



INSTALLATION GUIDANCE

Natural Stone and Porcelain Paving.

Please see below some general guidance on installing your natural stone or porcelain paving you have purchased from Natural Stone and Timber Ltd. This Guide is only to help give advice on how you should expect these materials to be installed and is in no way a definitive guide to laying paving.

Natural stone and Porcelain paving are premium products and should be installed by an experienced professional landscaping contractor or builder, who will be able to give you guidance on site conditions and provide a suitable installation method tailored to your specific requirements.

FIRSTLY AND MOST IMPORTANTLY

Please NEVER use Acid based cleaner on natural stone products, they will damage the surface of the stone and will cause irreversible damage to your patio (see photo).

SUB BASE

The depth of the sub-base will vary depending on soil type and site conditions, but generally 100mm of consolidated MOT Type 1 crushed limestone or crushed concrete to the same specification can be used. This will provide sufficient strength for most paving jobs but clay soils and for driveway you will require additional depth up to 200mm. We would also recommend a geo-textile membrane (weed membrane) to be used under the sub-base especially in clay ground conditions, this prevents mixing between substrate and the sub-base.

Some landscape architects or very conscientious landscape contractors will specify a concrete foundation / base, that the paving will then be laid on. This is a very successful method of construction for a sub-base but is generally better left to the professional contractor as mistakes are very hard to correct. If this method is used it is important to use a less porous pointing product such as instarmac flow-point or traditional sand and cement.

LEVELS AND FALLS

An important consideration when excavating for your sub-base is the finished level of the paving. It must be 150mm below the damp proof course or two bricks down.

In most cases your patio should gently run away from the house or any building except where drainage is to be provided. A slope of between 1:100 to 1:50 will be sufficient but depending on the lye of the surrounding land the fall could change. The sub-base should slope at the same rate as the finished level of the patio.



Photo showing five spot method showing through to the surface and the discolouration after an Acid cleaner has been used and left to dwell. Please do not use either of these methods.

BEDDING MATERIAL

We always recommend bedding all paving slabs on a solid mortar bed made with 5 parts sharp sand / grit to 1 part cement. But you should always try to match the strength of the bed to the density of the slabs you are installing.

Never lay paving on dots and dabs of mortar also known as the five-spot method. This will leave voids under the paving which are prone to movement through freezing and thawing and allows the possibility of discolouration of the slabs also known as reflective staining which is an irreversible problem. (see photo).

When laying natural stone and porcelain slabs you should work as cleanly as possible, cleaning away any cement or mortar marks immediately, as they can be very hard to remove when they have dried.

If you are installing very light coloured natural stone products it is particularly important to use land-based aggregates which have a lower salt content and white cement or alternative use white tile adhesive, but this would require a solid concrete based to be installed first. This will help prevent discoloration of the stone.

PRIMER

We would always recommend using a suitable primer on all low porosity stones, such as granite, certain limestones and all porcelain paving materials. We would recommend using a product called Instarmac Pro-Prime (link below) which is a cement-based primer which adds adhesion between your bedding material and the paving slab. It is also advisable to use Pro-Prime on all natural stone and porcelain materials on hot days when the bedding materials will dry quickly, this rapid drying can result in the sub base not adhering to your paving, which will allow movement after installation. Pro-prime is available from all Natural Stone and Timber branches.

www.instarmac.co.uk/ultrascape-products/pro-prime-slurry-primer

CUTTING

Always use a diamond blade for natural stone on a grinder, petrol cutter or table saw for denser paving such as Porcelain a specific Porcelain diamond blade will be required as normal blade will give a very unsatisfactory finish to the cut edge. Porcelain diamond blades contain a harder bonding material to keep the diamonds in place and it allows the slabs to be cut successfully. Porcelain paving always cuts better using a nine-inch electric grinder or table saw.

SPACING & TOLERANCES

On most external paving applications, a 10mm joint is standard, but due to the tolerances with natural stone you can expect + or - 5mm tolerance on these widths. Manufactured products such as porcelain paving have a tolerance of + or - 2mm so a much tighter joint of between 3-10mm can be achieved. On any joint below 5mm and external grout should be used, but please consult with your contractor before purchasing to insure you are buying the correct product for your paving.

All joint should be adjusted as the paving is laid with trimming of slabs occasionally needed to help keep lines straight and the pattern running true.



OUTDOOR

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POINTING

There are a few standard ways to point your paving, traditionally your landscaper would use sand and cement mortar, this method can be highly successful if undertaken correctly and cleanly by an experienced contractor. In recent years resin-based point products such as Aspects Easy Joint (link below) have come onto the market, these products save lots of back-breaking work and labour costs and can be good for the DIYer.

We would also recommend a product called Instarmac Flowpoint (link below) this is a cement-based product used by commercial ground working contractors but can be used by experienced landscapers, this product gives a superior finish to mortar pointing and Easy Joint and is completely frost hardy and will last for many years. This product is not an easy product to use and is not recommended for use by anyone without the correct experience.

www.aspects.co.uk/products/easy-joint.aspx

www.instarmac.co.uk/ultrascape-products/flowpoint-rapid-set-flowable-grout

SEALING

It is always advisable to seal both natural stone and Porcelain paving products, this helps reduce the chances of staining and helps reduce the maintenance required after installation. With natural stone we would always recommend using a water-based impregnating sealer such as Universeal Hydroseal or Ultimate Stone Enhancer.

Porcelain paving can also be sealed to improve its stain resistance properties but is not as crucial as sealing natural stone paving products. We would recommend using Patio Porcelain floor tile sealer from Universeal, but this is best used by a professional contractor as mistakes with this sealer are very hard to rectify.

Please ensure that the area to be sealed is completely clean, dry, free from debris and surface staining and that you have at least 24 hours of dry weather ahead.

Application guidance is available on the bottles must always be followed to ensure successful application. For more information on these products please use the link below.

universealsealants.co.uk



IF YOU NEED ANY ADVICE PLEASE CONTACT A MEMBER OF STAFF AT YOUR LOCAL DEPOT, ON ONE OF THE NUMBERS BELOW, WHO WILL BE HAPPY TO ADVISE YOU ON ANY OF OUR PRODUCTS.

PORTSMOUTH **02392 652923**
MON-FRI 7:30-16:30 SAT 9:00-14:00

POOLE **01202 736629**
MON-FRI 8:00-16:30 SAT 9:00-14:00

ROMSEY **01794 322908**
MON-FRI 7:30-16:30 SAT 9:00-14:00

TADLEY **01183 342256**
MON-FRI 8:00-16:30 SAT 9:00-14:00

WINCHESTER **01962 883708**
MON-FRI 7:30-16:30 SAT 9:00-14:00

WWW.NATURALSTONEANDTIMBER.CO.UK