



Laying Paving

- Preparation

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The secret of all good paving is preparation. The area to be paved should be cleared of all obstructions and levels established.

String lines

Decide where the paving is to run and mark out area. This process establishes lines, levels, curves and arcs. Basic setting out skills require the use of a string line, accurate spirit level, a tape measure and marker pegs.

String line need to start somewhere so a double loop should be used to fix one end of the line to the first pin. Once the string line is secure on the first pin it is to be taken to the next pin and secured by half hitch knot. These half hitches are used on subsequent pins until the area has been completely set out. Curves and arcs may need pins at short intervals. Pins should be set out no more than 10m apart. If a line is sagging it gives the wrong guide for level and so you may have to place pins within 5m intervals. To set out a straight line the start and end pin must be positioned first and a string pulled tight between the two. On long straights, the intermediate pins are established by halving the distance between two existing pins. Once all intermediates are in place, the alignment of the string line should be visually checked for accuracy by sighting along the line.

Falls

Paving needs to be laid at a slight fall to ensure surface water is drained away a recommended fall is between 1:40 (25mm per metre) and 1:80 (13mm per metre)

Sub-grade

The sub-grade layer is essentially the underlaying ground and is the lowest point of the paving structure.

The surface needs to be dug off to a depth of approximately 90mm and all weeds and other unwanted matter removed. Excavate any soft spots and fill with compacted 10:1 grit sand/cement mix. Where the area is troubled with weeds treat the excavated area with weed killer.

Sub-base

A sub-base will not normally be required for a path or patio unless there is concern at the suitability of the sub-grade. A well constructed sub-base will aid drainage and prevent settlement. For driveways or other heavy use areas, the sub-base is the load bearing layer and should be at least 100mm thick.

The sub-base works by distributing a point load over a larger area. The interlock between adjacent particles of the sub-base material ensures that a relatively thin layer of the right sort of crushed aggregate can dramatically improve the ability of the ground to carry comparatively heavy loads.

Two types of materials are used to construct a sub-base and they are chosen for their load spreading and drainage capabilities.

The materials are unbound granular material which are defined as loose aggregates that do not bond or adhere when laid and compacted, but they rely on their natural interlocking properties, and cement bound materials which do bond together when compacted and set and makes it more difficult to remove.

If there is an area to be paved that needs that requires raising to a higher level then uplifts should be constructed by including or adding to the sub-base layer and not by increasing the thickness of the bedding layer.