

WET ROOMS MADE EASY

# WET ROOM INSTALLATION GUIDE

ORBRY 30MM SHOWER TRAY



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## 01

### PREFACE

#### CONGRATULATIONS!

You are now one step closer to creating a stunning wet room for your home.

A wet room is a modern, watertight solution replacing the traditional bathroom with an easy access shower area that is easy to clean and features a minimalistic design.

With the Orbry Wet Room Solution, it's easy to create a completely waterproof background for your wet room that is guaranteed to last for years to come.



#### ORBRY LIFETIME GUARANTEE

If you choose to install a complete Orbry wet room or shower room, then you will be covered by the Orbry Lifetime Guarantee. This is only available when you use the complete Orbry system, and install it in accordance with the Orbry installation guides.

There is a lifetime guarantee on all Orbry non-electrical branded products if proven that the products have been installed and maintained in accordance with all Orbry Installation Instructions. The guarantee excludes normal wear and tear, any modifications, neglect or misuse. When used in commercial situations, the Orbry Lifetime Guarantee is limited to a period of five years.

NB: Liability does not extend to consequential loss or damage that arises from defective products. The liability is limited to the price of the original goods as they were supplied.

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## 02

### CAN I FIT A WET ROOM?

Before fitting a wet room in your home, it's important to consider the room dimensions and other additions that you may want to install, such as underfloor heating. Based on the information provided we can advise whether or not a wet room is a feasible solution for your home.

To create your Orbry wet room, you will need; an Orbry Shower Tray, an Orbry Drain, Orbry Boards, Orbry waterproofing components, and Orbry fixing ancillaries.

#### POINTS TO CONSIDER BEFORE INSTALLATION BEGINS:

- 1 Select the correct size Orbry Shower Tray (see Section 7)

*Orbry Shower Trays are available in a wide range of sizes and drain configurations, plus they are easy to trim; allowing you to create the perfect fit for your shower area. We recommend that you choose as large a tray as possible for your wet room, as this increases the area that will drain effectively. Custom size Orbry Shower Trays are available.*

- 2 Ensure there will be sufficient fall to allow water to flow from the shower drain to waste pipe.

- 3 Check to make sure there are no obstacles in the way of the drain or waste pipe.

## 03

# WATERPROOFING THE WALLS

Common wall backgrounds in the UK, i.e. plasterboard and plaster, are sensitive to moisture and will need to be covered with Orbry Tile Backer Boards before tiling commences.

Traditional wall backgrounds aren't likely to be able to hold the weight of many porcelain and natural stone tiles. The recommended weight limit for Gypsum plaster is only 20kg/m<sup>2</sup>. Orbry Boards are capable of supporting a weight of up to 60kg/m<sup>2</sup> and are completely waterproof, making them an ideal surface for tiling.

## SOLID WALLS

### BACKGROUND PREPARATION

#### *Plaster/ Plasterboard:*

If the wall background in the proposed wet room area is currently plaster or plasterboard, you will either need to remove the plaster to reach a sufficient weight-bearing background or, more easily, mechanically fix Orbry Boards over the plaster to the weight-bearing surface beneath. Orbry Boards should be fixed with Orbry Spanker Dowels to a minimum depth of 35mm into the weight-bearing structure.

#### *Existing Tiles:*

Remove the tiles to a sufficient weight-bearing background or mechanically fix Orbry Boards to the weight-bearing surface beneath the tiles with Orbry Spanker Dowels to a minimum depth of 35mm.

#### *Brick/Block/Concrete:*

Apply Orbry Boards directly to the surface using a rapid setting, flexible, cement-based, category C2 tile adhesive.

### ORBRY BOARD APPLICATION

Before fixing Orbry Boards, check that all wall surfaces are load bearing, sound, clean, and free from dust and other contaminants. Orbry boards are easily cut with a utility knife, however we recommend always wearing appropriate gloves when cutting.

Dependent upon the advice above, use one of the following application methods to fix the Orbry Boards to the wall:

#### FIXING WITH TILE ADHESIVE

Choose a rapid setting, flexible, cement-based category C2 tile adhesive. Follow the manufacturer's instructions for mixing ratios. Apply using one of the following methods:

#### ***Solid Bed Fixing (Brick/block/concrete):***

*(can only be used if the walls are flat and true):*

Spread the adhesive evenly onto the wall using a minimum of an 8mm notch tiler's trowel. Then, put the board up to the wall and press firmly into position before adjusting with a spirit level to ensure that it is both flat and level (*Fig. 1*).

Keep in mind that the minimum board thickness for a brick, block, or concrete wall installation when solid bed fixing is 6mm.

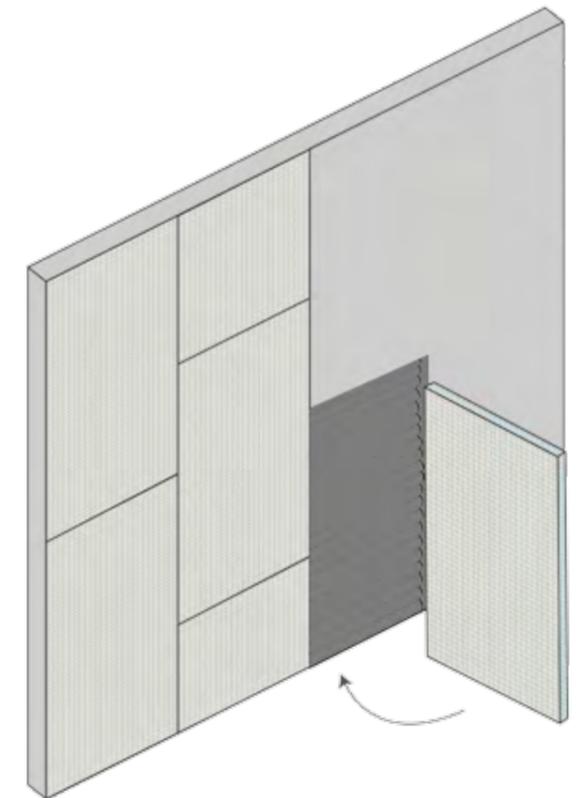


Fig. 1  
Fixing Orbry Boards with tile adhesive

Fig. 2  
Apply dabs of suitable cement based adhesive to the back of the boards.

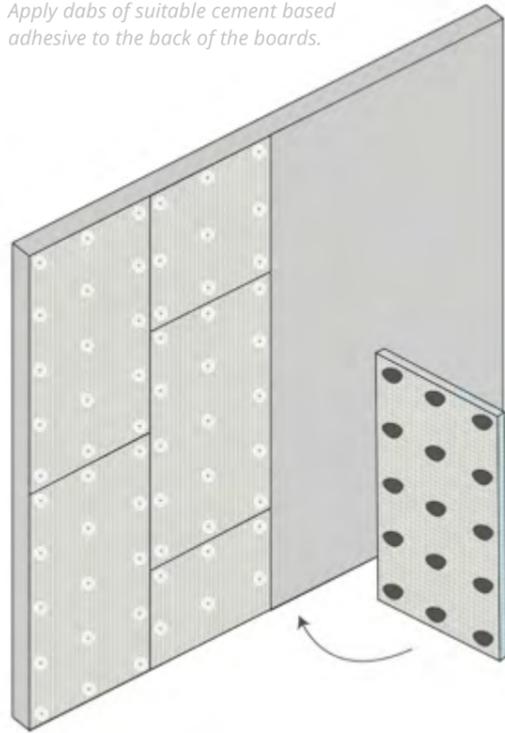
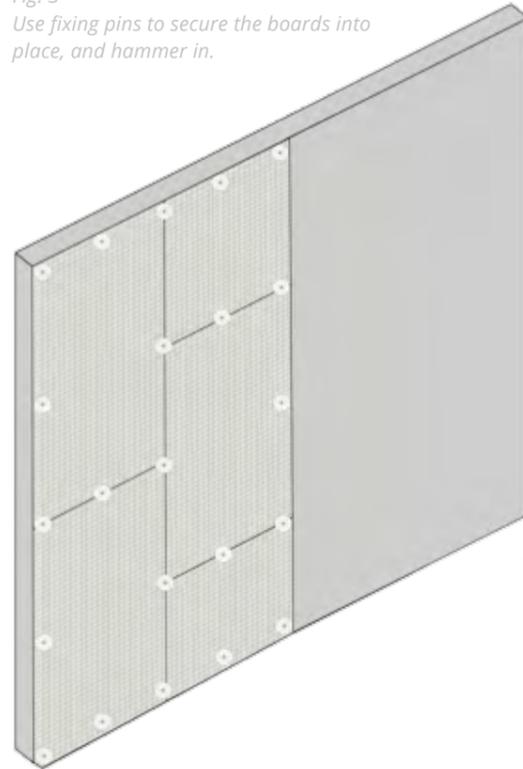


Fig. 3  
Use fixing pins to secure the boards into place, and hammer in.



**Dot and Dab Fixing  
(Brick/block/concrete):**

*(the ideal method for uneven walls):*

Drill the Orbry Boards with a 10mm masonry drill at approximately 600mm centres for 20mm thick boards or 300mm centres for 10mm and 12mm thick boards. Next, apply dabs of adhesive to the back of the board where the drill holes are located (Fig.2). The thickness of the adhesive should not exceed 30mm and the dabs should be a minimum diameter of 120mm. Then, put the board up to the wall and press firmly into position before adjusting with a level to ensure it is both flat and level. Allow the adhesive to dry, then drill through the existing holes to the depth of the Orbry Spanker Dowel. Insert the dowel and fixing pin, then hammer in to place.

Keep in mind that the minimum board thickness for a brick, block, or concrete wall installation when dot and dab fixing is 10mm.

**MECHANICAL FIXING**

**(Brick/block/concrete):**

*(can be used if the walls are flat and true):*

Using a 10mm drill bit, drill through the board to a depth equal to the length of the Orbry Spanker Dowel that is being used. Use fixing pins to secure the board into place and hammer in, making sure not to crush the boards (Fig.3).

*NB: The minimum board thickness for mechanical fixing is 10mm and the Orbry Spanker Dowel must penetrate the weight-bearing surface by a minimum of 35mm.*

**STUD WALLS**

**BACKGROUND PREPARATION**

**Plasterboard**

Plasterboard and moisture resistant plasterboard is not waterproof and should be removed.

**Plywood**

Plywood of any grade should not be used. Plywood is not dimensionally stable and will swell and shrink over time leading to potential tile failure or water ingress caused by grout cracking.

**FIXING TO STUD WALLS**

**Background Preparation**

Fix vertical studs at 600mm centres for 20mm or thicker Orbry Boards or 300mm centres for 12mm and 10mm thick Orbry Boards. All board edges must be supported with noggins (Fig.4).

*NB: For quicker and easier installation, use Orbry Long Wall Boards to reduce noggins and waterproof tape.*

**Orbry Board Application**

In wet areas, fix the boards with Orbry Washers and Orbry Stainless Steel Screws. For dry areas, it is acceptable to use coated screws instead.

**WATERPROOFING THE WALLS**

We recommend that all joints and junctions are taped with Orbry Self-Adhesive Scrim tape using a cement-based tile adhesive to strengthen the joints between the boards (Fig. 5).

It is then essential that you use Orbry Self-Adhesive Waterproof Tape, or a combination of Orbry Waterproof Tape with Orbry Waterproof Sealing Compound, to seal all joints and junctions.

*NB: For best results, tape the wall boards after taping the floor and skirtings*

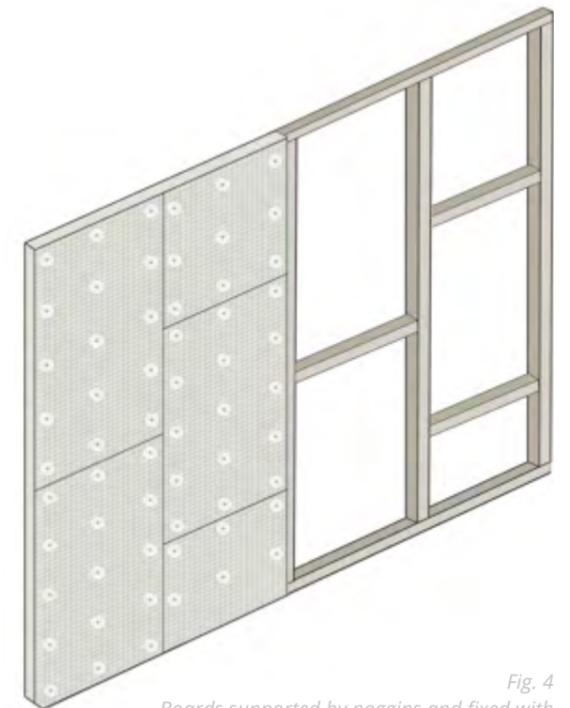


Fig. 4  
Boards supported by noggins and fixed with Orbry Washers and Stainless Steel Screws.

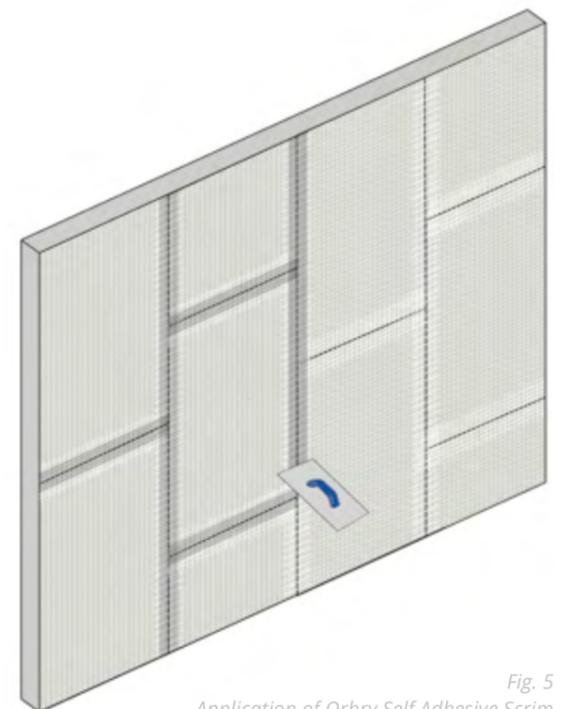


Fig. 5  
Application of Orbry Self Adhesive Scrim Tape and cement based tile adhesive.

## 04

### FIXING THE SHOWER TRAY & DRAIN

Orbry Shower Trays are available in a number of sizes and can be easily trimmed for the perfect fit. Alternatively, bespoke shower trays with custom drain positions are also available.

For an easy to follow installation guide, please view the Orbry Wet Room Shower Tray Installation Video online by searching 'orbry installation video'

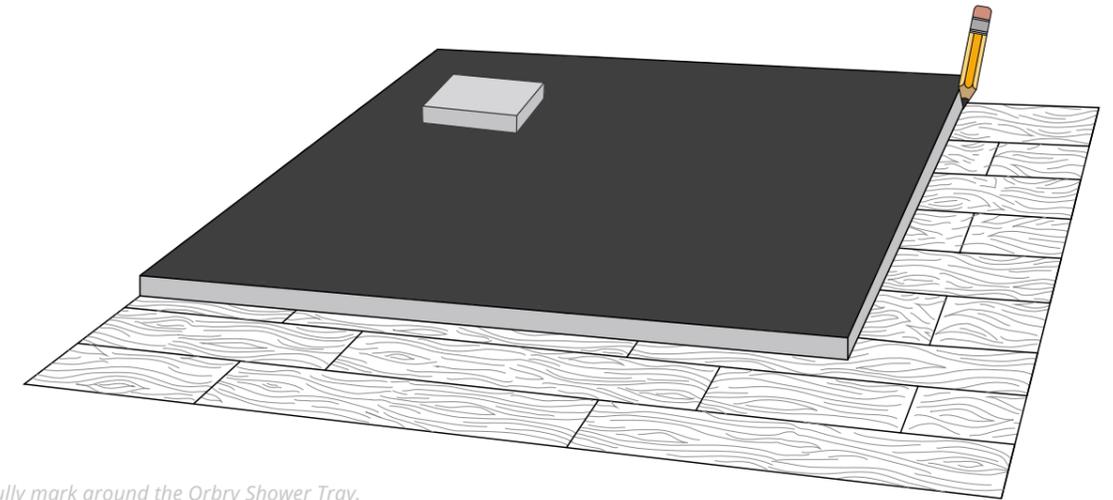


Fig. 6  
Carefully mark around the Orbry Shower Tray.

#### INSTALLING AN ORBRY SHOWER TRAY ONTO A SUSPENDED TIMBER FLOOR

##### Preparation:

1. Measure the room and note the shower tray and drain positions. This will determine the size to cut the surrounding boards.
2. Carefully mark around the Orbry Shower Tray (Fig.6).
3. Locate joists and mark their position.  
*NB: Following the line of the securing screws will help to locate the position of the joists.*
4. Remove any screws that are fixed within the marked area.

##### Removing the existing wooden floor:

1. Set your circular saw to the depth of your floorboards - most standard floorboards are 18mm (Fig.7).
2. On the side of the Orbry Shower Tray where the joists are at right angles, cut the floorboards along the marked line flush with the shower tray.
3. On the side of the Orbry Shower Tray where the joists are parallel, cut the floorboards at the centre of the nearest joist past the edge of the shower tray.
4. Remove the boards in the shower tray section and set to one side as you will need these later. If there is a joist in the way of the shower tray you will need to consult a professional joiner or structural engineer for advice.

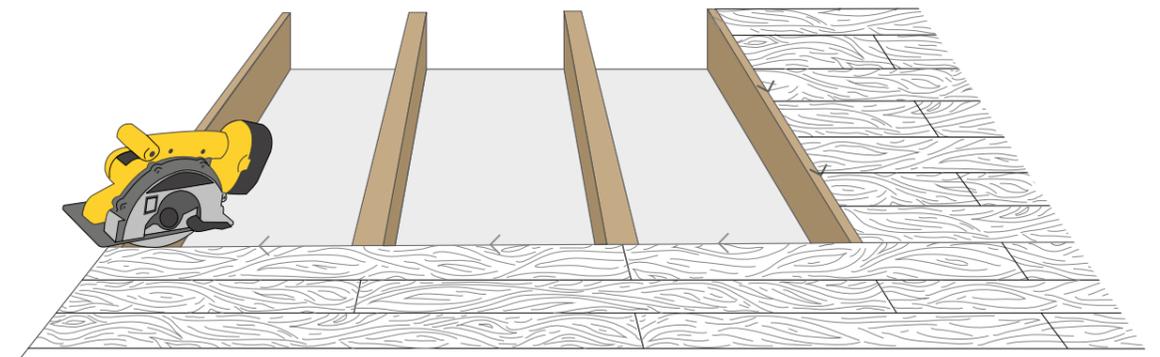


Fig. 7  
Set your circular saw to the depth of your floorboards and cut the floorboards flush with the shower tray.

Fig. 8  
Use the 18mm plywood to fill the gap between the joists. Do not fix into position yet.

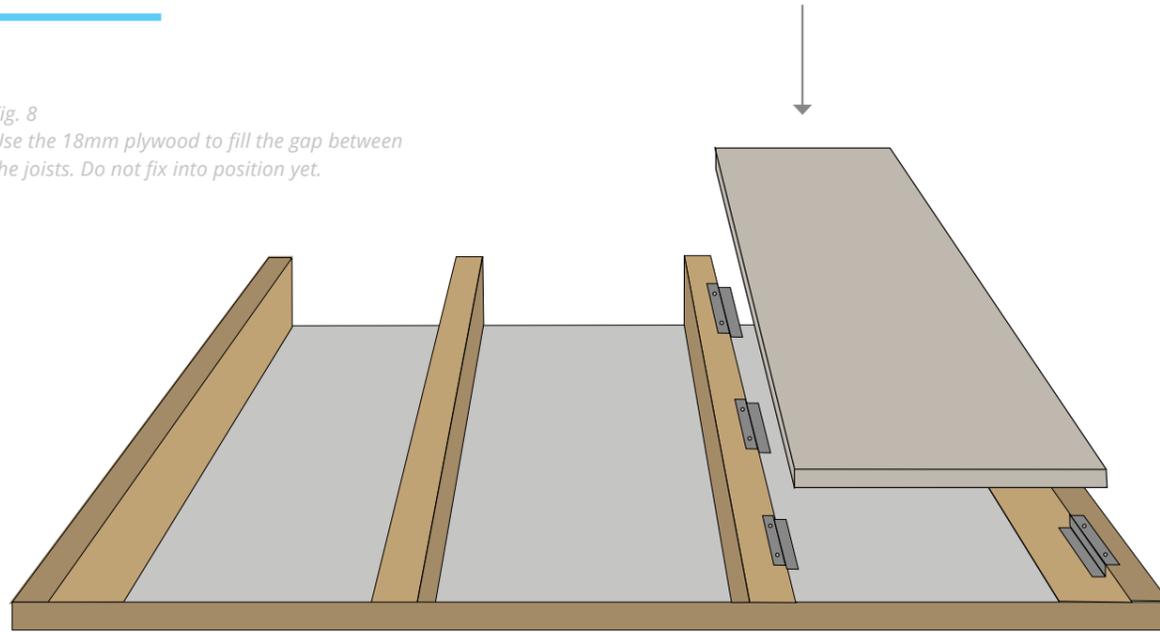
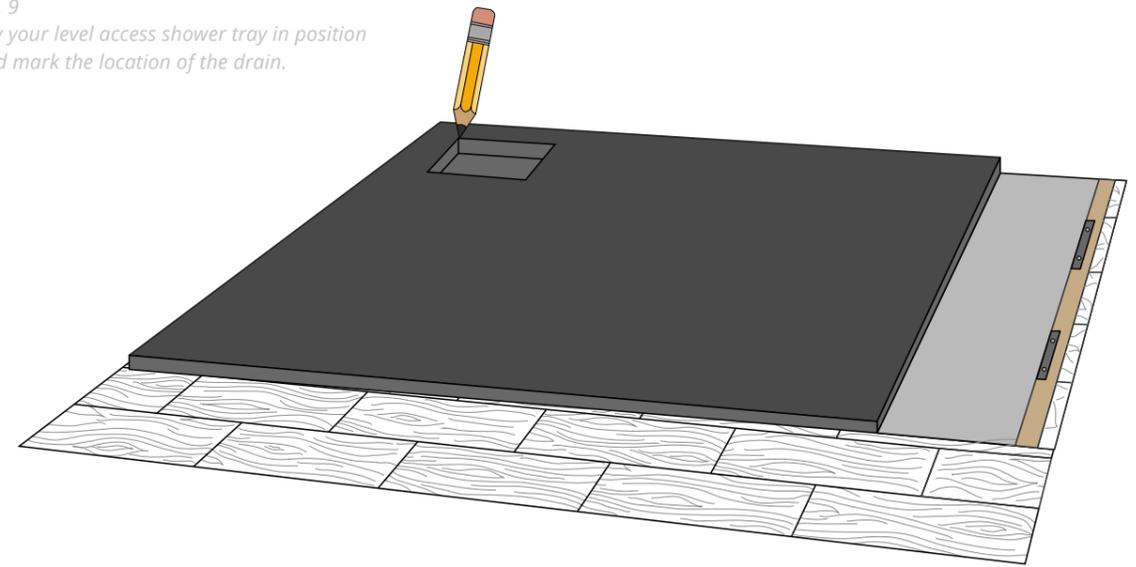


Fig. 9  
Lay your level access shower tray in position and mark the location of the drain.



#### Recessing the floor to receive the tray:

##### Option 1 - Batten fixing method for standard joists:

1. Using an adjustable square, mark 18mm down on your joists.
2. Fix 50 x 50mm (2"x 2") battens below these markings.

##### Option 2 - Orbry TrayFast fixing method for engineered and standard joists (recommended).

1. Position the Orbry TrayFast joist hangers equidistant along the joists (gaps of up to 70mm between each TrayFast are acceptable) and fix each with (4x) 4 x 40mm passivated screws.
2. Cut some 18mm plywood to the distance between the joists and fill the gap between them. Do not fix into position yet (Fig. 8).
3. Lay your level access shower tray in position and mark the location of the drain. Remove it again and store it safely (Fig. 9).
4. Measure and mark where your drain and waste pipe will be fitted. For the linear drain cut a 350 x 100mm hole, for the square drain cut 180 x 180mm.
5. Cut drain shape out of the plywood. You may also need to cut a rectangular section for the top end of the waste pipe.

#### Installing the waste pipe and drain:

1. Remove the drain section of the plywood to install the waste pipe and drain.
2. The waste pipe and drain are all solvent-weld products so ensure you clean all connections thoroughly with solvent waste pipe cleaner before assembling them.

NB: Use either 2" (50mm) domestic waste pipe solvent weld (external dimension 56mm) or 1.5" (40mm) domestic waste pipe solvent weld (external dimension 43mm).

3. Apply the sealing agent to the drain outlet and attach the 50mm (2") connection collar (Fig. 10a).  
*The pack also contains a 2" to 1 1/2" reducer, however it is important to remember that this will reduce the drain outflow from approximately 60 litres per minute to 40 litres per minute. Showers with a higher output than the outflow of the drain should not be installed.*
4. Connect the drain to the waste pipe. Make sure the top of the drain is level and centred on the shower tray drain above (Fig. 10b). Once the solvent weld has set, pour water down the drain to check that the waste is not blocked and that there are no leaks.

Fig. 10a  
Assemble the waste pipe and drain.

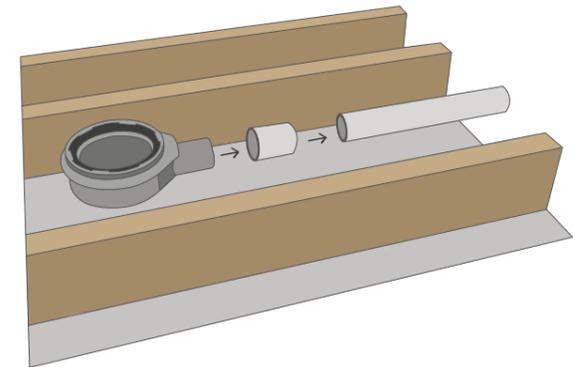
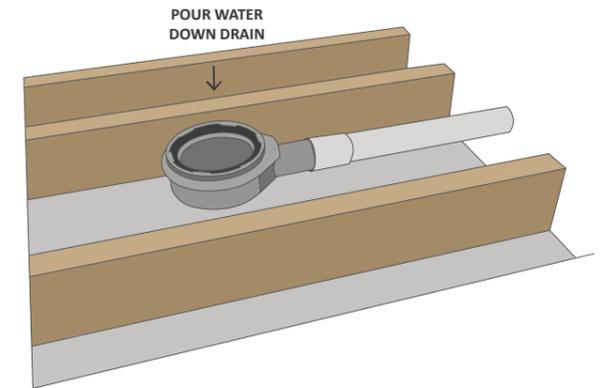


Fig. 10b  
Test the outflow by pouring some water into the drain.



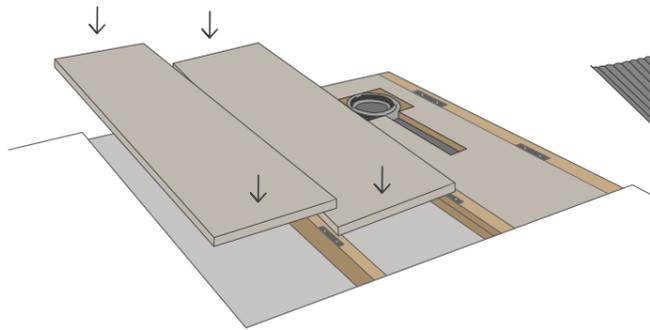


Fig. 11  
Replace the plywood around the drain and fix in position.

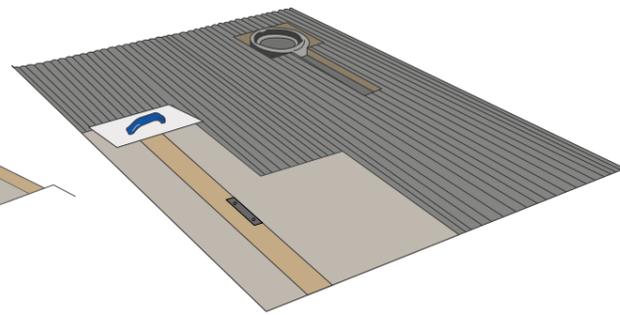


Fig. 12  
Spread adhesive evenly over the area where the shower tray is to be installed.

### Installing the Orbry Shower Tray:

1. Once you are satisfied with the drainage, replace the plywood section around the drain and fix all floor infills in position (Fig.11).
2. Cut and fit floorboards to in-fill the section between the shower tray and the floorboards.
3. Spread the adhesive evenly over the area where the shower tray is to be installed, being careful to clean away any adhesive on the rim of the drain (Fig.12). We recommend a rapid-setting, flexible, cement-based, category C2 tile adhesive, follow the manufacturer's instructions for the mix ratios.
4. Fix the shower tray into position.
5. Generously apply the silicone lubricant provided around the black rubber "o" ring on the drain.

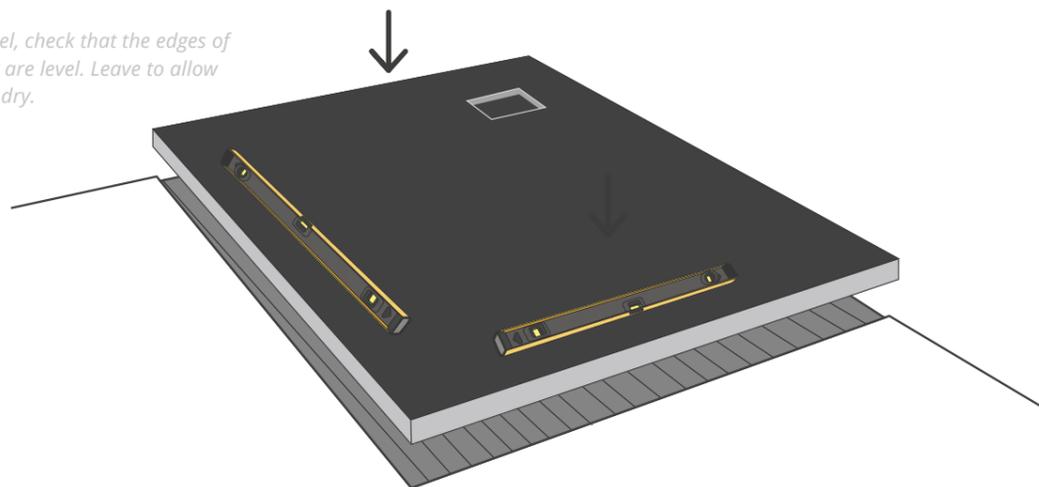
6. Apply a continuous wave of the silicone along the wall side edges of the Orbry Shower Tray and press the tray evenly into position.
7. Place both hands through the hole in the tray and firmly squeeze together the tray and the drain until they click into place.

**IMPORTANT: Do not pull up sharply or this may damage the tray.**

8. With a spirit level, check that the edges of the tray are level and leave to dry. Check the adhesive packaging instructions for drying times (Fig.13).

*NB: You'll notice the shower tray now sits about 10mm above the rest of the floor. The rest of the floor can now be brought level to the tray with 10mm Orbry boards. Where underfloor heating is being fitted, select the Orbry Waterproofing System with Permlayer™ matting instead; see Section 5 for further instructions.*

Fig. 13  
With a spirit level, check that the edges of the shower tray are level. Leave to allow the adhesive to dry.



## INSTALLING THE ORBRY SHOWER TRAY AND DRAIN ONTO A SOLID SCREED FLOOR

### Preparation:

1. Ensure there is sufficient depth of screed available to accommodate the depth of the tray and drain.
2. Measure the room and note the shower tray and drain positions.
3. Place the Orbry Shower Tray in position and carefully mark around the tray.
4. Consider how the finished floor height will affect the doorway and entrance to the room; will it require a step up into the room? If it's too high consider alternative floor waterproofing finishes.

### Recessing the floor to receive the tray and drain:

1. You will need to excavate the screed where the shower tray will be positioned to a depth of at least 30mm (Fig.14). The depth to be excavated is dependent on whether underfloor heating will be used and which method of waterproofing is chosen (see Section 5 before commencing work). It may be easier to remove all the screed in the area of the shower tray and then lay a thin screed using a self-levelling compound.
2. Once the recess is dug out, carefully place the level access tray in the recess and mark the position of the drain. Remove the tray again and store carefully.
3. Measure and mark the size and the shape of your drain.
4. You now need to excavate a recess to accommodate the waste pipe and drain. To find the required height of the drain you are using, please refer to the corresponding drain technical diagram.
5. Place polystyrene where your pipework will be positioned and level the excavated area with a self-levelling compound (Fig. 15) to the required height (see Section 5).

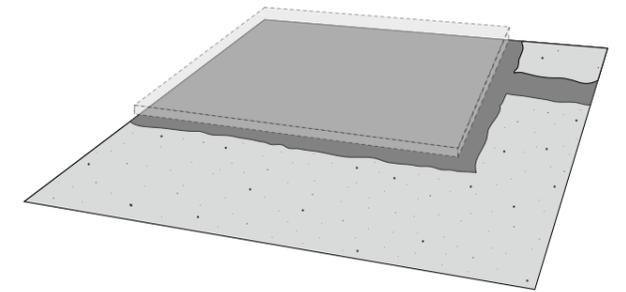


Fig. 14  
Excavate the screed where the shower tray will be positioned to a depth of at least 30mm.

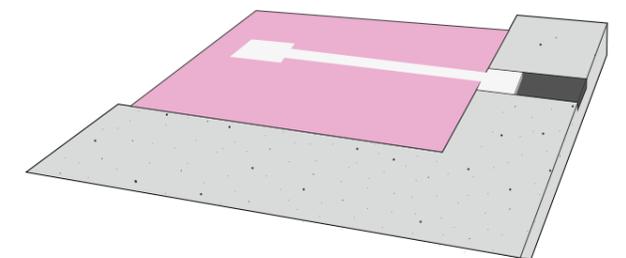


Fig. 15  
Place polystyrene where your pipework will be positioned and level the excavated area with a self-levelling compound.

### Installing the waste pipe and drain:

1. The waste pipe and drain are all solvent weld products so ensure you clean all connections thoroughly with solvent waste pipe cleaner before assembly.

*NB: Use either 2" (50mm) domestic waste pipe solvent weld (external dimension 56mm) or 1.5" (40mm) domestic waste pipe solvent weld (external dimension 43mm).*

2. Apply the sealing agent to the drain outlet and attach the 50mm (2") connection collar.

*The pack also contains a 2" to 1 1/2" reducer but it is important to remember that this will reduce the outflow from approximately 60 litres per minute to 40 litres per minute. Showers with a higher output than the outflow of the drain should not be installed.*

3. Connect the drain to the waste pipe, making sure the top of the drain is level and centred on the shower tray drain above (Fig.16).
4. Once the solvent is dry, test the outflow by pouring some water into the drain (Fig.17).
5. Set the drain and waste pipe into a sand and cement bed, ensuring the drain is set to the correct height.

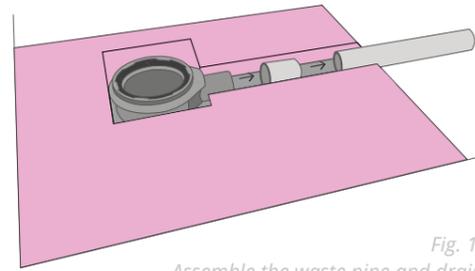


Fig. 16  
Assemble the waste pipe and drain.

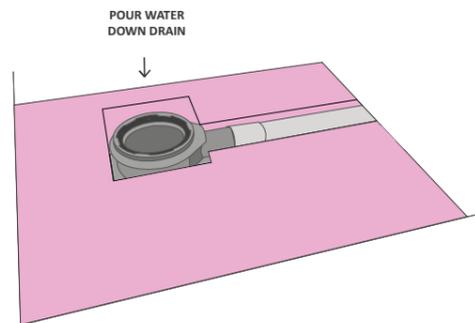


Fig. 17  
Test the outflow by pouring water into the drain.

### Installing the Orbry Shower Tray:

1. Spread tile adhesive evenly over the area where the shower tray is to be installed, being careful to clean away any adhesive on the rim of the drain (Fig.18). We recommend a rapid-setting, flexible, cement-based, category C2 tile adhesive. Follow the manufacturer's instructions for the mix ratios.
2. Fix the shower tray into position.

3. Generously apply the silicone lubricant provided around the rubber "o" ring on the drain.
4. Apply a continuous wave of the silicone along the wall side edges of the Orbry Shower Tray and press into position on the bed of tile adhesive.
5. Place both hands through the hole in the tray and firmly squeeze together the tray and the drain, until they click into place.  
**IMPORTANT: Do not pull up sharply or this may damage the shower tray.**
6. With a spirit level, check that the edges of the tray are level and leave to dry.

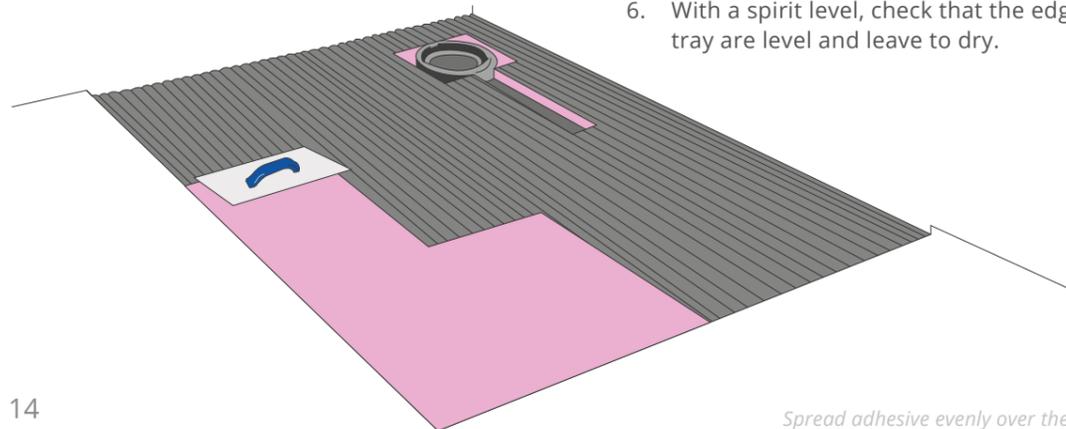


Fig. 18  
Spread adhesive evenly over the area where the shower tray is to be installed.

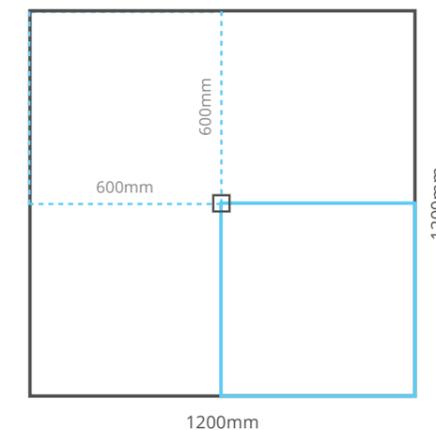
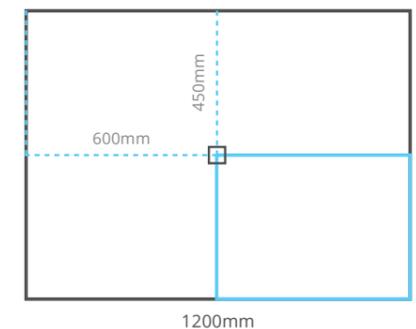
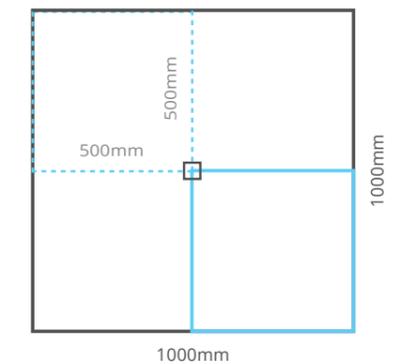
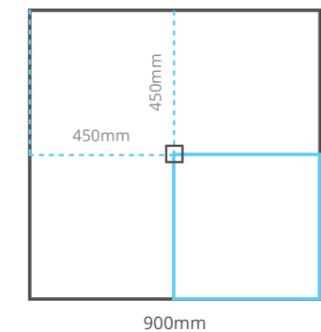
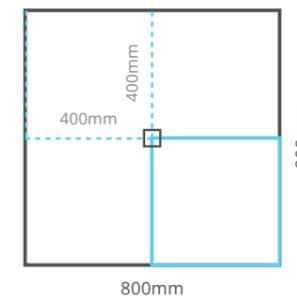
## SHOWER TRAYS

Bespoke sizes and drain positions are available.

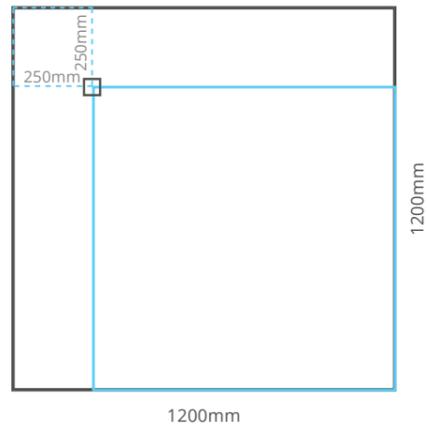
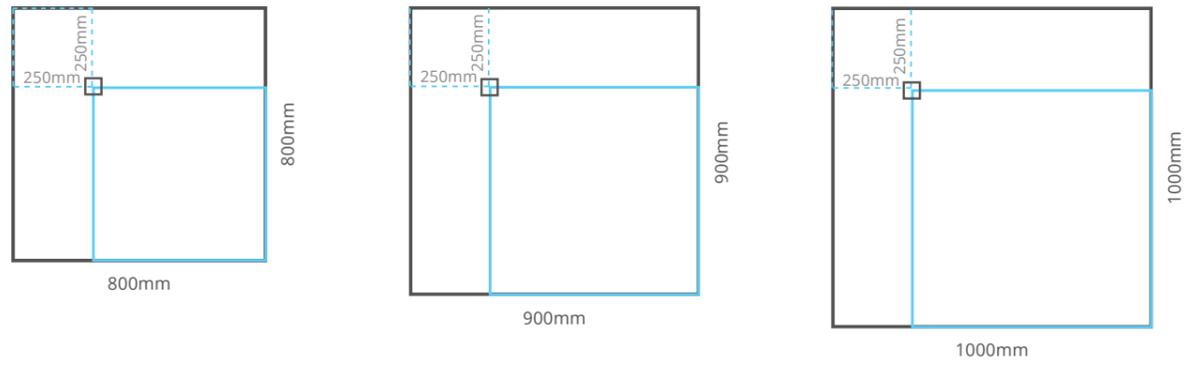
Orbry Shower Trays come in six different sizes and are available in a variety of drain configurations (corner drain, centre drain, offset drain, linear drain). Every shower tray can be easily trimmed up to 50mm to suit your specific project needs.

The Orbry Shower Trays fit either a standard square horizontal drain or a sleek, modern linear drain. The shower trays provide level, easy access to the shower area of a wet room.

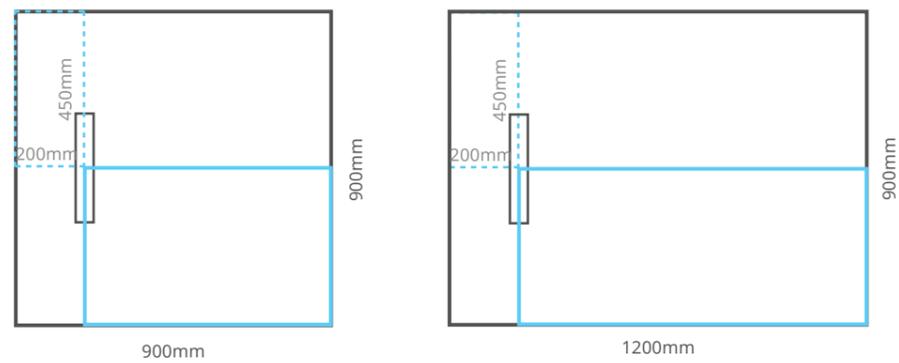
### CENTRE DRAINS



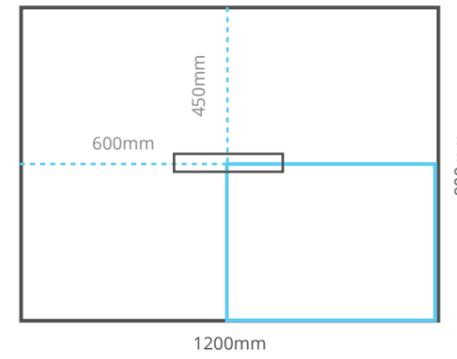
## CORNER DRAINS



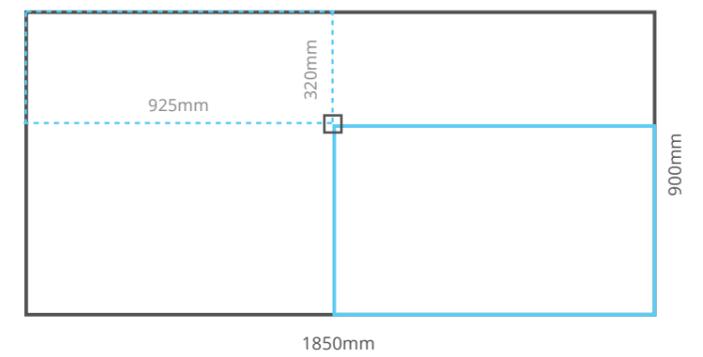
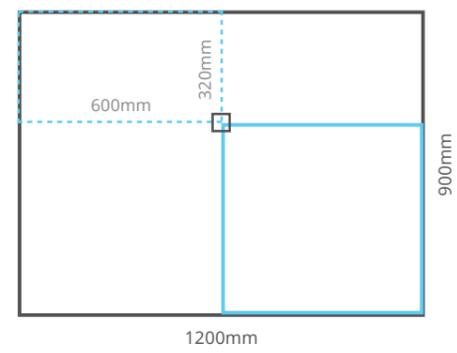
## LINEAR END DRAINS



## LINEAR CENTRE DRAINS



## OFFSET DRAINS



## 05

# WATERPROOFING THE FLOOR

Once the Orbry Shower Tray is fixed, the remainder of the floor, and the junctions between the floor and Orbry Boards fixed to the walls need to be waterproofed. There are a few factors that need to be considered when waterproofing the floor, including the height of the waterproofing system in comparison to the shower tray and the doorway.

## WITH UNDERFLOOR HEATING



### Orbry Permalayer Method:

Electric underfloor heating is a popular choice in wet rooms. It makes the tiles warm to the touch and can help keep your wet room floor dry. Electric underfloor heating often needs to be used in conjunction with a heated towel rail or radiator in order to provide full room heating. However, if you are just looking for a warm feeling underfoot, underfloor heating can be installed on its own.

**Do not install Orbry Underfloor Heating on the shower tray. The heat of the water from the shower will warm the tiles and you will negatively affect the fall of the shower tray by laying underfloor heating on it first.**

To prevent raising the finished floor level above the shower tray when using underfloor heating, it is necessary to use the Orbry Waterproofing System with Permalayer. This acts as both a thin waterproofing layer and decoupling membrane.

1. Mix the Orbry Waterproofing System following the instructions on the pack. We recommend using an electric whisk to mix the sealing compound to ensure a smooth, even mixture.
2. Spread the mixed Orbry Waterproofing System evenly over the floor and lay the Permalayer

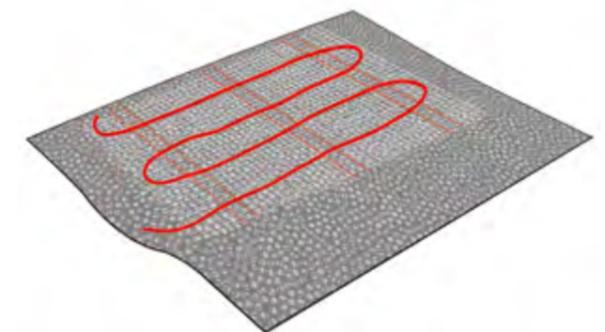
membrane over it, ensuring is fitted tight to the shower tray and perimeter of the room.

3. Using a float trowel, press the Permalayer into the Orbry Waterproofing System mix, forcing it to ooze through the gaps in the Permalayer. Trowel to a thin smooth layer on the surface (Fig. 20).
4. When dry, fix Orbry Electric Underfloor Heating following the included instructions (Fig. 21).
5. Mix and pour a sufficient amount of self-levelling compound to cover the entire floor. The cables should be covered by a minimum of 2-3mm. This should form a smooth layer that will be level with the top edge of the shower tray. Allow to fully dry.
6. Waterproof the joint between the self-levelling compound and the shower tray, and a skirting round the whole room, using Orbry Waterproof Tape and Orbry Waterproof Sealing Compound.
7. Using the Orbry Waterproof Sealing Compound paint the floor for a distance 500mm from the edge of the shower tray in all directions.
8. Wall joints and corners should be waterproofed after the floor joints have been taped.

Fig. 20  
Using a float trowel press the Permalayer into a bed of Orbry Waterproofing System Compound.



Fig. 21  
Fix Orbry Electric Underfloor Heating following the included instructions.



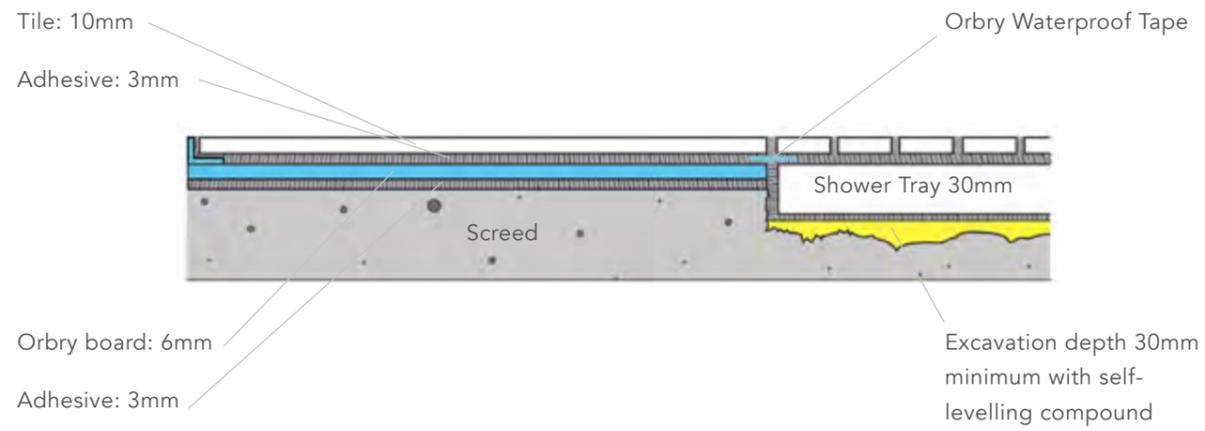


## ALTERNATIVE METHODS FOR SOLID FLOORS

2

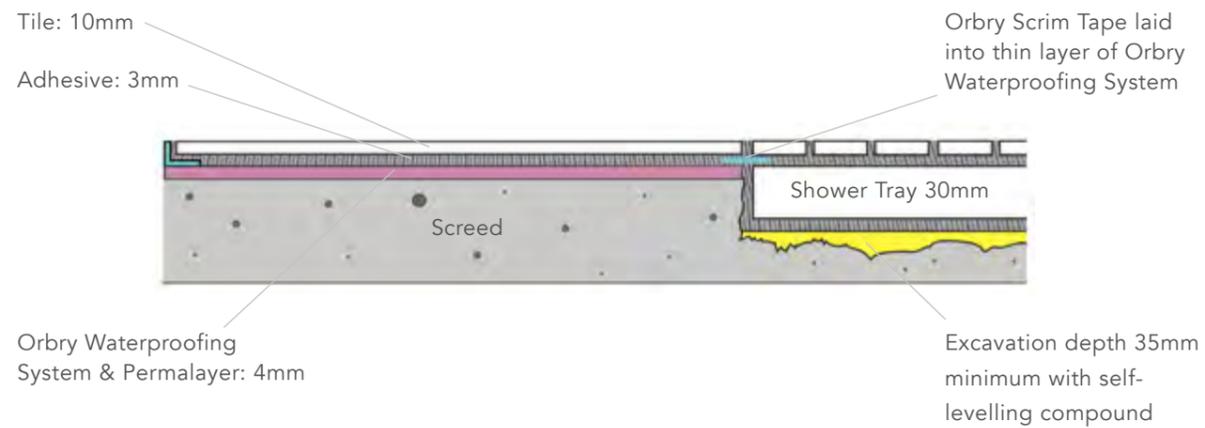
*Screed with 10mm thick tile and 22mm\* finished floor level*

*\* using 10mm boards increases finished floor level to 26mm, 12mm board to 28mm etc.*



3

*Screed with 10mm thick tile and 17mm finished floor level*



## 06

### FINISHING THE WET ROOM

Now that the base of the wet room is installed and waterproofed, you're ready to tile the wet room area.

#### TILING THE ORBRY SHOWER TRAY

Orbry Shower Trays are extremely easy to tile over. Mosaic tiles equal to or larger than 25mm are ideal because they easily follow the contours of the shower tray and they are inherently slip resistant because of the many grout lines. If the tiles are larger than 100mm in any direction, you will need to cut the tile on the fall lines of the shower tray to preserve the drainage and avoid lipping. Shiny, polished, or glass tiles and glass mosaics aren't suitable as they become very slippery when wet. If you're not tiling the shower tray with a mosaic, please check the tiles' slip resistance classification.

### TILING THE ORBRY SHOWER TRAY

1. Place the disposable tiling aide into the drain and tile the shower tray area using a suitable rapid setting flexible, cement-based category C2 tile adhesive and flexible grout (Fig.22).
2. Once grouting over the shower tray is complete, remove the tiling aide and place the shower tray drain top into the drain base.
3. Measure the distance from the finished tiles to the top of the shower drain (Fig.23) and cut this distance from the bottom of the centre drain section using the ribs in the plastic to get a square cut (Fig.24).

4. Secure the drain top in place with four blobs of silicone and allow to set.
5. Use some of the remaining grout to grout around the edge of the stainless steel rim.
6. Drop the bowl into the drain and push the internal dome tightly into place.
7. The hair-trap supplied will also drop easily into position (and it can be removed easily for cleaning purposes).
8. Place the stainless steel grid on the top of the drain.

*NB: There are two different Orbry Stainless Steel Drain Grid Designs available. The Orbry Standard Grid is easily removable by hand. The Orbry Designer Grid is made from solid stainless steel and is fixed to the base of the drain with screws, so is suitable for many commercial applications.*

Fig. 22  
Place the disposable tiling aide into the drain and tile the shower tray area.

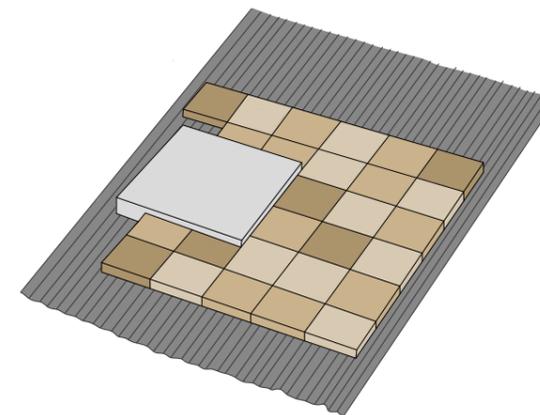
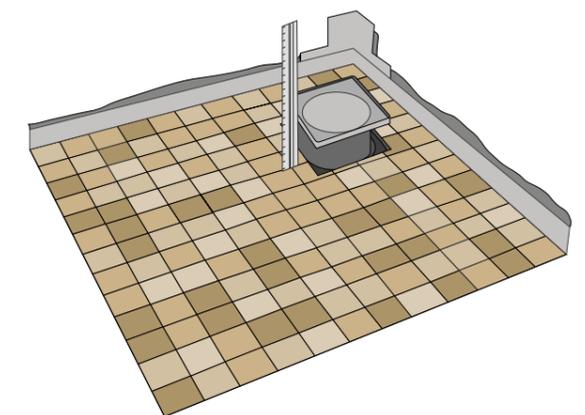


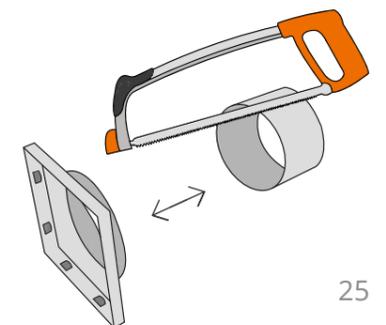
Fig. 23  
Measure the distance from the finished tiles to the top of the shower drain.



#### TILING ONTO ORBRY BOARDS

Orbry Boards bond easily with all proprietary tile adhesives. Therefore, all you need to do is choose the correct adhesive for the type of tile being fixed and adhere to the current British and European tiling standards. If in doubt, please seek further guidance from the tile adhesive and grout manufacturer.

Fig. 24  
Cut the measured distance, from the tiles to the top of the drain, from the bottom of the drain section. Use the ribs in the plastic to get a square cut.



## 07

### APPENDICES

#### ORBRY BOARD SIZES, PACKAGING AND WEIGHTS

| CODE    | SIZE                | WEIGHT (KG) | SHEETS PER BOX |
|---------|---------------------|-------------|----------------|
| OB12-06 | 1220 x 600 x 6mm    | 1.44        | 20             |
| OB12-10 | 1220 x 600 x 10mm   | 1.55        | 10             |
| OB12-12 | 1220 x 600 x 12.5mm | 1.65        | 10             |
| OB12-20 | 1220 x 600 x 20mm   | 2.29        | 10             |
| OB12-50 | 1220 x 600 x 50mm   | 3.23        | 5              |
| OB24-10 | 2440 x 600 x 10mm   | 3.10        | 10             |
| OB24-12 | 2440 x 600 x 12.5mm | 3.30        | 10             |
| OB24-20 | 2440 x 600 x 20mm   | 4.56        | 10             |
| OB24-50 | 2440 x 600 x 50mm   | 6.42        | 5              |

#### ORBRY TRAYFAST REQUIREMENTS

| SQUARE TRAY SIZE | 400mm JOIST SPACING | 450mm JOIST SPACING | 600mm JOIST SPACING |
|------------------|---------------------|---------------------|---------------------|
| 800 x 800mm      | 8                   | 8                   | 8                   |
| 900 x 900mm      | 12                  | 12                  | 12                  |
| 1000 x 1000mm    | 18                  | 18                  | 12                  |
| 1200 x 1200mm    | 24                  | 24                  | 16                  |

| RECTANGULAR TRAY SIZE | JOISTS RUNNING LENGTHWAYS |                     |                     | JOISTS RUNNING WIDTHWAYS |                     |                     |
|-----------------------|---------------------------|---------------------|---------------------|--------------------------|---------------------|---------------------|
|                       | 400mm JOIST SPACING       | 450mm JOIST SPACING | 600mm JOIST SPACING | 400mm JOIST SPACING      | 450mm JOIST SPACING | 600mm JOIST SPACING |
| 1200 x 760mm          | 16                        | 16                  | 16                  | 12                       | 12                  | 8                   |
| 1200 x 900mm          | 24                        | 16                  | 16                  | 18                       | 18                  | 12                  |
| 1300 x 800mm          | 16                        | 16                  | 16                  | 16                       | 12                  | 12                  |
| 1500 x 800mm          | 20                        | 20                  | 20                  | 16                       | 16                  | 12                  |
| 1850 x 900mm          | 36                        | 24                  | 24                  | 30                       | 30                  | 18                  |

#### FIXING REQUIREMENTS FOR ORBRY BOARDS ON STUD WALLS

| THICKNESS | SIZE         | CODE    | STUD CENTRES | FIXINGS | Orbry 37mm Stainless Steel Screws | Orbry 50mm Stainless Steel Screws | Orbry 70mm Stainless Steel Screws |
|-----------|--------------|---------|--------------|---------|-----------------------------------|-----------------------------------|-----------------------------------|
| 10mm      | 600 x 1220mm | OB12-10 | 300mm        | 15      | ✓                                 |                                   |                                   |
| 10mm      | 600 x 2440mm | OB24-10 | 300mm        | 27      | ✓                                 |                                   |                                   |
| 12.5mm    | 600 x 1220mm | OB12-12 | 300mm        | 15      | ✓                                 |                                   |                                   |
| 12.5mm    | 600 x 2440mm | OB24-12 | 300mm        | 27      | ✓                                 |                                   |                                   |
| 20mm      | 600 x 1220mm | OB12-20 | 600mm        | 6       |                                   | ✓                                 |                                   |
| 20mm      | 600 x 2440mm | OB24-20 | 600mm        | 10      |                                   | ✓                                 |                                   |
| 50mm      | 600 x 1220mm | OB12-50 | 600mm        | 6       |                                   |                                   | ✓                                 |
| 50mm      | 600 x 2440mm | OB24-50 | 600mm        | 10      |                                   |                                   | ✓                                 |

Orbry Stainless Steel Screws MUST be used with Orbry Tile Backer Board Washers.

#### FIXING REQUIREMENTS FOR ORBRY BOARDS ON TIMBER FLOORS

| THICKNESS | SIZE         | CODE    | FIXINGS | Orbry 37mm Stainless Steel Screws | Orbry 50mm Stainless Steel Screws | Orbry 70mm Stainless Steel Screws |
|-----------|--------------|---------|---------|-----------------------------------|-----------------------------------|-----------------------------------|
| 10mm      | 600 x 1220mm | OB12-10 | 15      | ✓                                 |                                   |                                   |
| 10mm      | 600 x 2440mm | OB24-10 | 27      | ✓                                 |                                   |                                   |
| 12.5mm    | 600 x 1220mm | OB12-12 | 15      |                                   | ✓                                 |                                   |
| 12.5mm    | 600 x 2440mm | OB24-12 | 27      |                                   | ✓                                 |                                   |
| 20mm      | 600 x 1220mm | OB12-20 | 8       |                                   | ✓                                 |                                   |
| 20mm      | 600 x 2440mm | OB24-20 | 16      |                                   | ✓                                 |                                   |
| 50mm      | 600 x 1220mm | OB12-50 | 8       |                                   |                                   | ✓                                 |
| 50mm      | 600 x 2440mm | OB24-50 | 16      |                                   |                                   | ✓                                 |

Orbry Stainless Steel Screws MUST be used with Orbry Tile Backer Board Washers.



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