VICTORIAN BUILDING AUTHORITY

PLUMBING PRACTICE NOTE

Mechanical Services | MS 05 | Evaporative coolers: Drainage provisions

Audience

The audience/s for this Practice Note include/s:

- ☐ Architects/ Designers
- ☐ Builders
- ☐ Building Surveyors/ Inspectors
- ☒ Engineers
- ☐ Home Owners / Residential Tenants
- ☒ Owner Builders
- ☒ Plumbers
- ☐ Real estate management agents
- ☐ Trades and Maintenance (inc. Electricians)

Purpose

This Practice Note provides guidance on the safe discharge of water from an evaporative cooler.

The content below provides guidance on:

- A discharge pipe to a roof gutter pop outlet
- Discharge to a downpipe via a tundish
- A discharge drain to a stormwater drain system
- A discharge pipe to a sanitary drainage system via a tundish to a disconnector gully
- A discharge pipe to a sanitary drainage system via a tundish to a floor waste gully
- A discharge pipe to a sanitary drainage system via a tundish to a sanitary drain
- A discharge pipe to an absorption pit
- A discharge pipe over a tiled roof

Abbreviations & Definitions

The abbreviations and definitions set out below are for guidance only. They are not intended to vary those set out in the Building Act 1993, the Plumbing Regulations 2018 or the National Construction Code.

- **NCC** – National Construction Code 2022 Volume 3
- **Regulations** – Plumbing Regulations 2018

A discharge pipe to a roof gutter pop outlet

Figure 1, the condensate drains and bleed down drains are not permitted to discharge to a system that is used for the collection of water for drinking use, as per the PCA VIC G1.2.

The height requirements of a minimum of 150mm are measured from the base of the evaporative cooler to the end of the drain termination.

VICTORIA State Government

Figure 1: Referenced from. NCC VIC E2D2 (e) General requirements & HB276- 7.6.3 Drainage provisions

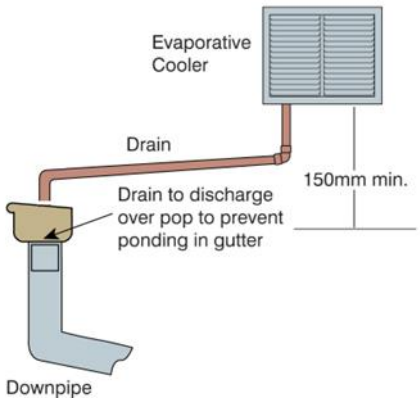

Figure 1 – Discharge pipe to a roof gutter pop outlet
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Discharge to a downpipe via a tundish

Figure 2, the condensate drains and bleed down drains are not permitted to discharge to a system that is used for the collection of water for drinking use, as per the NCC VIC E2D2 ((f)

The termination of the discharge pipe over the top of the tundish must have an air gap of a minimum of 25mm.

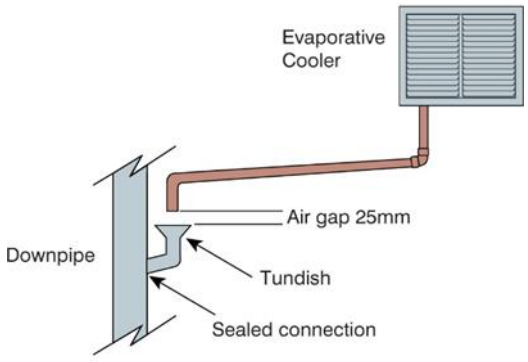

Figure 2 – Discharge pipe to a roof gutter pop outlet
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A discharge drain to a stormwater drain system

Figure 3, the surface must be graded away from the building, so that ponding does not occur, and the discharge does not create a safety risk to pedestrians, as per the NCC VIC E2D2 (c)

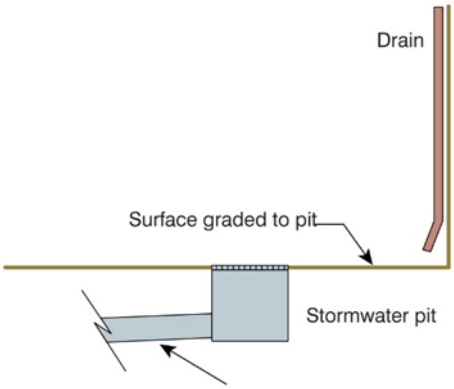

Figure 3 - A discharge drain to a stormwater system
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A discharge pipe to a sanitary drainage system via a tundish to a disconnector gully

Figure 4, the termination of the discharge pipe over the top of the tundish must have an air gap of a minimum of 25mm. The size of the pipe must be a minimum of 40mm to a disconnector gully of up to 6m. This is in accordance with AS/NZS 3500.2,clause 4.6.3 (f), and Appendix B.

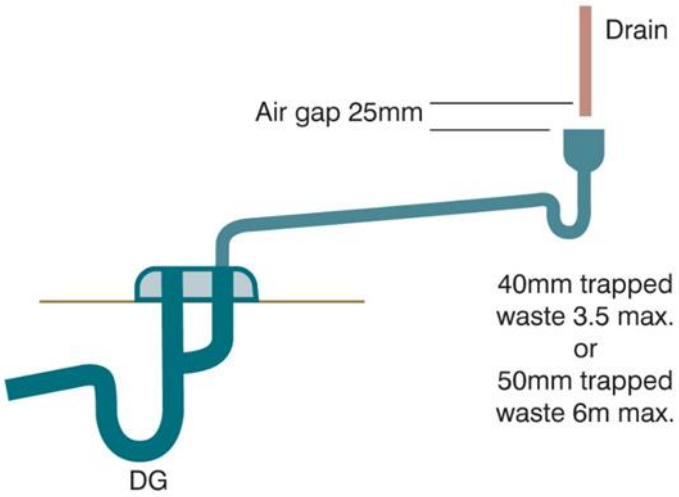

Figure 4 - A discharge pipe to a sanitary drainage system via a tundish to a disconnector gully
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A discharge pipe to a sanitary drainage system via a tundish to a floor waste gully

The termination of the discharge pipe over the top of the tundish must have an air gap of a minimum of 25mm. The size of the pipe must be a minimum of 25mm with a maximum of up to 10m in length. This is in accordance with AS/NZS 3500.2, clause 4.6.7.8, and 13.21

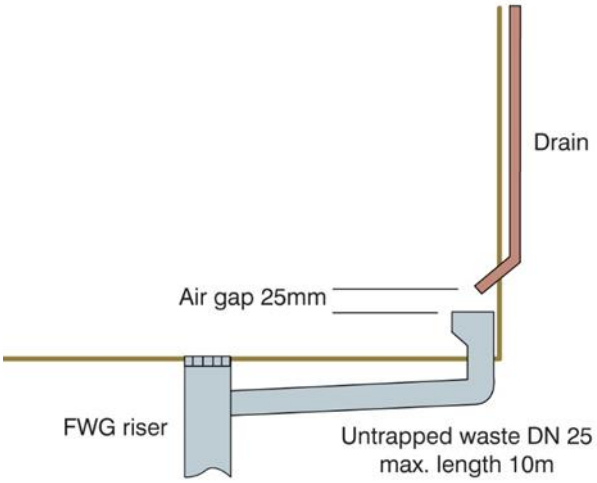

Figure 5 - A discharge pipe to a sanitary drainage system via a tundish to a floor waste gully
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A discharge pipe to a sanitary drainage system via a tundish to a sanitary drain

Figure 6, the termination of the discharge pipe over the top of the tundish must have an air gap of a minimum of 25mm. a) The size of the pipe must be a minimum of 40mm for the connection of a tundish to a sanitary system, with a maximum distance of 2.5m to a stack. b) The size of the pipe must be a minimum of 40mm for the connection of a tundish to a sanitary system, with a maximum distance of 2.5m to a 65mm drain. This is in accordance with AS/NZS 3500.2, clause 13.21 and Appendix B.

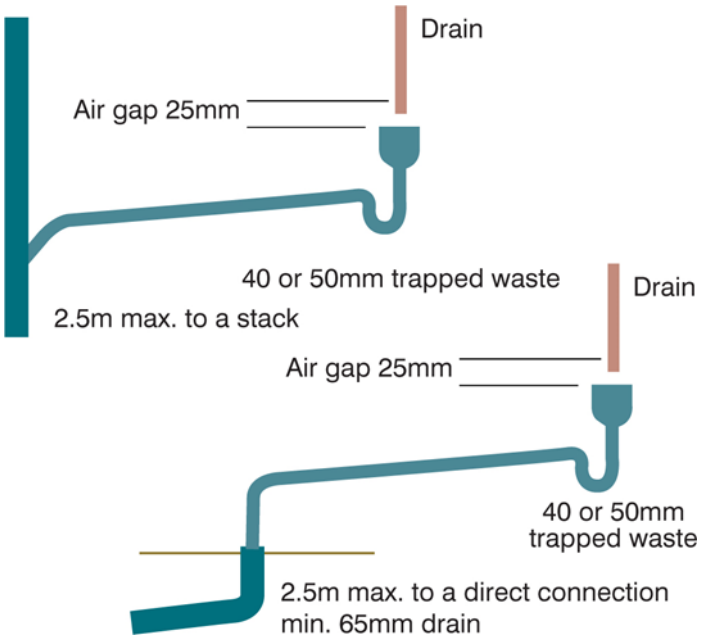

Figure 6 - A discharge pipe to a sanitary drainage system via a tundish to a sanitary drain
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A discharge pipe to an absorption pit

Figure 7, this scenario is only permitted where there is no sanitary drain or stormwater system available. The pit can only be constructed in permeable (porous) ground. It must be of a size appropriate to the volume of discharge and located so the discharge water will not cause building damage by changing moisture content, as per the .NCC VIC E2D2 (d)

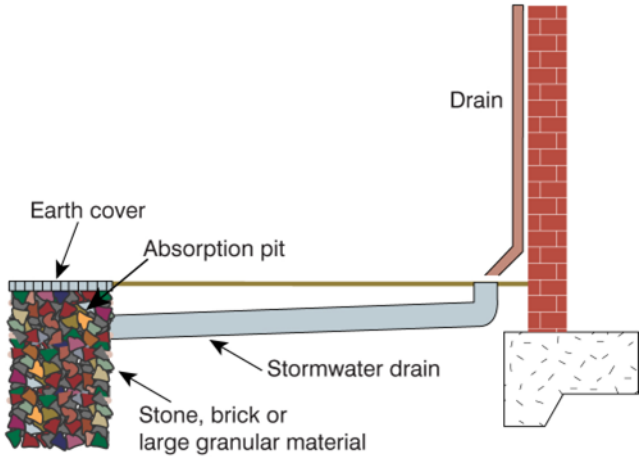

Figure 7:A discharge pipe to an absorption pit

A discharge pipe over a tiled roof

Figure 8, the discharge pipe from a roof mounted evaporative cooler may only be directed onto a tiled roof via a spreader. The spreader is to be in the direction of the flow of water, be secured, appropriately sized, and discharged evenly over the roof tiles. It must also be clear of roof tile joints and any roof flashings. The end of the spreader should be half capped (e.g., top half open) and the discharge pipes should not drain to a system that is used for the collection of water for drinking use, as per the . NCC VIC E2D2 (g) The spreader must not discharge over metal roofs.

VBA obtained photo

Related Documentation

- National Construction Code 2022 Volume 3
- AS/NZS 3500.2 Sanitary Plumbing and Drainage
- HB 276 Residential Heating and Cooling Equipment

List of Amendments

- Update to reflect Volume 3 NCC
- Updated template and formatting

Document history

Sector	Plumbing
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Contact Us

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