

# Technical Solution Sheet 7.05

## 7: Mechanical Services (including duct fixing)

### Evaporative Coolers

#### AIM

The aim of this technical solution is to inform practitioners on the requirements for the safe discharge of bleed and dump water from evaporative coolers.

#### Note:

This technical solution may be read in conjunction with other technical solutions that contain further information relating to condensate drainage for air-conditioning systems.

#### PLUMBING REGULATIONS 2008

The *Plumbing Code of Australia* (PCA) is adopted by and forms part of the *Plumbing Regulations 2008*. Part C1 of the PCA specifies the objectives and performance requirements related to the installation of sanitary plumbing systems. AS/NZS 3500.2: Plumbing and drainage Part 2: Sanitary plumbing and drainage is a “deemed to satisfy” document listed in Part C1 of the PCA and contains a section on “Connection of tundishes”.

The *Plumbing Regulations 2008* states that, “Residential heating, cooling and air-conditioning equipment must be installed in accordance with *HB 276: A Guide to Good Practice for Energy Efficient Installation of Residential Heating, Cooling & Air Conditioning Plant & Equipment*.”

#### DRAINAGE PROVISIONS FOR EVAPORATIVE COOLERS

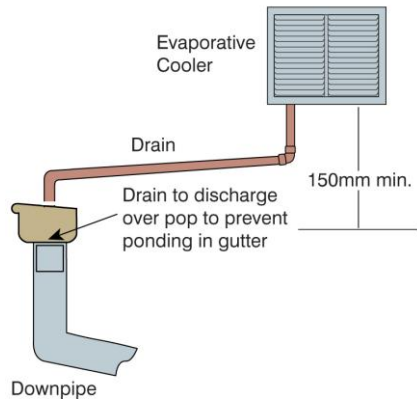
The discharge pipe from an evaporative cooler must be sized in accordance with the manufacturer’s requirements and must have continuous fall to the termination point.

The discharge pipe must have an internal diameter of no less than the internal diameter of the unit connection provision supplied by the manufacturer.

The following diagrams (Figures 1-5) are typical and provide guidance for evaporative cooler installers on the permitted ways to discharge the drains from evaporative coolers in accordance with the *Plumbing Regulations 2008*.

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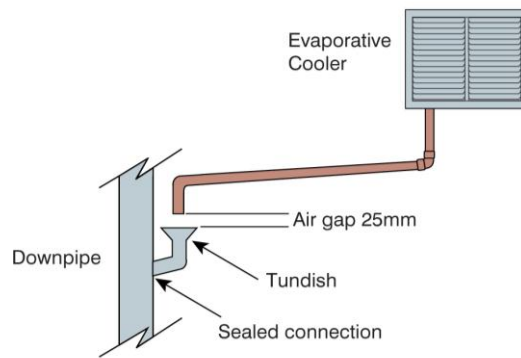
**FIGURE 1 - DISCHARGE POINT TO A ROOF GUTTER POP OUTLET**



## Requirements

- The downpipe must not be used for the collection of water for drinking water use.

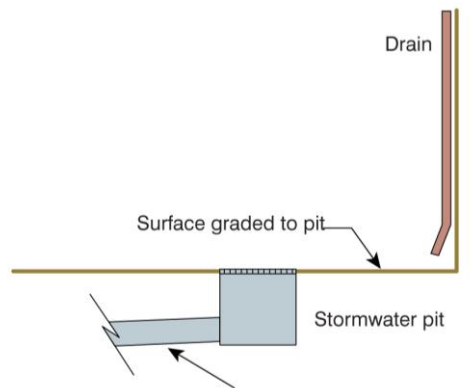
**FIGURE 2 - DIRECT TO A DOWNPIPE VIA A TUNDISH**



## Requirements

- The downpipe must not be used for the collection of water for drinking water use.

**FIGURE 3 - A SURFACE STORMWATER DRAINWATER SYSTEM**



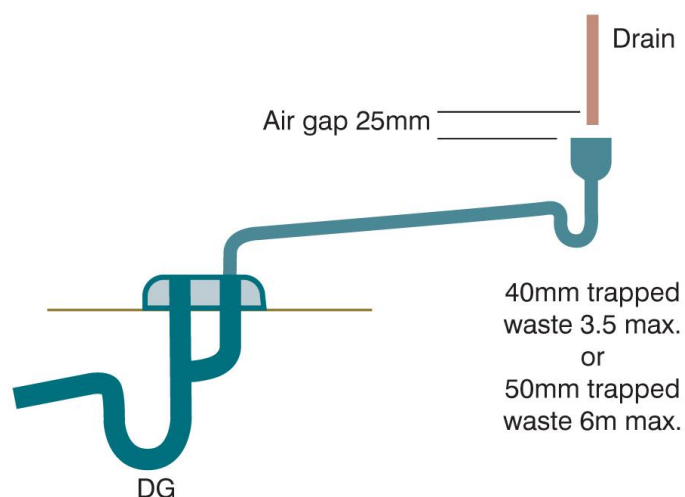
## Requirements

- The surface is graded away from the building & ponding does not occur, and the discharge does not present a safety risk to pedestrians (e.g. across a footpath) nor causes damage to buildings by changing moisture conditions.

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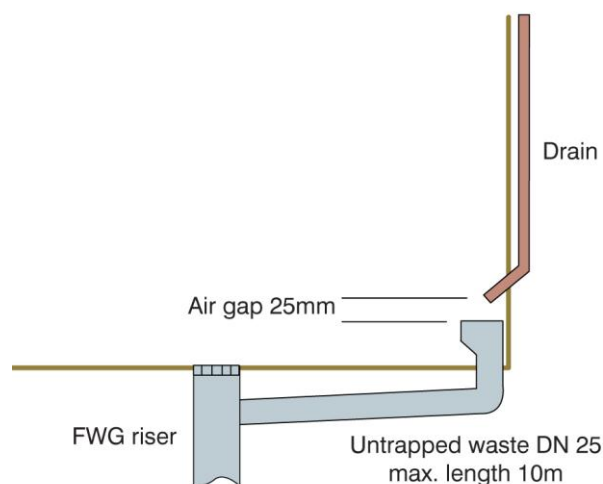
FIGURE 4 - A SANITARY DRAINAGE SYSTEM VIA A TUNDISH TO A DISCONNECTOR GULLY



**Note:**

- In accordance with [AS/NZS 3500.2](#) Clauses 4.6.7.8 and 11.22

FIGURE 5 - A SANITARY DRAINAGE SYSTEM VIA A TUNDISH TO A FLOOR WASTE GULLY

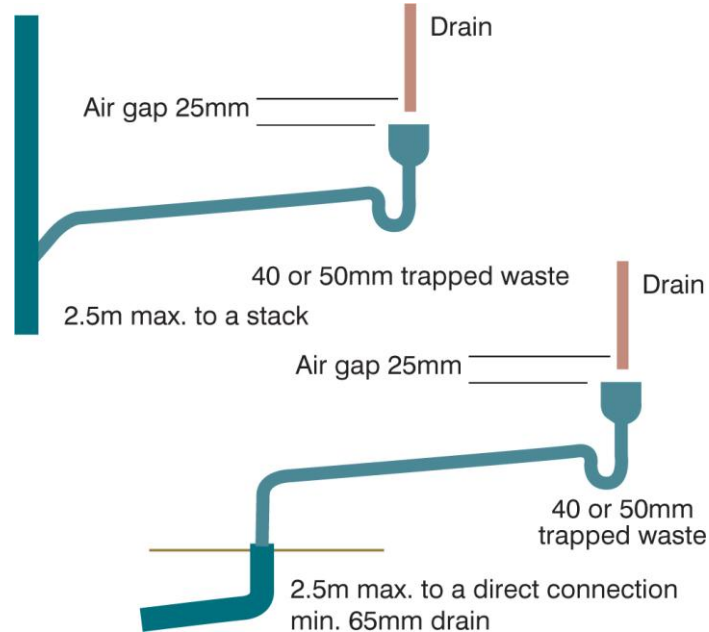


**Note:**

- In accordance with [AS/NZS 3500.2](#) Clauses 4.6.7.8 and 11.22

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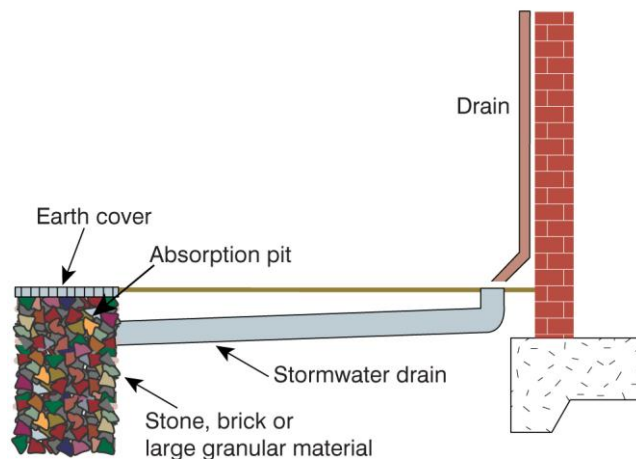
FIGURE 6 - A SANITARY DRAINAGE SYSTEM VIA A TUNDISH DIRECT TO A SANITARY DRAIN



**Note:**

- In accordance with [AS/NZS 3500.2](#) Clauses 4.6.7.8 and 11.22

FIGURE 7 - AN ABSORPTION PIT



**Requirements:**

- Only permitted where no sanitary or surface water drainage is available.
- The pit can only be constructed in permeable ground.
- Of a size appropriate for the volume of discharge.
- Located so the discharge water will not cause damage to buildings by changing moisture conditions.