

**Gas Water Heaters
Building (Planning) Regulation 35A**

Building (Planning) Regulation 35A requires suitable provision for the installation of a room-sealed gas water heater in every bathroom in a building. This practice note specifies the arrangements considered generally to be acceptable.

2. In some instances (e.g. with special ducted flue systems), other arrangements may be accepted. Each case will be carefully considered on its merits and in the light of any special circumstances presented for consideration.

Size of the Aperture

3. A standard aperture should be :
- (a) 320 mm wide by 420 mm high normally; or
 - (b) 240 mm by 240 mm when the bathroom is of such a size that only a shower could be fitted.
4. Non-standard apertures may be constructed provided that :
- (a) the size is to suit a specific water heater flue installed before completion of building; and
 - (b) if necessary, the aperture may be enlarged later to the appropriate standard size (the provision for which can be clearly discernible) without cutting reinforcing bars, re-positioning services or the like.

Location

5. The general requirements are as follows:
- (a) An aperture should be located in the clear face of an external wall, except that in buildings served by a permanently open and well ventilated balcony approach, apertures may be placed so as to vent into such balconies;
 - (b) As for the internal face of the wall, there should be an unobstructed area around the aperture. The minimum dimensions are as follows :-
 - 50 mm above
 - 100 mm to each side
 - 150 mm below

- (c) The base of the aperture should be not less than 200 mm above floor level.
 - (d) The aperture should be not less than 300 mm from any corner or from any other opening into the building (e.g. an openable window, a vent, an air-conditioner opening or another aperture);
 - (e) The aperture should be in a wall which has a clear space of not less than 1 500 mm between it and any facing wall or other part of a building, or site boundary. However, if the boundary abuts a street, an aperture may be provided in any wall abutting that street;
 - (f) An aperture should not be positioned directly below any fixed clothes drying racks. Flue terminal guards (supplied/designed by the appliance manufacturers) should be fitted at aperture locations if selected water heating appliances do not incorporate an overheating protector.
 - (g) The water heater, when fitted, should not cause obstruction or inconvenience to the normal use of the room in which it is installed, and should be readily accessible by the user for operation, inspection and maintenance; and
 - (h) The length of the hot water pipes from the water heater should comply with the requirements of Waterworks Regulation 19 (Cap 102).
6. For apertures facing into an enclosed space (such as a light well) :
- (a) The entire enclosed space should contain no obstruction to restrict a vertical flow of air;
 - (b) The enclosed space should be ventilated to the external air below the lowest aperture so as to maintain the air flow. The area of the vents providing this ventilation should be not less than 0.05 m² for each aperture which faces into the enclosed space. No vent may have any internal dimension less than 200 mm; and
 - (c) The minimum plan dimension of the enclosed space in relation to its height should be -
 - not less than 3 m - not more than 10 storeys high
 - not less than 4 m - between 11 - 19 storeys high
 - not less than 5 m - 20 or more storeys high

7. For apertures facing into a re-entrant :
- (a) The minimum plan width of the re-entrant should be not less than 1.5 m;
 - (b) At each storey, any obstruction (e.g. tie beam) at the open end of a re-entrant may not reduce the vertical open area by more than 20%; and
 - (c) The entire re-entrant should contain no obstruction to restrict a vertical flow of air.
8. For installation of gas water heaters in a confined cavity such as that within a false ceiling :
- (a) The gas water heater should be readily accessible by the user for operation, inspection and maintenance. Quick release type removal panel for access to the gas water heater inside the confined cavity (e.g. within a false ceiling) without the necessity of using hand tools is considered acceptable for that purpose.
 - (b) Means of ventilation to the cavity in which the gas water heater is installed should be provided. Installation of adequate louver-type ventilation panels are considered acceptable for that purpose provided that it is a non-adjustable purpose-made louver designed to allow the passage of air at all times. Moreover, such means of ventilation should not be located in a position where it is likely to be easily blocked.
 - (c) Manufacturer's installation, operation and maintenance requirements should be followed.
9. With respect to the location of the standard aperture for water heaters, please refer to the drawing at Appendix A.

Sealing

10. When a gas water heater is not fitted at the time of construction, a standard aperture must still be provided. There is no objection to it being sealed. However, any such sealing should be of easily removable brickwork or blockwork. Moreover, any aperture so sealed should be clearly discernible (e.g. by means of recessing) from the inside of the building.

/Reference

Reference

11. Reference should be made to the Code of Practice GU03 for the Installation Requirements for Domestic Gas Water Heaters published by the Electrical & Mechanical Services Department.

(AU Choi-kai)
Building Authority

Ref. : BD GR/PU/1
BD GR/1-50/70

This PNAP is previously known as PNAP 82

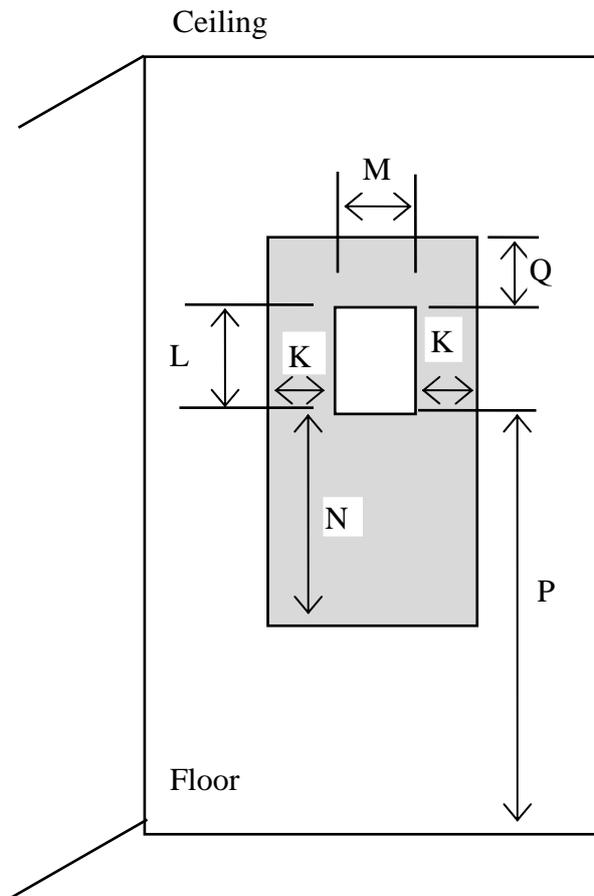
First issue May 1983

Last revision December 1998

This revision December 2010 (AD/NB1) – para. 3, 5 & Appendix A amended,
para. 8 & 11 added

**ACCEPTABLE LOCATION OF
ROOM-SEALED WATER HEATER TERMINAL**

INTERNAL VIEW



Dimension		Minimum
K	Unobstructed Area	100 mm
N		150 mm
Q		50 mm
P	Height Above floor	200 mm
L x M	Standard size	420 x 320 mm or 240 x 240 mm
	Non standard	to suit

* Unobstructed area shaded