→ INSTALLATION GUIDE

Crazy Paving Flooring

Aussietecture LIFESTYLE

ABOUT THIS GUIDE

This guide is intended as general guidance only. Before commencing work, confirm the current Australian Standards and any applicable requirements for trade practices.

The information has been prepared in good faith and must be considered alongside the specific conditions of each site. It is not a substitute for advice from qualified contractors or consultants, nor does it replace the relevant product technical data sheet or the manufacturer's prescribed installation method.

Aussietecture reserves the right to amend, remove or update information in this guide without prior notice.

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PRODUCT CONSIDERATIONS

Aussietecture crazy paving is natural stone, with colour, texture and performance characteristics influenced by its geological origin. Natural differences between pieces and supply batches are to be expected and form part of the material's character. Surface finish and thickness tolerances may also vary according to the production method.

Samples indicate the general appearance of a product rather than its full range of variation. Inspect all stone upon delivery and confirm its suitability before installation. Blend pieces from multiple crates during laying to distribute tonal and textural differences naturally. If any material is unsuitable, notify Aussietecture before installing it; installation constitutes acceptance of the supplied material.

STORAGE

Store uninstalled paving in a sheltered, dry location away from weather exposure and direct sunlight. Keep material single-stacked on a firm, even surface.

SUBSTRATES & FOUNDATIONS

A sound, correctly designed base is fundamental to long-term performance. A suitably qualified structural engineer should assess soil conditions, expected traffic loading, site levels and drainage. The source guide provides the following indicative minimum reinforced concrete slab thicknesses for 25 MPa concrete:

- Pedestrian use only: 75mm minimum.
- Vehicle traffic below 3 tonnes gross mass: 100mm minimum.

Reinforcement grade and design will depend on the application. Allow the substrate to dry for the period required under the relevant provisions of AS 3958. Before fixing, ensure it is structurally suitable, stable and free of dust, grease, oil, dirt, curing compounds, release agents and other bond-inhibiting materials.

CONTROL & MOVEMENT JOINTS

Control and movement joints accommodate expansion, contraction and movement within the ground, substrate, fixing materials and paving. Keep these joints free of hardened mortar or adhesive. If cleaning out a joint is necessary, protect any underlying waterproofing membrane from damage.

Existing substrate joints must continue through the paving as flexible joints at the finished surface. Where a stone spans an underlying control joint, form a corresponding cut and flexible joint directly above it. Detail and install movement joints in accordance with AS 3958.

DRAINAGE

Adequate drainage and surface falls help minimise subgrade softening, deterioration of bedding layers and efflorescence. Provide suitable falls to drainage points in accordance with relevant Australian Standards and the project design. Seek project-specific drainage advice where required.

SCREED & BONDING SLURRY

Where a screed bed is used, first allow the concrete base to cure in line with manufacturer requirements. Bond the screed to the base using an approved cementitious slurry. Select and install screed materials in accordance with applicable standards and manufacturer instructions.

WATERPROOFING MEMBRANE

Install a compliant under-tile waterproofing membrane wherever required. Depending on the system, the membrane may be applied to the concrete base or the screed bed. Confirm the correct substrate and preparation method with the membrane manufacturer, and follow its installation instructions in full.

Aussietecture recommends considering Ardex or Mapei waterproofing systems. Confirm the system is suitable for the substrate, stone and installation conditions, and follow the manufacturer's instructions.

Ardex: www.ardexaustralia.com
Mapei: www.mapei.com

PRE-SEALING & PRE-GROUT SEALING

Pre-sealing or pre-grout sealing may be beneficial depending on the stone type, surface finish and installation environment; it is not necessary for every crazy paving product. Confirm that any sealer is compatible with the selected stone, adhesive and grout. Apply and cure in accordance with the manufacturer's instructions.

Aussietecture recommends Aqua Mix natural stone sealing products.

Aqua Mix: www.aquamix.com.au

WEATHER CONDITIONS

Review site and forecast conditions before starting. Temperatures below 10°C or above 30°C may interfere with bonding, while rain or excessive moisture may weaken adhesive and grout performance. These thresholds are indicative only; refer to the relevant current product data sheets.

CUTTING

Use a high-quality stone-specific cutting blade approved for the chosen machinery. A bench saw is preferred where practical. For split-edge pieces, partially cutting from the underside and carefully breaking through to the face may help retain an organic edge, except where precise or perimeter cuts are required. Minor shaping can be undertaken with a brick hammer where suitable.

Silica Safety: Stone, mortar, sand and concrete may contain crystalline silica. Cutting, grinding, drilling and other processing can release respirable silica dust associated with serious illness, including silicosis. Apply appropriate dust suppression and extraction controls, PPE and workplace safety procedures. Consult Safe Work Australia: safeworkaustralia.gov.au.

WET BED INSTALLATION

Crazy paving with significant surface or thickness variation may require wet-bed installation to accommodate those differences. Confirm that the base is clean, stable and free from contaminants before starting.

Wet-bed mortar mix
- 3 parts coarse washed sand compliant with relevant Australian Standards
- 1 part General Purpose (GP) Portland cement
- 1 part clean water, with additional water as required

Thoroughly combine the dry sand and cement, then add water and mix until smooth and evenly blended without lumps.

Bonding slurry
Prepare cement and Planicrete SP as a workable paste, following the manufacturer's current guidance.

Fixing procedure
- Spread a uniform 1-2 mm layer of bonding slurry over the concrete where the mortar will be placed
- Lay the wet-bed mortar to a consistent 25 mm thickness, avoiding voids
- Remove loose fragments and thoroughly clean the underside of each stone
- Back-butter the entire underside of the stone with bonding slurry
- Position the stone in the fresh mortar and gently tap into place with a rubber mallet; a white mallet may help avoid marks. Ensure full support beneath each piece
- Adjust the paving to the specified finished level
- Allow joint widths to respond to the irregular shapes, without exceeding the maximum permitted by the relevant manufacturer instructions
- Fill voids around the newly installed stone and remove surplus mortar
- Immediately wipe mortar residue from the stone with a clean sponge and clean water to help avoid staining
- Use joint wedges or spacers if needed to maintain the intended grout spacing. Remove them once the adhesive has set but before it fully cures
- Install in manageable areas so the mortar remains workable while stones are placed

Remove spacers and wedges once the adhesive has set, but before it has fully cured. For project-specific advice on the appearance and layout of split loose cobblestones, consult Aussietecture before work begins.

Aussietecture recommends Ardex and Mapei Adhesive Systems for Crazy Paving.

Adex: www,ardexaustralia.com
Mapei: www.mapei.com

DIRECT ADHESIVE FIXING

Crazy paving with relatively consistent surface and thickness dimensions may be suitable for direct fixing with a two-part adhesive. Aussietecture recommends Ardex X18 with E90 additive and Mapei Keraquick Maxi S1.

Adex: www,ardexaustralia.com
Mapei: www.mapei.com

Follow the chosen manufacturer's specifications, including powder/additive proportions and working times.

Mixing
Place the measured additive in a clean mixing vessel. Gradually introduce the required powder while mixing slowly with a low-speed mixer until the adhesive is smooth and uniform. Allow it to stand for 1-2 minutes and remix, subject to the manufacturer's directions.

Fixing procedure
- Confirm both the substrate and stone backs are sound, clean and free from dust, oils, grease and other contaminants
- Ensure the receiving surface – whether membrane, concrete or screed – has cured for the required period
- Key adhesive into the substrate using a 10-12 mm or 15 mm notched trowel according to the thickness variation
- Fully back-butter each stone
- Press each piece firmly into the freshly notched adhesive bed. Use a rubber mallet where needed to bring the stone into position
- Keep irregular joints within the maximum width allowed by the relevant manufacturer
- Work in controlled areas, allowing for the adhesive's stated open time and pot life
- Check levels and required drainage falls with a spirit level
- Periodically lift a stone to verify full adhesive contact without voids. Do not spot-fix
- Remove surplus adhesive from the stone faces and joints before it hardens

If spacers or wedges are used, remove them after initial set but before complete cure. Refer to the selected manufacturer's current technical guidance.

GROUTING

Select a grout compatible with the stone, intended joint widths and exposure conditions. Aussietecture recommends Ardex WJ50 with Grout Booster for crazy paving.

Ardex: www.ardexaustralia.com

Confirm compatibility and suitability for the specific project with the grout manufacturer.

Mixing

For a two-part grout, accurately measure powder, additive and water where required. Add the specified additive to a clean vessel, diluting first in clean cool water if directed. Slowly incorporate powder using a low-speed mixer until a smooth, creamy mix with consistent colour is achieved. Allow to stand for 3–5 minutes and remix, subject to current manufacturer directions.

Application

- Ensure all joints are thoroughly clean
- Where pre-grout sealing is required, confirm it has been completed and cured
- Lightly dampen the paving with a sponge; do not saturate the stone or leave water standing in the joints
- Pack grout into all joints with a rubber float, eliminating gaps and voids. For stone requiring grouting across its top surface, complete that treatment during this stage
- Draw the float diagonally across joints to remove excess grout
- Allow grout to firm, typically around 10-15 minutes in the source guide. Conditions and moisture-sensitive stone may require earlier cleaning
- Prepare two buckets of water: one to remove most grout residue from the sponge and another to dampen it with cleaner water
- Use a well-wrung sponge to wipe diagonally in one pass, turn it over and wipe an adjacent area. Rinse through the two-bucket system and repeat
- Limit water use and change the water regularly
- Remove grout residue within the timeframe set by the grout manufacturer

CLEANING

Complete final cleaning after grout and silicone joints have fully cured. Protect adjacent materials, including trims, fences and framing, from the selected cleaning solution.

- Remove loose dirt and debris from the stone
- Apply a suitable stone-compatible cleaner as instructed
- Agitate with an appropriate scrubbing brush and allow the specified dwell time
- Remove the cleaning solution and rinse as directed

The correct cleaner depends on the stone and the residue to be removed. Do not use acid without specialist advice, as it can damage stone, sealers and installation products.

Aussietecture recommends Aqua Mix for cleaning and sealing products

Aquamix: www.aquamix.com.au

POST-INSTALLATION SEALING

Post-installation sealing is recommended for natural stone to help preserve its appearance and performance. Choose a suitable sealer for the stone and application, and follow the manufacturer's requirements for preparation, coverage, application and curing.

MAINTENANCE

Maintenance needs vary according to the stone, finish, location, exposure and level of use. Depending on these factors, ongoing care may involve regular cleaning, periodic resealing, or both. Use cleaning and sealing products specifically suited to the installed stone and follow their directions.

Contact Aussietecture to discuss a maintenance approach suited to the selected product and installation environment.

Important: This guide provides general installation guidance only and is not a substitute for project-specific design, professional advice, applicable Australian Standards or the current technical data sheets for the products used. The installer is responsible for confirming suitability of the substrate, materials, methods and site conditions before commencing work.

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