

How to Lay Porcelain Paving Outdoors

Incorporating outdoor porcelain paving into your outdoor space is one of the best ways to transform your garden or patio. Porcelain tiles bring an elevated sense of style to your design and provide a modern alternative to more traditional paving slabs; incorporating interior design into the outdoors and bridging the gap between the two seamlessly.

But the aesthetic isn't the only reason people are choosing to go down the porcelain path (pun intended!). Due to the nature of the material, porcelain tiles provide a wide range of benefits, including a hard-wearing and scratch-resistant surface that will withstand all weather conditions with minimal maintenance required.

Unfortunately, the only downfall is that porcelain paving is slightly harder to install than other types of paving slabs due to its non-porous attribute. But don't let this put you off! Installing porcelain paving is absolutely doable, you just need to know what you're doing.

And that's where we're here to help! We've put together an in-depth guide for how to lay external porcelain paving, including everything you need to know to get the job done successfully. Although this is an in-depth guide, it is exactly that, only a guide. Please take professional advice before commencing any work, as ground conditions and other factors may affect what is being advised. So, let's get into it...

Below is a guide for laying porcelain paving by the traditional wet sand and cement mortar bed method. Other methods can be used:

Paygran Raised Laying Pedestals & Rail Systems:

This is typically for applications where the traditional method cannot be used for weight restrictions i.e. balconies and roof gardens, but also for creating a patio at a raised level, without the hassle of removing spoil and/or raising levels via importing materials. This method also allows the chance to run electrics and utilities underneath the slab, without any invasive work. No jointing compound is required, therefore the patio is free draining with the surface water being lost underneath the finished patio area.

Flexible Adhesive:

A flexible adhesive can be used in applications where the paving is being laid directly onto a concrete pad. Follow the manufacturers guides when installing and ensure the correct jointing compound is used for filling the joints.

Equipment Needed for Laying Porcelain Paving

The equipment you need to lay porcelain paving is pretty much identical to what you need to lay regular paving with only a couple of differences. So, before you get started make sure you have the following:

- Porcelain Pavers
- Circular Cutting saw
- Diamond Circular Blade
- Freshly-Mixed Mortar (Sharp Sand & Cement)
- Type 1 MOT Stone Sub-Base
- Joint Spacers
- Cement

- Slurry Primer
- Porcelain Paving Grout
- Grouting Tool
- Shovel
- Mallet (Rubber)
- Measuring tape
- Spirit Level
- Wooden pegs
- String Line
- Pointing Iron or Trowel
- Rake
- Roller or Tamper
- Hard-Bristled Brush
- Tarpaulin (optional)
- Suction Cups
- Levelling Clips

We also strongly recommend wearing the relevant PPE to keep yourself safe when cutting tiles, including:

- Gloves
- Facemask
- Eye protection

Quality Checking your Porcelain Pavers

Before you get started, it's vital to check the quality and condition of your paving slabs. Once they've been delivered make sure you check the tiles for any damage, including chips around the edges, cracks and breakages, etc.

If you do have damaged tiles, don't throw them away! These can be put to one side and used later in the process for any infills required. Once you're happy with your materials, it's time to get started on preparing your base.

Preparing the Ground for Porcelain Paving

As with most DIY tasks around the home or garden, preparation is key. Preparing your chosen area correctly will help to ensure your porcelain paving has the desired effect and remains in place for years to come. Plus it means you won't bump into any serious issues or nasty surprises further down the line...

1. Plan out the area where you will be laying your paving slabs.
2. Begin by marking out the area that needs to be excavated using your string lines and wooden pegs - making sure you allow for a 150mm - 200mm margin for kerbing or haunching if the edge of your patio will not join a solid wall.
3. Once your area is marked out correctly, you'll need to dig to a depth of at least 160mm below the proposed patio height, removing any vegetation, roots and topsoil. This minimum depth will sufficiently facilitate your sub-base, bedding mortar, and the depth of your porcelain pavers.
4. When levelling out your surface you want to make sure that you install your porcelain pavers at a fall/gradient of 1:60, using your spirit level. This ensures that your patio will carry away surface water to sufficient drainage points.
5. Rake the surface level before compacting the entire area using a garden roller or tamper before using a spirit level to check the gradient.

6. Once the gradient is correct, you can then rake out your Type 1 MOT Sub Base, creating an even layer that sits roughly 30mm below your string line. Once in place, the aggregate will need to be compressed until it sits at around 50-60mm below your string line. We strongly recommend using a vibrating plate compactor, if you're able to hire one, as the more compact and solid your foundations, the better.

Please note: Building Regulations and NHBC guidelines require paving surfaces to be at least 150mm below any damp-proof course on your property to prevent damp.

Now your garden is prepped and ready for the paving slabs to be installed. But before we can lay them in place we must first cut them to size and prime them.

Cutting Porcelain Paving Tiles

Cutting through porcelain flags is slightly more complicated than regular paving slabs as it's much more delicate - but don't let this put you off! With the right tools and a bit of know-how, you can create a clean cut with ease.

The only way to properly cut through porcelain paving is to use an uninterrupted diamond blade. Hand tools or abrasive blades will only damage the porcelain, creating chips and scratches or even shattering the full tile.

When cutting the porcelain, it's important that you wet the surface of the tile to suppress the dust and create a clean cut.

Priming Your Porcelain Paving for Installation

Due to its non-porous characteristics, porcelain paving requires an extra step for installation. Without priming your tiles, the porcelain cannot absorb anything from the bedding mortar and therefore it won't be able to bond securely to the tile.

In order to create a strong bond between your porcelain slabs and the mortar beneath, you must use a slurry primer. Painting the reverse side of your tiles with a slurry primer mix will result in the sort of bond we want that will keep your paving in place for many years to come. Please follow the manufacturer's instructions for application.

When applying your primer, pay close attention to the edges and ensure that the entire surface area is coated for the best results. But, make sure you don't get any on the surface of the pavers as once it dries it cannot be removed! We recommend keeping a bucket of water and a sponge close by so you can wipe it off instantly if you make a mess.

Laying Porcelain Paving

Now all the prep is done, and your pavers are primed and ready to go, it's time to get laying! Follow these step-by-step instructions for a seamless installation:

1. Once your bedding mortar is of the right consistency (firm, not sloppy or runny) use a shovel or trowel to apply it to the sub-base. We recommend laying down enough for one tile at a time for the best results.
2. A priming slurry should be applied to the back of each slab prior to laying. Follow the manufacturers guide for applying the slurry correctly.
3. Your mortar should be roughly 30-40mm thick and sit around 15mm below your string line, filling the entire area of a slab. Using your trowel or float, create a smooth texture on the surface, creating a perfectly flat mortar bed, otherwise known as a full contact bed - which will help to create a stronger bond, and leave no voids.
4. Carefully lay your porcelain paving flag in position, lining it up one corner at a time and taking care not to knock the edges which could cause chips. Using suction cups to handle the product is best practice as this reduces manual handling and prevents contamination onto the surface of the tile.
5. Once in position, use your rubber mallet to tamp the slab down. We're aiming for all of the tile to be in contact with the mortar bed below for the strongest bond and therefore best results.
6. This point is your last chance to make any essential adjustments as once the mortar is set it will be pretty much impossible to move. Make sure that the slab is completely bonded by checking that it doesn't rock at all. We also recommend using levelling clips and a spirit level on every tile you lay to ensure it lays flush against the string line and adjacent tiles.
7. After laying a slab, use a wet sponge to remove any excess primer or mortar that may have found its way onto the surface as this will be difficult to get it off once it's dried.
8. When laying porcelain slabs next to each other, leave a 3-7mm gap between each paver and never butt joint them. We advise the use of joint spacers to keep your gaps regular throughout.
9. Continue this process until all paving is complete, making sure to check the level as you go. If you're using more than one pack of tiles, we highly recommend laying tiles from different packs adjacent to one another to reduce the risk of colour banding.
10. Once all your tiles are in place, you can fill the joints with a porcelain jointing compound. Please follow the manufacturer's instructions for application.
11. Brush away any excess once all the gaps are filled and leave your finished paving to dry for a minimum of 24 hours. If there's any chance of rain during those 24 hours, it's vital that you cover the paving.

Great news, your porcelain paving project is complete! Plus, there's no need to worry about sealing your porcelain paving as it is already sealed during its manufacturing process.

Discover our extensive range of porcelain pavers today to find the perfect style for your next project and transform your outdoor space now. Feel free to contact us with any questions you have, our friendly team of experts will be happy to help!