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# ECO OUTDOOR INSTALLATION TIPS

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WALLING  
FREE FORM

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**ECO OUTDOOR®**  
FLOORING • WALLING • FURNITURE

MELBOURNE SYDNEY BRISBANE ADELAIDE PERTH  
T. 1300 13 14 13  
ECOOUTDOOR.COM.AU



### **Installations tips**

Please note these tips are guides only and should be used in addition to the relevant Australian Standards for trade practices. Note that installation may vary from site to site with varying conditions experienced on that site. The contractor and specifier should decide if these suggestions are suitable for their application or require further adjustment. A site sample of the proposed method of installation should be completed to ensure that this method is appropriate for the site conditions. These tips are given in good faith and to the best of our knowledge and experience at the time of printing. In no way do these tips replace the services of professional contractors and/or consultants.

### **Materials Considerations**

Natural stone wears the markings of thousands of years of formation, through extreme weather and climate conditions with sands, oxides and minerals from the earth and the sea. Materials vary in appearance from original sample and from piece to piece upon installation. As with any natural material, no two pieces of natural stone will be exactly alike. Colour, as well as percentage, size and shape of markings, will vary. Variation is not a material flaw. It's not that we accept imperfections, the imperfection is the point.

Our goal is to minimize surprises and help set realistic expectations with specifiers, contractors and end users. Prior to ordering, ensure that consideration has been made to understand what variation you might expect when this material is delivered and installed.

We suggest blending stone from all pallets delivered whilst laying.

Some typical installation methods are:

### **Substrate/Wall**

The background structure must be structurally sound and suitable for the stone installation. This may require an engineer's structural certification.

For concrete, blockwork or brickwork walls, the surface must be even and true, with a variance of no more than 2mm every 4m. If the wall is not true, a render should be applied as per the manufacturer's recommendations. The surface should be free from movement, oils, grease, waxes, paints, curing compounds and any other loose contaminating materials.

New concrete must be allowed to cure for 6 weeks, should have a wood float finish and be free of any laitance.

Old concrete should be cleaned of all laitance and have a keyable surface.

For tilt-up concrete panels, it is vital that all residues from release agents etc. are removed from the panel prior to the application of any tile adhesive.

Mechanical fixings such as a shelf, pin or tie back system may be necessary.

### **Control Joints**

Control joints should be used in the following areas:

1. Over movement joints in the background and over weakened plane joints.
2. At a junction between different background materials.
3. At fixtures interrupting the stone surface, e.g. columns and beams.

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4. At internal vertical corners.
5. At all horizontal joints and vertical joints (Approximately 3m to 4.5m apart).  
Foundations/Substrates

### Render

All render should be liquid modified and bonded as per the manufacturer's instructions.

The render should be true to a tolerance of +/-2mm in 4m. It is essential to have a keyable finish.

The render should be finished no thicker than 20mm and no single coat should be less than 8mm or more than 16mm.

Render should be allowed to fully cure before application of stone.

### Storage

Ideally store crates indoors away from direct sunlight and rain and on a level surface. Do not stack crates on top of one another.

### Waterproofing

Drainage design and waterproofing should be considered prior to installation as part of a broader 'moisture management plan'. To assist in dealing with efflorescence and other moisture related issues, we recommend coating the substrate with a waterproofing compound/membrane prior to tile installation. Examples are Mapelastic Smart (Mapei helpline 1800 652 666) or Hydro Ban (Laticrete helpline 1800 331 012).

It is strongly recommended that the top course is always sealed (silicon/polyurethane) or capped to prevent moisture entering between the stone and the substrate.

### Pre-Sealing Prior to Laying

Pre-sealing prior to laying should be considered depending on the stone selected and the environment it is to be installed in. When pre sealing ensure that the product used is appropriate to work in conjunction with the selected tile adhesive.

### Pools, Water features and Coastal Areas

In certain environments it may be appropriate to dip seal (on all six sides of the stone tile) with a consolidator sealer such as Dry Treat 40SK (Dry Treat 1800-675-119). This would be highly recommended for areas where stone elements are exposed to salt water.

### Weather Consideration

Avoid laying stone in extreme weather conditions, or if rain is expected.

Laying stone on very hot days (above 30C degrees) can cause delamination issues between stone and adhesive bedding layer.

### Consideration of Mechanical Fixings

Suitable mechanical fixings should be considered as part of the installation process, please consult your engineer. Companies such as Stone Clip ([www.stoneclip.com](http://www.stoneclip.com)) are a good source for further information and for the supply of mechanical fixing hardware.

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### Selection of Adhesive for Bedding Stone Elements

We recommend using synthetic tile adhesives to bed stone elements. Research and development of adhesives are continually improving. There are many reputable companies with a wide range of products available. Examples are Mapei (p: 1800 652 666) and Laticrete (p: 1800 331 012). It is essential to follow manufactures instructions.

In certain environments, fast setting tile adhesives (such as Granirapid by Mapei) should be used.

### Laying of Stone Elements

General tips in working with adhesives are as follows:

1. Ensure the back of the stone is clean and free of dust and other contaminants.
2. Spread the adhesive using a 10mm x 10mm to 12mm x 12mm notched trowel, making sure there is at least a 2mm final bed thickness and full coverage of the stone surface.
3. Each stone should be fully back buttered before attempting adherence.
4. The adhesive should not be allowed to skin prior to bedding of the stone. Work within controlled areas, to ensure the stone is applied promptly to the adhesive bed (refer to manufacturer's specifications).
5. To ensure that full coverage is being maintained, a sample stone piece should be removed, the adhesive coverage noted and the stone re-laid accordingly.
6. Sponge off any residual tile adhesive immediately.
7. Once stone pieces are laid, they must not be disturbed for at least 24 hours.
8. Care should be taken to ensure that vertical progression is appropriate (i.e. Don't install too high too quickly).
9. Depending on the style of stone to be installed there are numerous techniques, which can be used to achieve a certain look. Where a grout joint or coursing is desired, use tapered wedges or pre-soaked timber spacers. Ensure these are removed once the tile adhesive has set, but is not yet fully cured.
10. Please pay special attention to corner details, ensuring that the stone is never seen 'floating' on a wall. Corner pieces are made for most stone styles.

For site specific requirements we suggest you contact Mapei p: 1800 652 666 or Laticrete p: 1800 331 012

**ALWAYS CONSULT AN ENGINEER WHEN UNSURE**

### Cutting

Ideally it is recommended that cutting be done using a bench saw with a wet diamond blade. The stone should be washed immediately after it is cut to avoid cutting paste drying and staining the surface of the product.

Crystalline silica (or silica dust) is a common mineral found in soil, sand and stone. It is also used in the construction of materials such as bricks, tiles, concrete and artificial stone. Silica exposure can cause a range of health issues, so protective equipment should be worn whilst using power tools to cut, grind and drill such products. Appropriate safety guidelines relating to silica exposure should be adhered to on the work-site.

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### **Sealing**

Sealing is an essential step in protecting the beauty and ensuring the longevity of any Eco Outdoor stone (especially important for Crackenback)

We always recommend using a cleaning and sealing professional after the stone has been installed. Please call a showroom for a list of recommended professionals.

Research and development of sealing products are continually improving. There are many reputable companies with a wide range of products available. Examples are Dry Treat ([www.drytreat.com.au](http://www.drytreat.com.au)) and Aquamix ([www.aquamix.com.au](http://www.aquamix.com.au)).

We recommend using high quality penetrating sealers such as Stain Proof (Dry Treat), Ultra Solve (Aquamix) or Sealers Choice Gold (Aquamix).

Please note: Eco Outdoor provides recommendations for sealing products as a service to consumers only. Eco Outdoor does not warranty and will not be responsible for any claims regarding sealers.