



ALLSTONE

NATURAL STONE SPECIALISTS

PAVING

INSTALLING NATURAL STONE PAVERS

VISIT OUR SHOWROOM

211 Devonport Tce, Prospect SA 5082

info@allstone.com.au

Tel: 08 8344 5575

allstone.com.au



We hope this document provides helpful information on installing natural stone pavers, but if in doubt, please consult the relevant Australian standards and contact the relevant trades and installers for professional advice and assistance.

There are three main methods that can be used to lay your pavers:

- **Laying on Sand** – involves laying pavers on a sand bed. It is a quick application that can be appropriate where easements exist for example, but it is more prone to movement over time and is only applicable for pavers with at least 30mm thickness.
- **Wet Lay** - Wet laying pavers, is also referred to as mud mix or mortar lay, which involves using a mortar bed made from sand, cement, water and sometimes an additive to lay the pavers onto. A mortar bed is stronger than a sand lay, prevents weeds or ants coming up between your pavers and provides a pliable surface to absorb thickness variation.
- **Direct Stick** – Uses a tile glue to directly stick your stone pavers onto a concrete slab. An even stronger option that will support your pavers well into the future.

We have described each below. Always consider the particulars of your specific job when deciding which options are best suited.

BLENDING

Installing natural stone is all about the blend. The way the natural variation of stone plays out across your area has a huge impact on the resulting look and feel of your paved area. Any patterns will draw attention. It is important to think about these details before laying your paving and have a chat with your installer about what you want. For example, do you want the organised rhythm of repeating straight lines, or a soft, fluid arrangement.

CHOOSING AN INSTALLER

While we are not installers ourselves, we do know that not all pavers are the same. When selecting an installer, it is always best to use someone who has previously worked with the type of product you are using in your space.

CUTTING

Pavers should be cut with a wet saw, using diamond blades specifically designed for cutting natural stone. Wash any cutting slurry from the stone, once cut. Don't forget you're PPE.

DRAINAGE

Avoiding any drainage issues in your space is very important when using natural stone pavers. If you do not have appropriate drainage systems, it can reduce the life of your natural stone pavers.

SEALING

Please find our separate resources on sealing for more information.

SAND LAY

Sand lay involves laying pavers on a sand bed. It is a quick application that can be appropriate where easements exist for example, but it is more prone to movement over time and is only applicable for pavers with at least 30mm thickness.

METHOD:

1. Prepare the base of your paving area. Generally, you will need to start with a layer of compacted aggregate, rubble, or road base, with the appropriate thickness needed for your application. A border may help to define and contain the area to be paved. A forticon sheet (heavy duty plastic) may be used to separate the ground from your paving sand, we would strongly recommend this in coastal areas.
2. Spread and level a layer of washed sand over the area, a softer sand will allow for some thickness variation in the paving. You want a smooth base, with a slight slope if applicable for drainage.
3. Carefully lay your pavers down onto the sand, and gently tap each paver down with your hands or a rubber mallet. Allow at least a 3mm gap to absorb any movement. You will likely need to adjust a few pavers as you go to absorb any thickness variation.
4. Finally, spread a dried sweeping sand or a polymer bonded joining sand in the gaps using a soft broom making sure to remove any excess from the surface. With a polymer bonded jointing sand you will also need to activate it with water, as per the instructions for the specific product you are using.

Please note:

- If you pressure wash your pavers down the track, you will likely erode the joint material.
- Be sure to manage stormwater drainage on and around the area, using slopes and drains.

WET LAY

Wet laying pavers is also referred to as mud mix or mortar lay, which involves using a mortar bed made from sand, cement, water and sometimes an additive to lay the pavers onto. This method is a supportive base so can be used on tiles or pavers of any thickness, prevents weeds or ants coming up between your pavers and provides a pliable surface to absorb thickness variation.

Method:

1. There are several ways to prepare the base for wet laying including a concrete slab or a compacted aggregate, rubble, or road base, sometimes with a geotextile sheet and reinforcing mesh. Which one you select will need to consider the conditions on the site of your project. It really is true what they say, the project is only as good as its foundation, so it pays to spend a bit more to install it properly.
2. The mortar is then prepared, spread and levelled with a trowel over the area to be paved. The mortar bed is usually around 20-40mm thick. If you have a large area, you might need to work in zones, to make sure the mortar remains pliable while installing the stone pavers.
3. The bottom of each paver should be clean, and usually a skim coat of the mortar is applied before the paver is paced down.
4. Each paver is then placed and positioned in the bed. Pavers are to be carefully set and levelled by hand, or with gentle tapping with a rubber mallet.
5. A gap will need be left between each stone. It is recommended that your gap be at least a 3mm to allow for any movement and cutting tolerances.
6. Don't walk on the pavers for at least 24 hours to give the mortar time to set.
7. Finally, the gaps can then be filled by either a sanded grout for tighter gaps, or a mortar for wider gaps.

Please note:

- With natural stone paving the blend of individual pieces is important. Especially if you have selected a French pattern or crazy paving, it can be helpful to lay the pattern out before preparing the wet mix.
- Be sure to consider the width and colour of your mortar/grout as it will impact the overall look of your paving.
- Natural stone can have variation across the thickness of each piece, a wet lay can absorb this variation. A bit of patience and finesse is required to get the levels right.
- When grouting or pointing you should always work clean, it is very difficult to remove grout or mortar from the stone once it has dried. Wetting the pavers down or pre-sealing them before you start grouting can help avoid picture framing, which is where the grout haze forms a border around the edge of each piece of stone. Acid can damage stone, do not use it to clean your pavers.

DIRECT STICK

Wet laying pavers is also referred to as mud mix or mortar lay, which involves using a mortar bed made from sand, cement, water and sometimes an additive to lay the pavers onto. This method is a supportive base so can be used on tiles or pavers of any thickness, prevents weeds or ants coming up between your pavers and provides a pliable surface to absorb thickness variation.

Method:

1. Pour and level a concrete slab in the area required. It needs to be the appropriate thickness depending on your use, e.g. it needs to be thicker if you are planning to pave a driveway compared to when it is to be used for foot traffic. Some concrete slabs may need priming before installing your pavers – the key is to have a keyable surface that the glue can appropriately bond to.

Ensure both the back of the stone and the substrate are free of dirt, dust and other contaminants prior to application.

2. Stone should be fixed to the slab using the Tarver Method. To do this:
 - Spread the adhesive on the substrate surface with a 10-12mm notched trowel to achieve both the minimum required coverage and bed thickness. When the trowel is held at an appropriate angle and its notched side is drawn over the adhesive, it will leave a series of parallel ribs. Adequate ribs are essential to ensure an evenly distributed area of contact between the stone and the adhesive. You are aiming for full coverage of the stone back. Apply the adhesive in small areas as you go to ensure the adhesive does not skin prior to bedding of the stone.
 - Also butter the entire area of the back of the stone with a thin screed of adhesive 1-2 mm thick to achieve at least 99% coverage.
 - Carefully press each stone coping piece onto the substrate and then drag it at least one width of a rib perpendicular to the adhesive ribs. You can use your hands or gently tap with a rubber mallet if you need to adjust the level. You will likely need to adjust a few pavers as you go to absorb any thickness variation.
 - You can check the adhesive coverage you are achieving on a sample piece, by lifting it immediately once placed.
 - Allow at least a 3mm gap between each paver to absorb any movement and cutting tolerances.
 - Work cleanly and remove any adhesive immediately from unwanted areas especially the face of the stone.
3. Once laid, do not disturb the stone as per manufactures recommendations for curing.

4. Finally, the gaps can then be filled by either a sanded grout for tighter gaps, or a mortar for wider gaps.

Please note:

- This method is a supportive base so can be used on tiles or pavers of any thickness.
- There can be some bleeding of moisture and adhesive colour on dark coloured stone; using the above method should minimise this. Stone may also be pre sealed if preferred.
- Be sure to consider the colour and width of your gaps as it will impact the overall look of your paving.
- When grouting or pointing you should always work clean, it is very difficult to remove grout or mortar from the stone once it has dried. Wetting the pavers down or pre-sealing them before you start can help avoid picture framing, which is where the grout haze forms a border around the edge of each piece of stone. Acid can damage stone, do not use it to clean your pavers.

Disclaimer

The information in this guideline is general in nature and do not supersede the relevant Australian Standards. Installers should consider many factors, some of which have not been covered in this document. Allstone is a stone retailer and are not accredited trades or builders, we provide this information for convenience only and this document represents a summary of our understanding at the time of publishing. It is the responsibility of the builder and installer to determine if these guidelines are suitable.