

GET IT RIGHT

8. Laying Ibstock Clay Pavers for rigid and flexible applications

Ibstock Clay Paver Installation Guidelines (not SUDS)

Pavers in the Ibstock range are intended for domestic use and are generally to be laid by one of two distinct methods. 65mm thick pavers should be dry bedded on sand (flexible) and 50mm pavers are intended for mortar bedding (rigid) with 10mm mortar joints. The latter version ideal for covering existing concrete pathways as they act as a veneer rather than a load bearing unit.

Pavers suitable for sustainable urban drainage systems should be laid to a different method not covered in this sheet.

The design of the pavement structure and its installation is covered by a series of Guides and Codes of Practice which form the constituent parts of BS 7533. Parts 1 & 2 cover the design of 'Heavy Duty' and 'Lightly Trafficked' pavements respectively. Installation is covered in Part 3 for flexible paving and the soon to be published Part 9 for Rigid Paving.

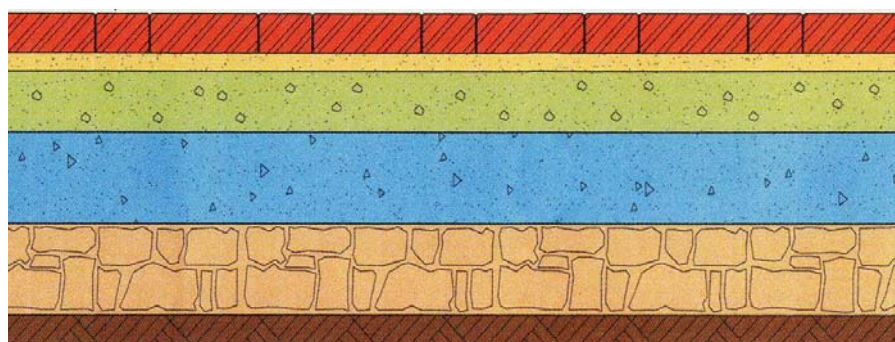
Its not possible to summarise the content of the relevant Parts of BS7533 and Professional Specifiers are advised to consult the Codes and select products accordingly.

However, for domestic applications the following notes will assist in achieving satisfactory results.

Sand Bedded Pavers (flexible system)

1. Ensure rigid edge restraints are effective for the whole of the paved area and are adequately secure. The pavement will try to spread in-use and the joints will open up unless restrained by walling or kerbs. Newly laid proprietary kerbs together with any concrete haunching, must be allowed to gain sufficient strength before compaction of sub-base and laying course takes place.
2. Prepare the sub-base which may consist of either an existing sound pavement or crushed aggregate if paving on virgin ground. The depth of sub-base needs to be between 150-200mm if on virgin ground dependant on soil conditions and planned usage. Drain falls must be formed in the sub-base (not the laying course) and it should be well compacted with a plate vibrator.

Flexible Pavement - Terminology

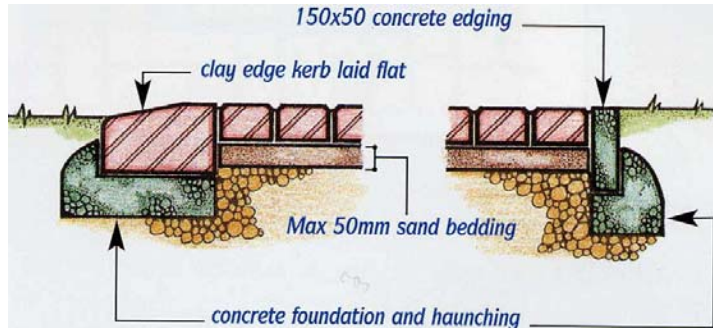


- ⇒ Pavers (wearing course)
- ⇒ Laying course (bedding sand)
- ⇒ Roadbase or existing roadway if required.(not relevant to domestic situations)
- ⇒ Sub-base
- ⇒ Capping layer if required (not relevant to domestic situations)
- ⇒ Subgrade (soil)

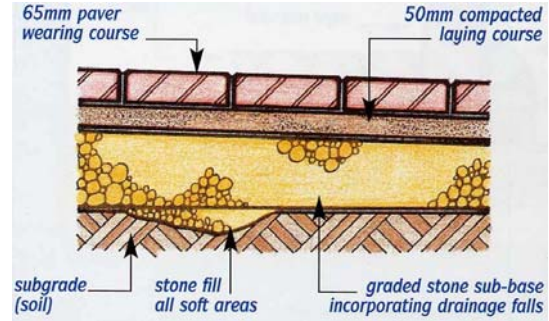
3. Washed sharp concreting sand for the laying course should also be compacted with a plate vibrator to a depth of 50mm max on a sub-base or 30mm thick on a rigid base. The actual thickness needed to produce the required paving level is determined by trial and error. Do not form the drainage falls in the laying course. Once compacted, level by screeding.

4. The Ibstock clay pavers can now be laid to the chosen laying pattern which should commence from a straight section of the edge restraint. Do not stand on the sand when laying pavers. Pavers should be laid with joint width typically within the range of 2-5mm.

Edge restraints



Sloping sites



5. Alignment of the pattern should be checked periodically using string lines at right angles and minor adjustments made to maintain it within reason. The achievement of perfectly straight joint lines may not be possible due to permitted manufacturing tolerances and variations in the surface profile of the pavement.

6. Avoid infill pieces less than $\frac{1}{4}$ of the original paver size. To achieve this use half to three quarter pavers near an edge to slightly adjust the bond pattern. Pavers should be cut with a power saw or multi bladed paver splitter.

7. After placing all the pavers, fine, dry jointing sand must be brushed into the joints until they are full. Surplus sand lying on the surface should then be brushed away.

8. The Plate vibrator fitted with a neoprene sole plate is then used to compact the pavers. Two or three passes need to be made with additional sand being brushed in each time.

9. After final compaction has taken place a thin layer of jointing sand should be left on the surface to help fill any voids which may develop.

Mortar Bedded Pavers (Rigid veneer)

These are laid in a 15-20mm thick mortar bed on a concrete base with each paver buttered on 2 edges before being set into the mortar. Final jointing should be carried out when the mortar has stiffened.

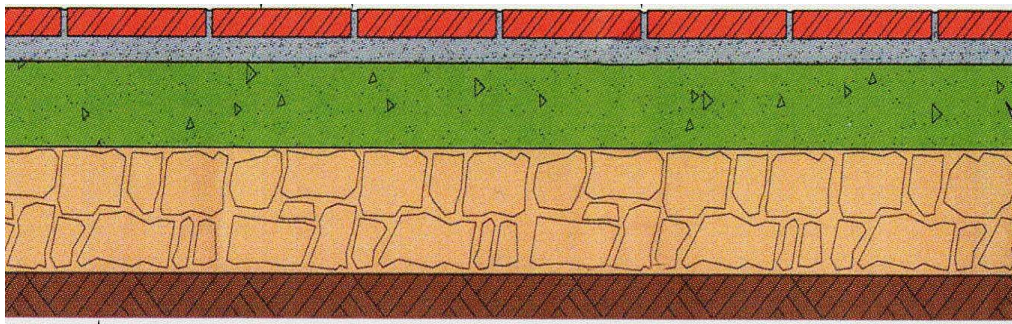
Designation (i) mortar (1: ¼ : 3 cement: lime: sand) should be used and vertical joints must be well filled and compacted. Plasticised mixes should be avoided in this situation.

Movement joints must be incorporated at 6m spacings and at the perimeter when paving is constrained by walls.

The concrete sub-base must be strong enough to withstand envisaged loading (*note; BDA guidelines indicate minimum 300mm concrete base for foot traffic alone*), and pavers must be fully bedded with no voids, the whole assembly being regarded as a rigid system.

Mortar bedded pavers are manufactured to a brick bed size and should be laid with a nominal 10mm joint width.

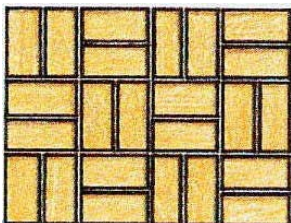
Rigid Paver -Terminology



- ⇒ Pavers and mortar joints
- ⇒ Mortar bed
- ⇒ Concrete base (to structural requirements)
- ⇒ Capping layer
- ⇒ Sub-grade (soil)

Paver laying patterns –

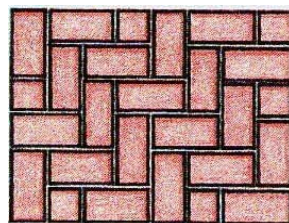
Rigid lay are sized to incorporate a nominal 10mm mortar joint (215x102mm bed dimensions), Flexible lay are sized to be laid with a joint width typically 2-5mm (200x100mm bed dimensions).



Basket weave



Herringbone at 45°



Herringbone at 90°



Running bond

Maintenance

Little or no maintenance is required with clay paving. Any discolouration due to organic growths can be treated with fungicides available from all garden centres and DIY stores. The use of a High Pressure Washer is NOT recommended on either method of installation, it will compromise joint strength and may reduce durability.