

MORTARED STONE PAVING

(SURFACE OPTION No. S 10)



INTRODUCTION

Mortared Stone Paving is one of a number of road surface improvement or paving options that use **natural stone** and are suitable for construction using **labour** and **simple equipment**. Other options are Water Bound Macadam (WBM), Dry Bound Macadam, Hand Packed Stone, Telford Paving, Cobble Stones, Stone Setts or Pavé, Dressed Stone, and Stone Chippings. None of these options normally require the use of high-cost equipment. Therefore a high proportion of the costs may be spent in, and benefit, the local community. Mortared Stone Paving is suitable for use as a surfacing in appropriate circumstances.

DESCRIPTION

Mortared Stone Paving consists of a layer of natural selected stones, laid on a bed of loose sand or fine aggregate with the joints filled with sand–cement mortar. The stones do not need to be dressed to a regular shape. The individual stones should have at least **one** face that is fairly smooth and even, to be the upper or surface face when placed. Stone size is typically from 100 – 300mm. The bedding sand around each stone is adjusted with a small hammer and the stone is then tapped into position and to the final level of the surrounding stones. Sand–cement mortar and small stones are used to fill the joints between the individual stones. When the mortar has set the layer should be covered in sand and kept wet for a few days to aid curing.

ADVANTAGES

- Proven performance in all climates.
- Suitable for light to heavy traffic.
- Does not require expensive equipment to construct or maintain.
- Built with unshaped stones and laid by hand. It is therefore suitable for construction by small contractors or communities themselves, or in remote areas with access problems for crushing equipment or heavy plant.
- Can be constructed at any gradient.
- Low maintenance, easily repairable.
- Light compaction equipment is only required for the foundation layers.

DISADVANTAGES

- Requires hard stone to be available locally.
- Stone requires to have at least one smooth, even face.
- Requires skill in laying to achieve a smooth, even finished surface.
- Smooth to medium surface roughness.
- Stones that ‘polish’ by traffic, or are slippery when wet, must not be used.
- Cannot be used until the mortar joints have set and hardened sufficiently (usually about 5-7 days in hot/warm climate).