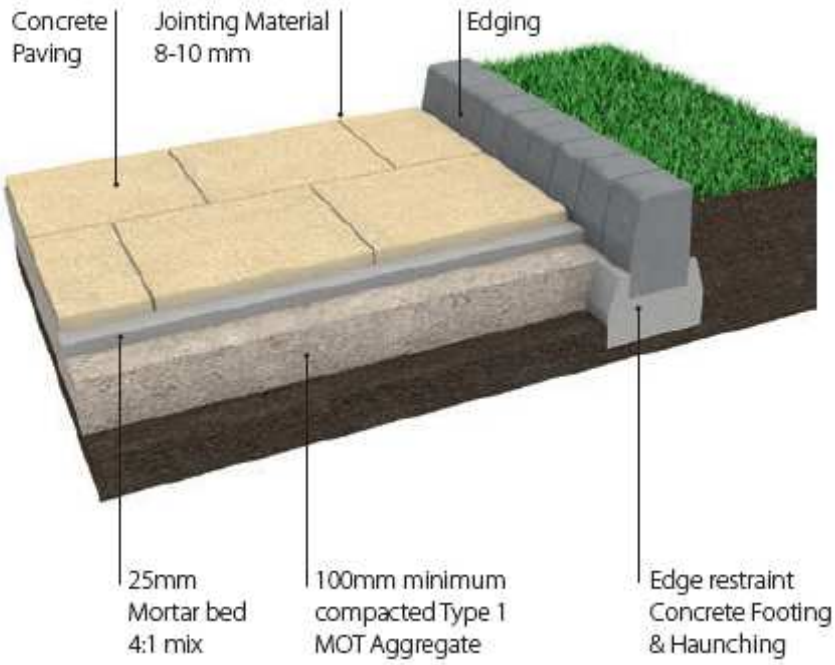
Marshalls

Creating Better Spaces

INSTALLATION DETAILS FOR HERITAGE PAVING

Health and Safety Information
Safe working practices should be employed at all times during the construction process and all necessary Personal Protective Equipment (PPE) should be worn.

Pavement Design
For most domestic applications a sub-base of 100mm should prove to be sufficient. However the paving design must be based upon the prevalent ground conditions, type and frequency of anticipated loads.



Excavation
To allow the new paving to be installed correctly, a certain amount of excavation may be required. The depth of this excavation will depend upon the thickness of the required sub-base plus the sand and/or mortar, and the paving flag thickness. An extremely important factor to consider when working out the depth of excavation is that the finished surface level of the paving, when being laid up to an existing structure, must be a minimum of 150mm below the DPC to prevent problems with rising damp in the structure.

Edge Restraints
Edge restraints should be sufficiently robust to resist the lateral displacement from imposed loadings placed upon the pavement and are installed prior to the installation

of the sub-base. The restraint must provide a consistent vertical face to a level below the laying course material.

Sub-base
Material Selection
Granular sub-base material should be well graded (40mm to dust) Type 1 quality material. Inferior quality material may be liable to failure under loading and be susceptible to frost or moisture movement. Recycled materials such as crushed masonry or concrete can be considered, provided it is well graded and compacts to give a close textured finish. Materials containing organic matter should not be used.

Construction
Sub-base material should be placed in layers not exceeding 75mm in thickness or twice the nominal maximum aggregate size. Each layer should be fully compacted before the next layer is placed. Sub-base tolerance to be +5 -10mm from specified levels. The surface should be clean and suitably close textured to prevent migration of finer material through the construction.
A minimum longitudinal fall of 1.25% (1 in 80) and crossfall of 2.5% (1 in 40) should be incorporated in the sub-layer construction to provide adequate surface water runoff from the wearing course.

Rigidly Laid Paving
Material Selection

Paving units should be cleaned by washing the units with a sponge and clean water. This is to remove any dust, loose material, packaging or production aids. To avoid damaging the units, stack the units on timber battens with spacers between them

The backs of the units should be primed using a proprietary priming product or fine mortar slurry prior to placement upon the bedding mortar.

Flags should be supported on a full 'wet' workable mix mortar bed of 1 part cement to 3 or 4 parts building sand. The mortar bedding should be laid to give a thickness between 15mm and 30mm; however some adjustment may be necessary to ensure that the units are fully supported and do not rock or move. A PVA, SBR or equivalent bonding agent can be added to the mortar to assist bonding. An appropriate plasticiser can also be considered to be added to the mix.

Keep checking levels and gradient across the units. String lines can be helpful to define levels and lines within the laying pattern. Maintain the correct joint width by gently shuffling with a trowel. Small pieces of timber are useful as temporary spacers.

For most paving units Marshalls' Weatherpoint 365 Jointing Compound can be used where a minimum of 10mm joint and minimum 22mm thick paving units are being utilised. Alternatively use a damp mortar mix of 1 part cement to 4 parts building sand. If mortar gets onto the surface of the units, clean off immediately using a damp sponge frequently rinsed in clean water.

Under no circumstances should dry or semi dry sand/cement mixes be brushed into the joints. This practice leads to staining of the paving and does not constitute a true rigid joint.

Butt jointing is not recommended for any of these paving products.

Cutting
Cutting may be carried out using a diamond tipped power saw, or hammer and bolster. It must however be noted that the aesthetic finish achieved will depend greatly upon the choice of cutting mechanism and level of skill. Specific equipment or blade types should be used when cutting natural stone units as those designed for cutting concrete only may blunt easily. If more than 25% of a flag or slab requires cutting then the remaining piece should be cut from the internal corner of the cut to the external corner of the flag or slab, at an angle of preferably 45°.

Inclement Weather
Laying operations should be discontinued (and any open work face covered) if weather conditions are such that the performance of the paving may be jeopardised. Laying operations should not be undertaken when the temperature is below 3°C on a falling thermometer and below 1°C on a rising thermometer. All unfinished areas and stockpiles of materials should be covered in the advent of inclement weather to prevent saturation.

Further Information
For technical advice on commercial installations, or when confronted by unusual problems or circumstances, please contact Marshalls Technical Advisory Services on 0370 411 2233, or by email on advisory.services@marshalls.co.uk

Contacts

Parex Streetscape	eg: Easipoint	01257 224900
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