

Natural Stone Setts Rigid Installation Guidelines



General Information

This installation guide is applicable to the following natural stone setts:

Alvanley Pavers, Scoutmoor Sawn Setts
 Fairstone Cropped Granite Setts, Fairstone Driveway Setts, Fairstone
 Magnasetts, Fairstone Sawn Granite Setts, Fairstone Split Sandstone
 Setts, Fairstone Sawn Sandstone Setts.

On delivery, the product should be inspected. If there are **any** issues, please report them immediately and do not commence installation.

Before installation commences a certain amount of sorting of the product may be required to ensure consistency of colour, texture and dimensional tolerance.

Natural stone products are unique and you can expect colour and veining variances between each unit.



Health and Safety Information

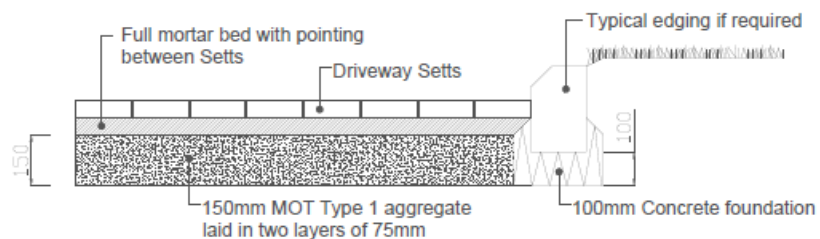
Safe working practices should be employed at all times during the construction process and all necessary Personal Protective Equipment (PPE) should be worn.



Pavement Design

For most domestic applications, a sub-base of minimum 150mm should prove to be sufficient. However, the paving design must be based upon the prevalent ground conditions and type and frequency of anticipated loads.

Consideration should be given for the inclusion of movement joints, at 6m centres, if the area is subjected to prolonged periods of direct sunlight, the area is a large open expanse of paving or the selected colour of paving is the dark option.

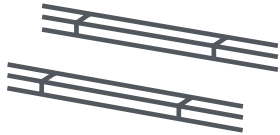


G Typical section through a driveway constructed using a rigid system
 D01 Scale 1:20 @ A3



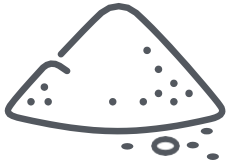
Excavation

To allow the paving to be installed correctly, a certain amount of excavation is usually required. The depth of this excavation will be the thickness of the required sub-base plus the mortar bed and the setts. An extremely important factor to consider when working out the depth of excavation is that the finished surface level of the setts must be a minimum of 150mm below the DPC (damp proof course) to prevent problems with rising damp.



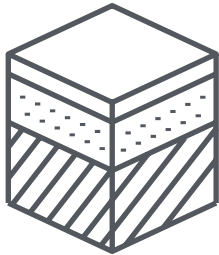
Edge Restraints

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 stone 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.



Sub-base – 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 cross-fall of 2.5% (1 in 40) should be incorporated in the sub-layer construction to provide adequate surface water runoff from the wearing course.

Tolerances

All products are manufactured with small variations in size. Bedding onto mortar allows variations in thickness to be accommodated during installation.

Laying Course – Material Selection

If necessary, the setts 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.

The base of the setts should be primed using Marshalls' Paving Primer prior to placement upon the bedding mortar. This is to assist bonding of the units to the bedding mortar.

The setts should be supported on a full 'wet' workable mix mortar bed of 1-part cement to 3 or 4 parts sharp sand. The mortar bedding should be laid to give a thickness of approximately 40mm; however, some adjustment may be necessary to ensure that the units are fully supported and do not rock or move. A bonding agent can be added to assist bonding.

Joins – Material Selection

All joints should be fully filled with a 'wet' mortar mix of 1-part cement to 4 parts sharp sand or Marshalls' Exterior Jointing Grout. Joint widths should be approximately 8mm to 15mm.

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.

Any mortar dropping on the face of the setts should be cleaned off quickly as work proceeds with a damp cloth.

Cutting

Cutting may be carried out using a water and dust suppressed diamond tipped power saw with the aesthetic finish achieved depending upon the level of skill of the operator. Specific equipment or blade types should be used when cutting natural stone units as those designed for cutting concrete pavers may blunt easily. Cut edges on cropped setts will need distressing prior to installation. Cut units should be inserted prior to completion of the working period or before the onset of inclement weather. Setts should be cut such that the resultant joint width remains within the 8 - 15mm tolerance.

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.

