

Tiling bath and shower enclosures, wet rooms and bathroom pods

(November 2024) (Fourth issue – supersedes June 2024)

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Applicable sites

Warranty sites registered with NHBC.

Applicable regions

This technical guidance applies to England, Wales, Scotland and Northern Ireland.

Background

The purpose of this Technical Guidance Note is to clarify NHBC's position on the installation of tiling to bath and shower enclosures, wet rooms and bathroom pods.

Note: The following guidance relates only to the installation of tiling. The suitability of the selected tiling substrate should also take into consideration other performance requirements such as structure, fire, thermal, acoustics etc. as appropriate.

Where alternative wall and floor lining finishes (eg vinyl) are proposed, products should be assessed in accordance with Technical Requirement R3.

Key Technical Considerations

The walls surrounding bath and shower enclosures and the walls and floors in wet rooms are exposed to regular wetting, and suitable precautions should be taken to prevent leaks occurring.

The degree of wetting to surfaces and the associated risk of leaks will vary depending on factors such as the flow rate of fittings and type of room; power showers and wet rooms represent a higher potential risk of leaks than where standard plumbing fixtures are used in a typical bath or shower enclosure.

In addition, joints between the tiling and bath or shower tray, joints between wall and floor tiling, and penetrations of the tiling such as pipes and shower valves are also areas of increased risk.

Bath without shower

The walls which surround a bath (where no shower is fitted) may be subject to intermittent wetting.

Substrates to any wall tiling around the bath should be moisture resistant and suitable for the application; consult the substrate manufacturer for guidance on product suitability and installation. In order to reduce the risk of water penetration through the tile finish, tiles should solidly bedded in water-resistant adhesive and finished with water-resistant grout.

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Shower over a bath and shower enclosures with standard flow rate fittings (<12 litres/min)

The walls which surround a shower or bath with a fixed shower or showerhead fixing may be subjected to regular wetting and the substrate to any tiling needs to be moisture resistant and appropriate for the application (eg Type H plasterboard to BS EN 520 or BS EN 15283 or other proprietary tile backing boards assessed in accordance with Technical Requirement R3). Consult the substrate manufacturer for guidance on product application and installation.

In order to reduce the risk of water penetration through the tile finish, tiles should be solidly bedded in water-resistant adhesive and finished with water-resistant grout. In order to reduce the risk of water penetration at junctions, shower trays and baths with integrated upstands should be used and incorporated behind the tiling. Alternatively, proprietary rigid or flexible upstand sealing kits should be fitted to the shower tray or bath and incorporated behind the tiling, see Figure 1.

In order to reduce the risk of water penetration around pipes, shower mixer valves and taps, fittings should be installed in accordance with the manufacturer's instructions; additional proprietary waterproofing gaskets may also be considered.

As an alternative to the above, a waterproofing system can be installed in accordance with Table 2.

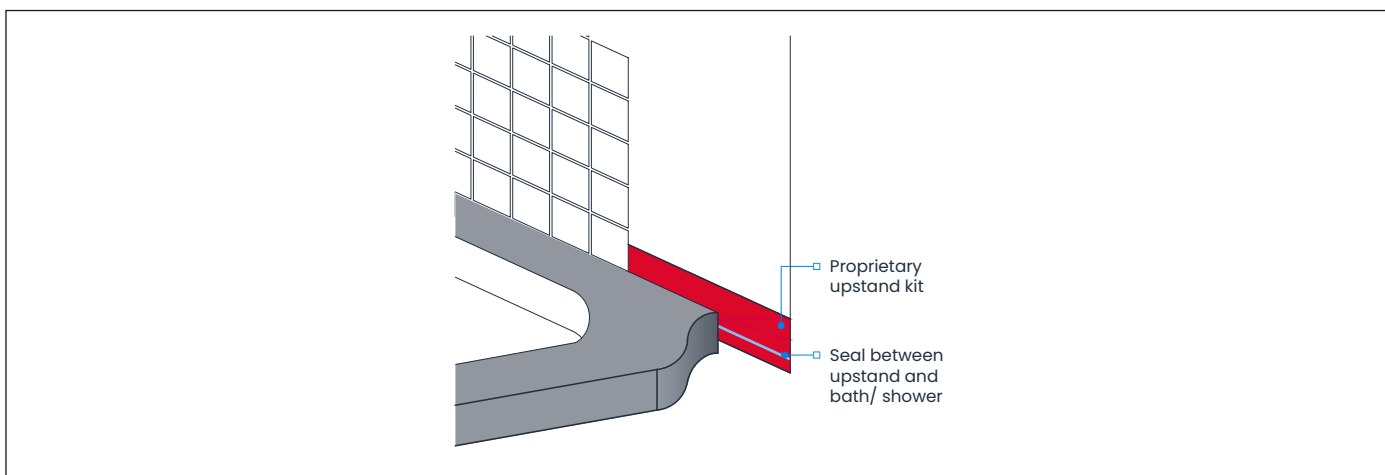


Figure 1 - Example of a proprietary flexible upstand kit incorporated behind tiling

Bath and shower enclosures with 'power showers'

A power shower incorporates a pump to boost the water flow rate (>12 litres/min). Power showers installed to bath or shower enclosures increase the potential moisture load on the enclosure walls, and additional protection through the use of a waterproofing system should be provided prior to the installation of any tiling.

Substrates to wall tiling within the bath or shower enclosure where power showers are fitted should be suitable for the intended application; substrates should be selected in accordance with Table 1. Waterproofing systems should be selected in accordance with Table 2 and installed in the areas set out in Figure 2. Gypsum-based boards are generally unsuitable for this application unless they hold a satisfactory assessment in accordance with Table 1.

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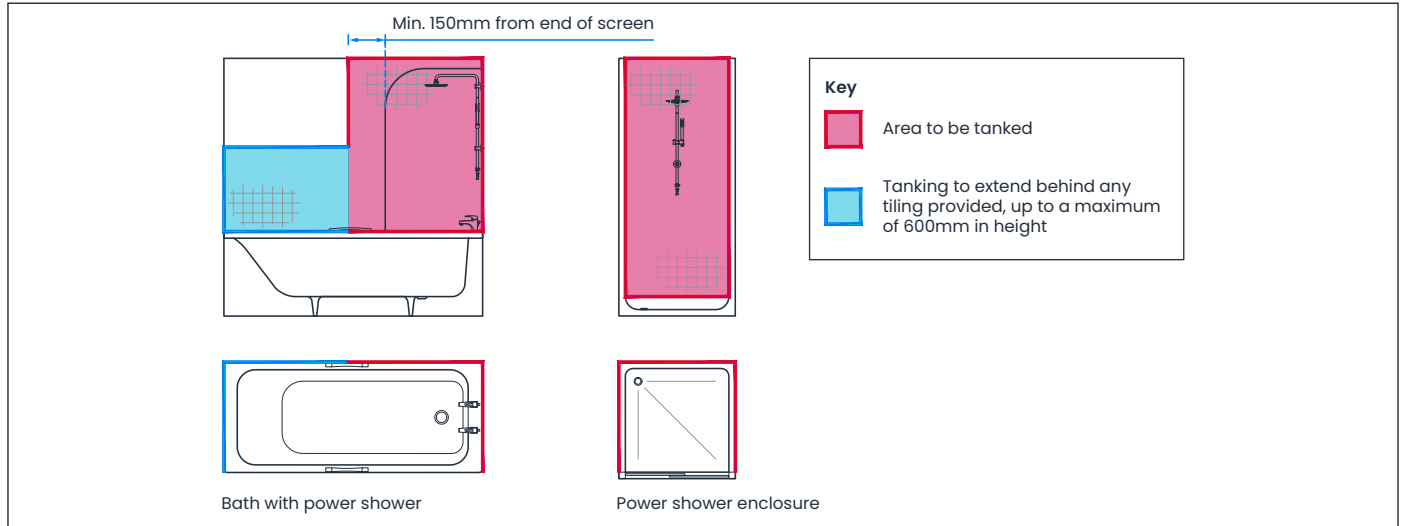


Figure 2 - Typical examples of bath and shower enclosures where power showers are fitted

Wet rooms

A wet room is considered to be an area where the shower is open or partially contained by a fixed wall or screen, its floor area being flush with the adjacent floor, and the water drains away through an outlet set into the floor. Note: This simple definition cannot cater for all potential scenarios; if there is any doubt as to whether a proposed design is a shower enclosure or a wet room, please contact TechnicalSupport@nhbc.co.uk for further guidance.

Wall and floor linings in wet rooms are subject to frequent wetting; the structure behind the tiles should be made watertight in the areas set out in the example Figure 3a and Figure 3b. Substrates to tiling and waterproofing systems should be selected in accordance with Table 1 and waterproofing systems selected in accordance with Table 2.

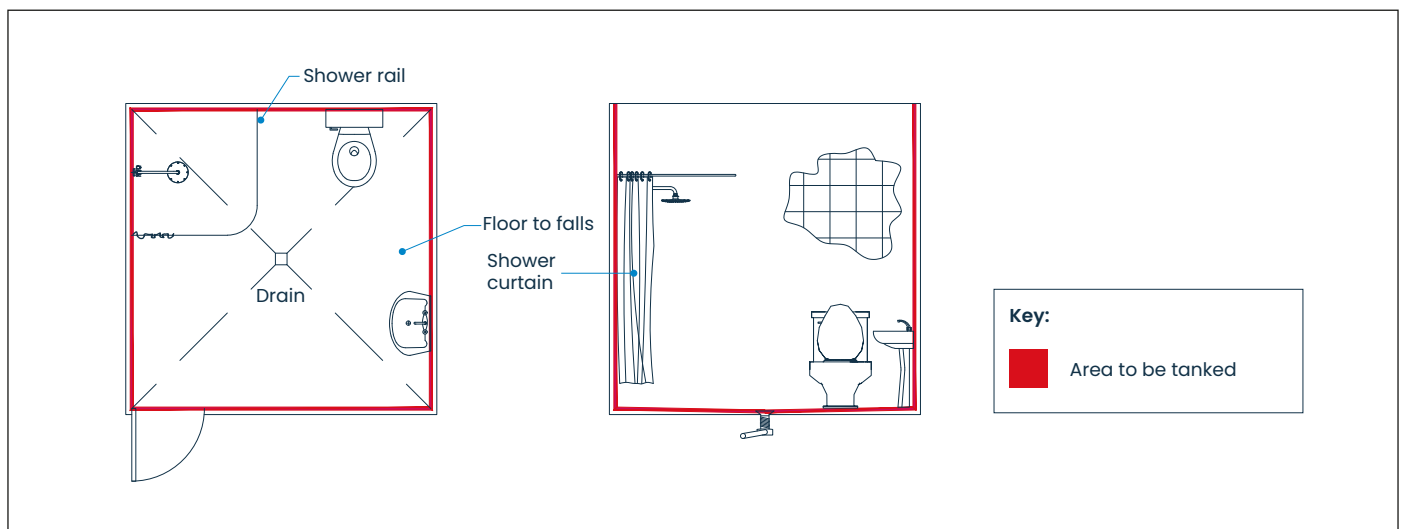


Figure 3a - Typical example of wet room configuration without fixed wall or screen

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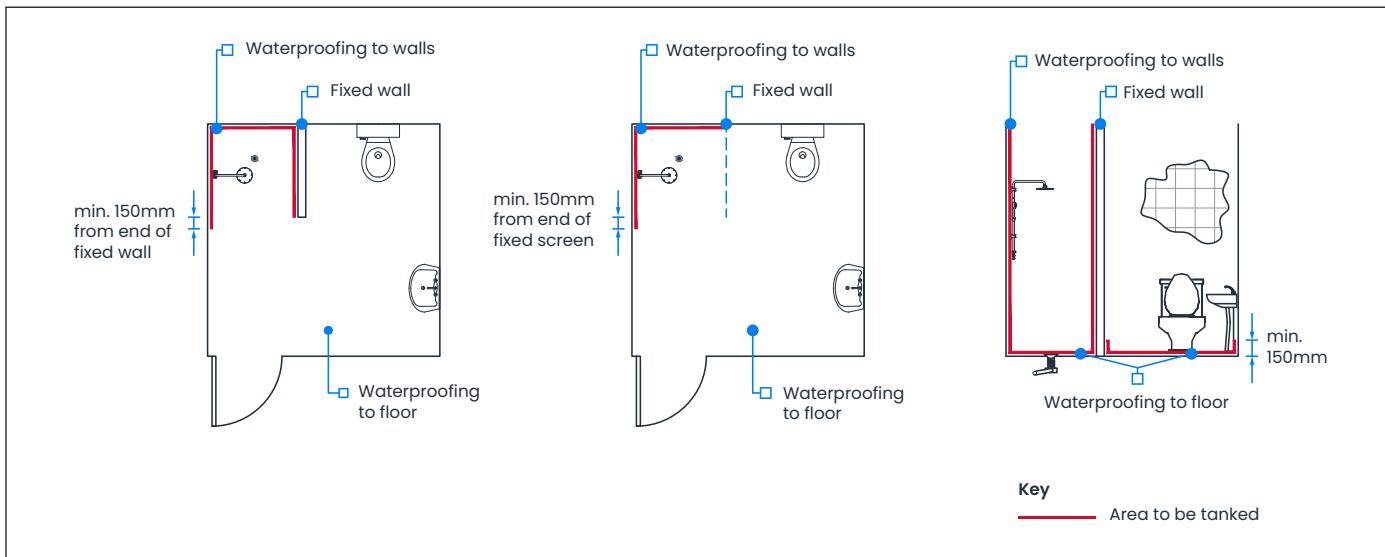


Figure 3b - Typical example of wet room configuration with a fixed wall or screen separating the shower from the rest of the room

Future adaptations

Where statutory requirements stipulate that allowances must be included for future adaptation in the design of a new home to meet any changing needs of the occupants (eg the changing of a bathroom into a wet room by the removal of a bath and replacement with a level access shower), the designer should ensure the minimum regulatory requirements are met at NHBC final inspection stage.

Note: Waterproofing systems will normally be installed at the time of adaption.

Waterproof tanking system

Waterproofing systems (tanking) should form an impervious waterproofing layer behind the tiles to prevent the ingress of water/moisture into the substrate and structure. All junctions should be appropriately sealed (eg between the wall and shower, bath or floor, and around any penetrations, etc) to ensure a watertight enclosure is formed in accordance with the system's technical approval.

Waterproofing systems should be applied in a uniform layer, prior to any wall or floor tiling. Liquid applied solutions or membranes should be appropriate for the substrate. The tiles, adhesive and grout should be compatible with the selected waterproofing system, and the maximum tile weight stipulated by the waterproofing system manufacturer should not be exceeded.

Waterproofing systems should meet NHBC Technical Requirement 'R3' (See Table 2).

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Table 1 – Suitable substrates

Material	Relevant standards	Bath and shower enclosures where a power shower is fitted and wet rooms	
		Substrate suitable?	Waterproofing system required?
Gypsum plaster	BS EN 13279	Subject to assessment ⁽¹⁾	Yes ⁽²⁾
Gypsum plaster board (Type H)	BS EN 520 & BS EN 15283	Subject to assessment ⁽¹⁾	Yes ⁽²⁾
Fibre cement board & glass reinforced cement board	BS EN 12467	Yes	Yes ⁽²⁾
Other board substrates ⁽³⁾	–	Subject to assessment ⁽¹⁾	Subject to assessment ⁽²⁾

(1) Substrate should hold a suitable independent technical assessment by a technical approvals authority acceptable to NHBC, to demonstrate the product's suitability for application.

(2) Where the substrate has been assessed in accordance with Table 2, tanking may be omitted.

(3) NHBC do not accept the use of Magnesium Oxide (MgO) building boards.

Table 2 – Waterproofing system criteria

Product type	Assessment	Alternative
Liquid applied	Products should be UKCA, UKNI or CE marked to EAD 030352-00-0503 'Liquid applied watertight covering kits for wet room floors and/or walls with or without a wearing surface'	Alternatively products should hold a satisfactory assessment by an appropriate independent technical approvals authority acceptable to NHBC
Flexible sheet	Products should be UKCA, UKNI or CE marked to either: <ul style="list-style-type: none"> • EAD 030436-00-0503 'Watertight covering kits based on flexible sheets for wet room floors and/or walls' or • EAD 030400-00-0605 'Waterproofing kit based on polymeric membranes for in- and outdoor walls and floors or wet areas and swimming pools' 	
Watertight boards	Products should be UKCA, UKNI or CE marked to EAD 030437-00-0503 'Watertight covering kits based on inherently watertight boards for wet room floors and/or walls'	

Transitional Arrangements

This guidance comes in effect for every NHBC registered home whose foundations are begun on or after 1st January 2025.



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