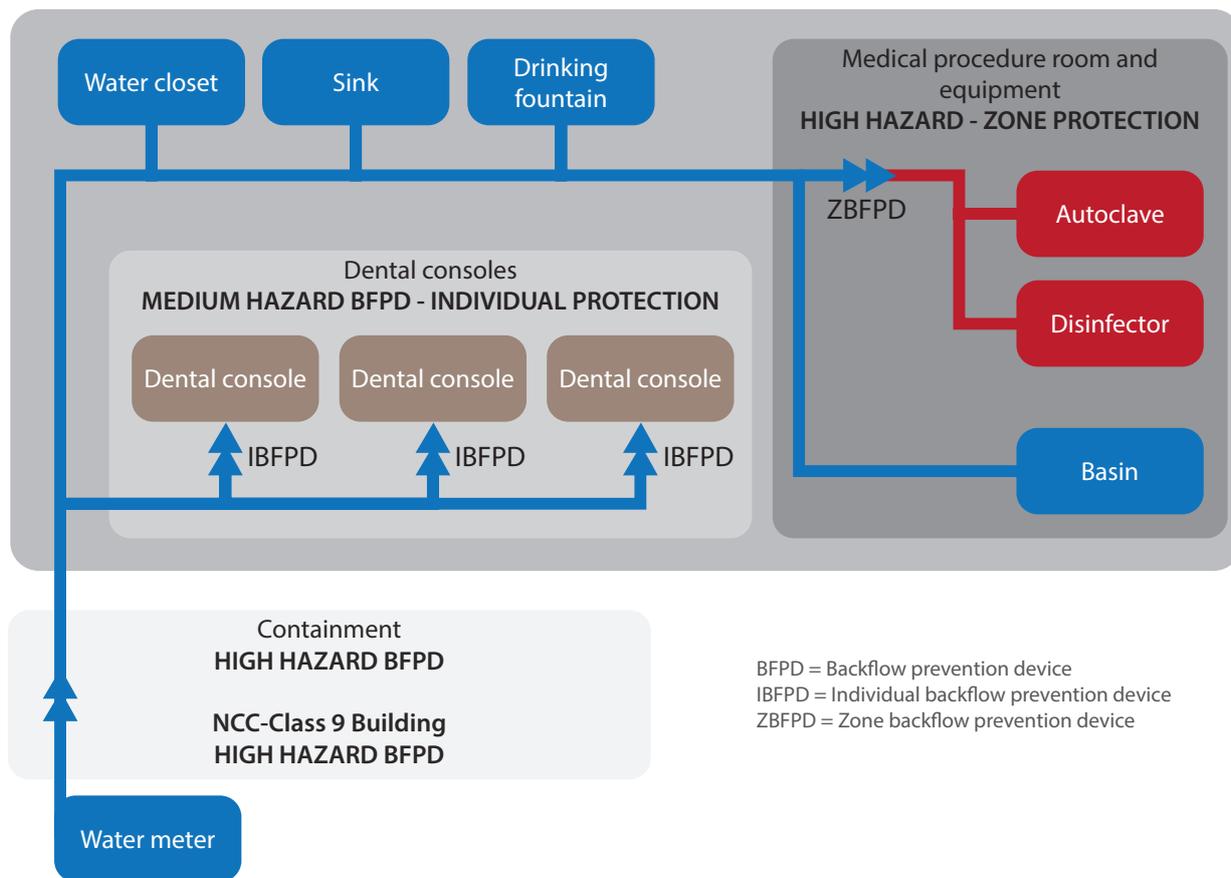
**AS/NZS 3500.1** - Table 4.4.1 sets the selection of a suitable Backflow Prevention devices after the hazard is known.

### Containment protection

Dental surgeries/clinics are Class 9A buildings, these buildings require a **high hazard** backflow device for containment protection.



Continued over page...



## Containment for mixed use buildings

As buildings can have mixed uses, they can also have mixed (or multiple) classifications. Where buildings have multiple classifications, the containment protection must default to the highest classification.

### For example:

Class 9A buildings are generally hospitals, referred to as health care buildings in the National Construction Code. They are buildings in which occupants or patients undergo medical treatment.

Class 9A buildings are **high hazard** for the purpose of containment protection.

Class 6 buildings are places that sell retail goods or supply

services direct to the public, like a shopping centre. In the National Construction Code, Class 6 buildings are **medium hazard** for the purpose of containment protection.

If a Class 6 building (medium hazard) includes tenancies such as a dental surgery/clinic, the hazard level for the Class 6 building would then be increased to high hazard for the purpose of containment protection.

### Contact the Office of the Technical Regulator for more information

Online [otr.sa.gov.au](http://otr.sa.gov.au)

Email [otr.plumbregulator@sa.gov.au](mailto:otr.plumbregulator@sa.gov.au)

Phone 1300 760 311



Government of South Australia

# Pot Fillers

The OTR Plumbing, Gas and Electrical have recently had an increase in calls regarding the installation of pot fillers above gas and electric stovetops. Pot fillers are generally installed on the wall (as pictured below) but can also be mounted in the benchtop next to the stovetop.

There is no specific mention regarding the installation of pot fillers in AS/NZS 3500, AS/NZS 5601.1 or AS/NZS 3000 however the installation must achieve the requirements in the Plumbing Code of Australia.

The OTR does not recommend pot fillers are installed above stovetops as the dangers of water and oil while cooking is well known to cause injury to persons and damage to property. ([Click here to see demonstration of water on an oil fire](#))

If installation is still to take place the OTR recommends contacting your insurance company (as this may affect premiums) and the manufacture of the cooktop that will be installed below the pot filler as it must be fit for purpose to withstand adequate spillage from the tap. Incorrect installation of a pot filler above some stovetops may also void the warranty of the product.



# Tampering With Infrastructure

There have been some recent incidents with plumbers being prosecuted for tampering with infrastructure under the *Water Industry Act 2012*.

Tampering with infrastructure can attract a maximum penalty of \$20,000 and shouldn't be taken lightly. Below is from Section 50 in the *Water Industry Act 2012*.

50—Protection of infrastructure and equipment

1. A person must not, without lawful authority—
  - a. attach any equipment or other thing, or make any connection, to water/sewerage infrastructure; or
  - b. interfere with—
    - i. the collection, storage, production, treatment, conveyance, reticulation or supply of water through the use of water infrastructure; or
    - ii. the collection, storage, treatment, conveyance or reticulation of sewage through the use of sewerage infrastructure; or
  - c. the collection, storage, treatment, conveyance or reticulation of sewage through the use of sewerage infrastructure; or disconnect or interfere with any water/sewerage infrastructure, or any equipment associated with any water/sewerage infrastructure; or
  - d. damage any water/sewerage infrastructure, or any equipment associated with any water/sewerage infrastructure.

Maximum penalty: \$20,000

Please see the following examples of tampering with infrastructure:

- Isolating a water or fire main.
- Isolating a fire service to a property.
- Connecting a sanitary drain to the riser of the SA WATER Inspection point.

## Stormwater to Sewer

Although discharging sewer to stormwater can have massive environmental impacts, sometimes discharging the stormwater to sewer can be overlooked as a non-issue—this is not the case.

When stormwater is connected to sewer this puts increased load on the network infrastructure during rain events. Not only does this impact SA Water's ability to treat sewerage but can cause mains blockages or overflows when the load on the pumping stations becomes too much.

When Plumbers are made aware of such interconnections customers should be notified and it should be rectified immediately.

The *Water Industry Act 2012* carries a maximum penalty of \$2,500 and an encumbrance will be placed on the property by the OTR until rectified.

56—Discharge of unauthorised material into sewerage infrastructure

(5) A person must not, without the authorisation of the relevant water industry entity, cause, permit or allow any rainwater, stormwater or surface water to flow into, or to otherwise enter, any sewerage infrastructure. Maximum penalty: \$2 500.

# Zone Of Influence

When replacing or installing sanitary drainage it's important to remember the **zone of influence** when digging close to a new or existing footing. Excavating within the zone of influence could compromise the structural integrity of the footing leading to potentially expensive repairs and verification of the footing by an engineer. The zone of influence is also more likely to collapse and erode depending on the soil type and conditions e.g. rain, earthworks.

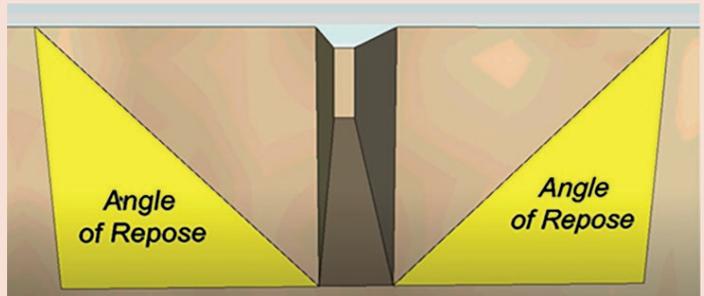


Figure 1 Angle of Repose

As a general rule the trench shall not be within 45 degrees from the bottom of the footing (Figure 2). This is only a general rule as soil conditions will alter how far from footings the trench

needs to be located. AS/NZS 3500.2:2021 Section 3.8.2 has more details on the distance from the bottom of the trench to the footing based on soil conditions.

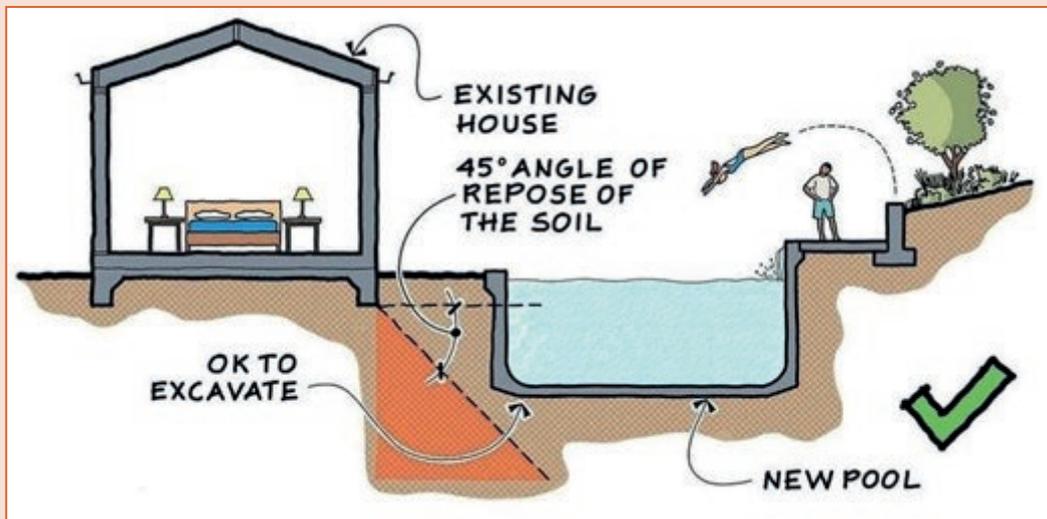


Figure 2 Trench parallel with house

Building engineers will generally consider the sanitary drainage when engineering footings and increase the depth of the footings or specify piers in certain sections of the slab.

Excavating within the zone of influence can be often overlooked on extensions, subdivisions or drain replacements.

This is because the existing footings on older properties are not generally as deep as footings on a new dwellings.

For more information or clarification on this topic the building engineer for the project you are working on should be consulted.

# List of Common Australian Standards



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

List of Common Australian Standards continued...



# List of Common Australian Standards cont...



Australian Standard	Current Publication Date	Public comment / Open/Closed
<b>GAS STANDARDS</b>		
<b>AS/NZS 5601 Part 1</b> <i>General Installations</i>	01/10/2020	
<b>AS/NZS 5601 Part 2 Amend 1</b> <i>LP Gas Installations in Caravans &amp; Boats non-propulsive purposes</i>	26/02/2021	
<b>AS 4575</b> <i>Gas Appliances – Servicing Type A Appliances</i>	09/08/2019	
<b>AS 3814</b> <i>Industrial &amp; Commercial gas-fired appliances</i>	25/10/2018	
<b>AS 1375</b> <i>Industrial Fuel Fired Appliances</i>	25/10/2013	
<b>AS/NZS 4645.1</b> <i>Gas distribution networks – Network Management</i>	28/02/2018	
<b>AS/NZS 4645.2</b> <i>Gas distribution networks – Steel Pipe systems</i>	28/02/2018	
<b>AS/NZS 4645.3</b> <i>Gas distribution networks – Plastic Pipe systems</i>	28/02/2018	
<b>AS/NZS 1596 Amend 2</b> <i>The Storage &amp; Handling of LP Gas</i>	01/10/2020	
<b>AS 4041</b> <b>Pressure Piping</b>	18/11/2016	
<b>PLUMBING STANDARDS</b>		
<b>*Plumbing Code of Australia</b>	February 2019	
<b>Plumbing Standard Issued by the Technical Regulator</b>	20/11/2020	
<b>AS/NZS 3500 Plumbing and drainage Part 0- Glossary of terms</b>	14/05/2021	
<b>AS/NZS 3500 Plumbing and drainage Part 1:</b> <i>Water services</i>	28/05/2021	
<b>AS/NZS 3500 Plumbing and drainage Part 2:</b> <i>Sanitary plumbing and drainage</i>	28/05/2021	
<b>AS/NZS 3500 Plumbing and drainage Part 4:</b> <i>Heated water services</i>	28/05/2021	
<b>AS/NZS 2845.2 Water supply- Backflow prevention devices</b> <b>Part 2: Registered air gaps and break tanks</b>	30/06/2010	
<b>AS/NZS 2845.3 Water supply- Backflow prevention devices</b> <b>Part 3: Field testing and maintenance of testable devices</b>	14/02/2020	
<b>AS 2419.1 Fire hydrant installations</b> <b>Part 1: System design, installation, and commissioning</b>	03/09/2021	
<b>AS 2441 Installation of fire hose reels (incorporating amendment 1)</b>	May 2009	
<b>FPA101D Automatic Fire Sprinkler System Design and Installation - Drinking Water Supply</b>	December 2021	

At Standards Australia you can view the draft with the latest comments and provide your feedback [here](#).

# [ Contact List ]

## Electrical Technical Advice

### Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide

(Reception on Level 4)

Phone: (08) 8226 5518 (8:00am-4:30pm)

Fax: (08) 8226 5529

Email: [otrmail@sa.gov.au](mailto:otrmail@sa.gov.au)

## Gas Technical Advice

### Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide

(Reception on Level 4)

Phone: (08) 8226 5722 (8:30am-4:30pm)

Fax: (08) 8226 5866

Email: [otr@sa.gov.au](mailto:otr@sa.gov.au)

## Plumbing Technical Advice

### Office of the Technical Regulator

Level 8, 11 Waymouth Street, Adelaide

(Reception on Level 4)

Phone: 1300 760 311 (8:30am-4:30pm)

Email: [otr.plumbenquiries@sa.gov.au](mailto:otr.plumbenquiries@sa.gov.au)

## eCoC Team

### Department for Energy and Mining

Phone: 8429 3394

Email: [dsd.otre-coc@sa.gov.au](mailto:dsd.otre-coc@sa.gov.au)

## General Information

### Licence and Address Change Consumer

& Business Services

Phone: 131 882

Email: [occupational@sa.gov.au](mailto:occupational@sa.gov.au)

## Appointments and Information

### SA Power Networks

Builders & Contractors Line

Phone: 1300 6500 14

Fax: 1300 6500 16

## Australian Standards

Standards Australia

[www.standards.com.au](http://www.standards.com.au)

## AGA

Phone: (03) 9580 4500

[www.gas.asn.au](http://www.gas.asn.au)

## Training

### Gas

#### Master Plumbers Association

1 South Road, Thebarton

Phone: (08) 8292 4000

Fax: (08) 8292 4040

#### Gas Services SA

2/16 Staite St, Wingfield

Phone: 1300 139 093

Fax: (08) 8162 5638

#### Gastrain

U1, 61-65 Tapleys Hill Road,  
Hendon 5014

(PO Box 83, Royal Park 5014)

Phone: (08) 8447 7783

Phone: 1300 955 583

Fax: (08) 8447 7753

[www.gastrain.com.au](http://www.gastrain.com.au)

#### Electrical and Gas TAFE info

(for all training enquiries)

Phone: 1800 882 661

#### Peer Veet

Rescue and Resuscitation, First Aid  
& other Industry related courses:

1042 Port Road, Albert Park

Phone: (08) 8348 1200

[www.peer.com.au](http://www.peer.com.au)

## Electrical

### Power Lines/Cables

#### Clearance Zones

Between vegetation and power lines  
or building/structures and power lines  
contact the **Office of the Technical**

#### Regulator

Phone: (08) 8226 5667

#### SA Power Networks (SAPN)

Phone: 13 12 61

#### For locations of Gas, Electricity or Telecommunications

#### “Dial Before You Dig”

This service is still available when doing  
emergency excavations at short notice.

Phone: 1100

[www.dialbeforeyoudig.com.au](http://www.dialbeforeyoudig.com.au)

#### For after-hours locations or gas emergency (including LPG)

**Origin Energy LPG:** 1800 808 526

**Kleenheat:** 1800 093 336

**Elgas:** 1800 819 783

**APA Group Gas leaks:** 1800 427 532  
(1800 GAS LEAK)

#### For gas or electrical major incident reporting 24 hours / 7 days (South Australia only)

#### Office of the Technical Regulator

Phone: 1800 558 811

This number also appears in the 24-hour  
emergency numbers section at the front  
of the South Australian White Pages

#### Gas Trade contact

#### APA Group Gas Distribution

#### Network Operator

Phone: 1300 001 001

# [ Additional websites for further information ]

## South Australian Parliament for Acts and Regulations

[www.legislation.sa.gov.au](http://www.legislation.sa.gov.au)

## SafeWork SA

[www.safework.sa.gov.au](http://www.safework.sa.gov.au)

## Gas Energy Australia (formerly ALPGA)

[gasenergyaustralia.asn.au](http://gasenergyaustralia.asn.au)

## Australian Competition and Consumer Commission (ACCC)

[www.accc.gov.au](http://www.accc.gov.au)

## Australian Gas Networks Ltd

(formerly Envestra)

[www.australiangasnetworks.com.au](http://www.australiangasnetworks.com.au)

## Elgas

[www.elgas.com.au](http://www.elgas.com.au)

## Australian Standards

<https://infostore.saiglobal.com/store/>