

# Small bore wastewater and macerator pump installations

Plumbing Advisory Note – issued April 2018

When installing small bore wastewater and macerator pumps that receive discharge from one or more waste fixtures, ensure that:

- pumps are only allowed when it is not practicable to gravitate to a sewer connection
- plumbing fixtures in new building must gravitate to the plumbing system, except those installed in a basement
- the pump apparatus must be positioned next to the fixture, in the same room
- the pump apparatus must have removable, appropriately sized airtight covers, for maintenance purposes
- the pumping apparatus must have a vent of at least 50mm that vents into the atmosphere.

## Venting of small-bore pump apparatus

Please note AS/NZS 3500.2 does not address small bore pumping apparatuses that do not hold a volume of water at any time. The Office of the Technical Regulator (OTR) recommend, where possible, all pump chambers have a vent installed to atmosphere.

In cases where venting to atmosphere is not possible, and the small-bore pumping apparatus does not hold a volume of water at any time, manufacturers may specify optional alternative venting arrangements such as a carbon filter vent.

Alternative venting will only be acceptable for dry, no reservoir, small-bore pumping apparatus which receive either one kitchen sink or one hand basin. All alternative venting products must be WaterMarked and meet the manufacturer's specifications and instructions.

## Legislative requirements

Small bore macerator pump installations must meet the performance requirements of the *National Construction Code Volume 3 – Plumbing Code of Australia* (PCA).

The performance requirements of the PCA are satisfied by complying with **AS/NZS 3500.2:2015 – Sanitary plumbing and drainage standard**.

Note: Please refer to Part C of the PCA for further information on sanitary plumbing and drainage systems, and the 'deemed to satisfy' provisions.



Example of a wastewater pump

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## Pumped discharge pipework

Pump discharge pipes must comply with AS/NZS 3500.2:2015 and discharge to one of the following locations:

- an inspection chamber
- a boundary trap shaft
- a stack below the lowest fixture connection on any floor
- a drain or combined discharge pipe, providing the connection is at least 2.5 m from any other connection
- downstream of a reflux valve, or at least 2.5 m upstream of a reflux valve
- a minimum of 1 m downstream of a boundary trap.

## Identification of pump discharge pipework

Please refer to the South Australian variation in the state and territory appendices of the PCA.

**Extract: South Australian variation – Section C 1.2(D) Identification of pumped discharges and rising mains**

- *Buried pumped discharge pipes and rising mains shall be placed in a sleeve or continually spirally wrapped. The sleeving or spiral wrapping shall be identified for the full length with the following statement 'sewer rising main' or 'pumped discharge pipe', in accordance with AS 1345.*
- *Above ground pumped discharge pipes and rising mains shall be identified in accordance with AS 1345. Identification tape (label) with the wording 'sewer rising main' or 'pumped discharge pipe' shall be installed in a visible position running longitudinally, and fastened to the pumped discharge pipe or rising main at not more than 3m intervals.*

## Performance solutions

When it is not possible to have a 50mm vent discharging into the atmosphere, a performance solution detailing the alternative venting method must be sent to the OTR.

Performance solutions aren't permitted when soil fixtures are connected to the pump apparatus. An alternative venting method must achieve the same outcome as the requirement for a vent to the atmosphere.

Performance solutions sent to the OTR must include:

- a covering letter from a recognised expert, e.g. pump manufacturer or hydraulic consultant, outlining the proposed performance solution and how it meets the performance requirements of the PCA. If carbon filters or other venting methods are included as a component of the performance solution, a maintenance schedule for the venting method must also be included.
- a letter from the property owner accepting the performance solution and confirming they will do the necessary scheduled maintenance.

The OTR will send a Notice of Advice letter confirming the performance solution to the property owner.

The Notice of Advice will be registered on the South Australian Integrated Land Information System and provided to any interested people on request.

## Lodging performance solutions

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

Post: Office of the Technical Regulator  
GPO Box 320  
Adelaide SA 5001

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

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

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**Government of  
South Australia**