Government of Western Australia
Department of Mines, Industry Regulation and Safety
Plumbers Licensing Board

Technical Note

Technical Advice Line 1300 360 897 www.dmirs.wa.gov.au/building-and-energy

Evaporative air-conditioners

This technical note has been issued to alert the plumbing industry and stakeholders to acceptable methods for the termination of the overflow pipe from evaporative air-conditioners. This note should be read in conjunction with the Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations).

Licensed plumbing work

Construction industry operatives, especially the ones in the air-conditioning/mechanical services area are reminded that under the definition of water supply and sanitary plumbing work in the Regulations, the water supply pipework up to and the pipework draining the evaporative air-conditioning unit is plumbing work. This work shall be carried out by a suitably qualified person licensed by the Plumbers Licensing Board.

Photo 1: Typical evaporative air-conditioner

To help control microbial contamination and reduce the effects of water impurities, salts or total dissolved solids, evaporative air-conditioners discharge an amount of water to waste.

For safe control of this waste water to an approved point of discharge the following applies:

The configuration of the water reservoir and water supply effectively places regulation of these air-conditioners under storage tanks as stated in AS/NZS 3500.1:2018, clause 8.2.1(d). Therefore the discharge water shall be controlled as per the overflow requirements under AS/NZS 3500.1:2018, clause 8.4.4, tank overflow.

Discharge of the overflow

As evaporative air-conditioners do not have a safe tray and the volume of discharge means the waste is not suitable for discharge inside a building. Therefore, only the requirements of AS/NZS 3500.1:2018, clauses 8.4.4.1(a) and 8.4.4.2(d) apply as follows:

- Overflow from tanks shall be not smaller than DN 40, as per clause 8.4.4.1(a).
- In order not to cause damage or nuisance, the tank overflow shall discharge where it is readily visible outside the building, clear of doors, windows or other opening, and within the property boundaries as per clause 8.4.4.2(d).

Discharge of waste

Due to the corrosive nature of the waste water it must not discharge onto roofs or into gutters and downpipes. Licensed plumbing contractors are reminded that readily visible means the termination of the overflow should be at or near finished surface level.

As a guide any tundish exceeding 1.8 m vertically from finished surface level would not be considered readily visible. There is no maximum length of these wastes although they shall fall continuously in the direction of flow. Some examples of acceptable methods for termination are shown on page 2.

Water supply isolation valve

The location of the isolating valve for the water supply serving evaporative air-conditioners shall comply with AS/NZS 3500:2018, part 4, clause 5.9.4(a). The isolating valve must be in a position readily accessible from finished surface level. If the evaporative air-conditioner is discharging water, this enables home owners or occupiers to isolate the unit, preventing water wastage, until a service person can attend.

Version 2 - May 2019

Level 1, Mason Bird Building, 303 Sevenoaks Street (entrance Grose Avenue), Cannington WA 6107
Postal: Locked Bag 100 East Perth WA 6892
Plumbers Service Line (08) 6251 1377 | Facsimile: 1300 449 185 | plumbers.admin@dmirs.wa.gov.au

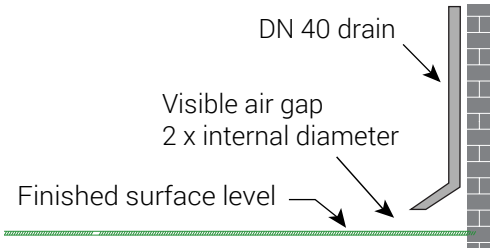

Diagram 1: To finished surface level with a visible gap provided the surface is graded away from the building, ponding does not occur, and the discharge does not present a safety risk to pedestrians.

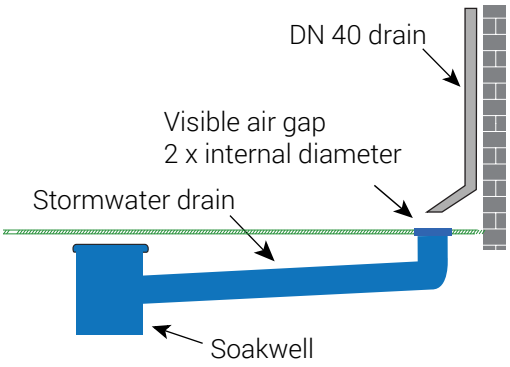

Diagram 2: Through a visible gap to a stormwater drain.

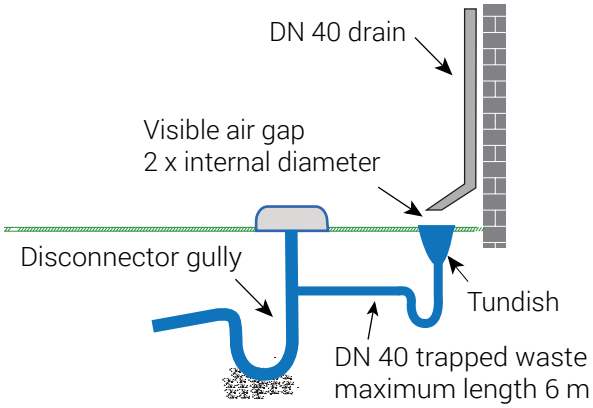

Diagram 3: To a disconnector gully via a tundish.

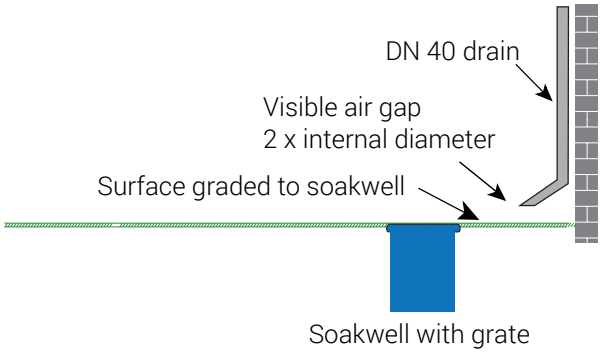

Diagram 4: To a surface stormwater drainage system provided the surface is graded away from the building, ponding does not occur, and the discharge does not present a safety risk to pedestrians for example draining across a footpath.

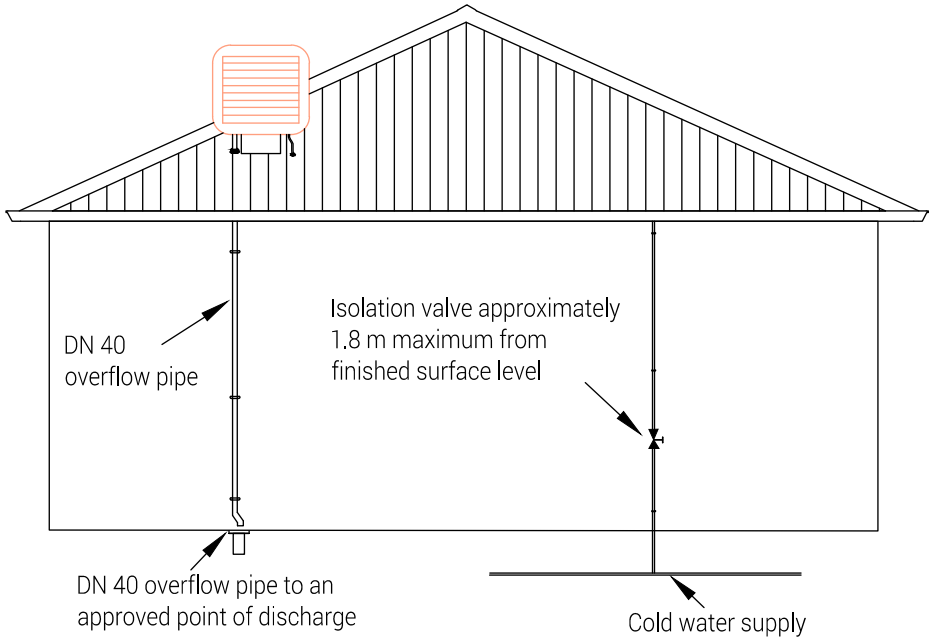

Diagram 5: Typical evaporative air conditioner installation showing compliant water supply and overflow pipe.

Notes:

1. Licensed plumbing contractors are advised to check with the relevant water services provider, for example the Water Corporation and their conditions of connection in relation to water used for cooling purposes.
2. Some water services providers do not allow evaporative air-conditioner waste to discharge to the main sewer due to the volume of waste water involved.
3. Water services providers' have conditions listed in the Water Services Regulations 2013.

Notes

The technical note series is issued by the Plumbers Licensing Board to assist the plumbing industry to comply with the Plumbers Licensing and Plumbing Standards Regulations 2000 (the Regulations) applicable to plumbing work in Western Australia.

Each technical note is to be read in conjunction with Part 6 of the Regulations that currently adopt the Plumbing Code of Australia (PCA) and the deemed to satisfy provisions of AS/NZS 3500:2018, parts 0, 1, 2 and 4 but modified in certain matters to suit the State's building approach and other local conditions.

Feedback

The Plumbers Licensing Board welcomes your feedback. If you have any questions on this technical note or any suggestions on any areas of plumbing work that the technical notes should cover, please contact the Board's Senior Technical Officer on (08) 6251 1377.

Copies

Technical notes are published at www.dmirs.wa.gov.au/building-and-energy Printed copies may be made available on request by telephone (08) 6251 1377 or email plumbers.admin@dmirs.wa.gov.au

Disclaimer