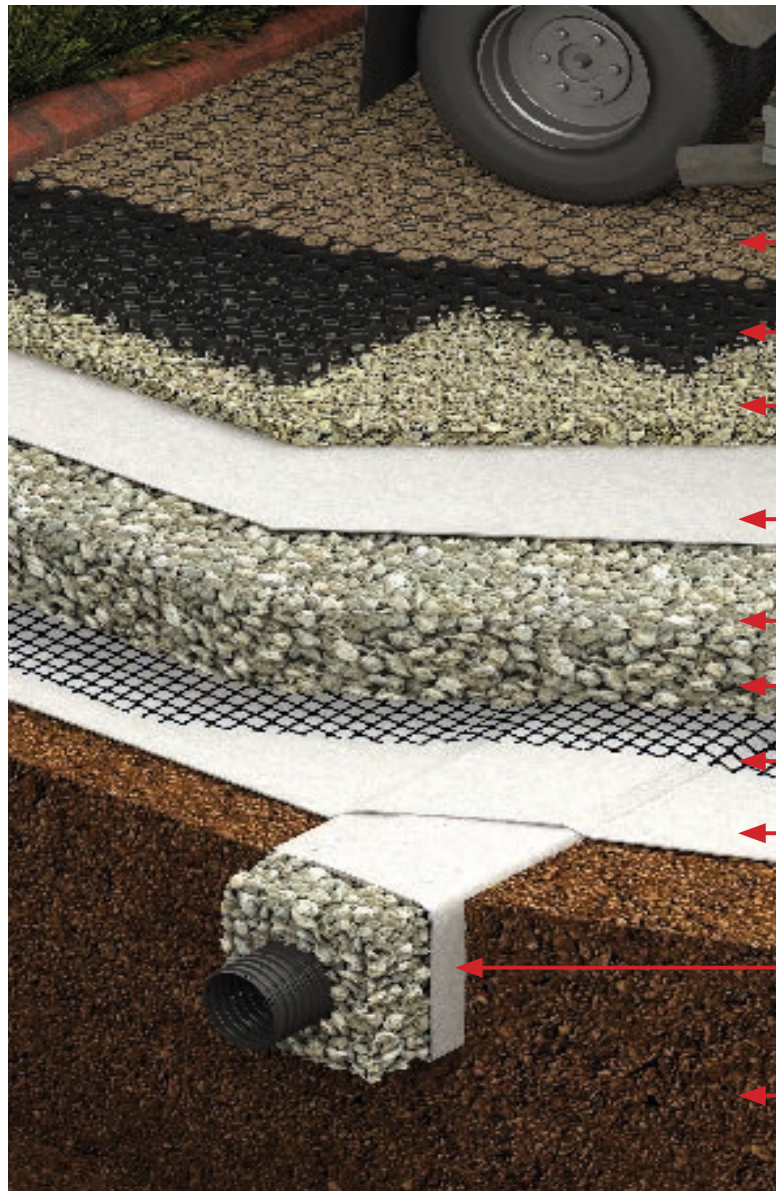


# INSTALLATION GUIDE

## SUREGREEN PP50

### POROUS PAVER GRAVEL FINISH



PP50 paver filled with a 5-20mm angular gravel

50mm deep cells

35-40mm thick layer of angular aggregate 5-20mm in size

Geotextile fabric

Free draining sub-base angular stone within a 5-45mm size range

Sub base thickness between 100-380mm

Optional Geogrid

Geotextile fabric

Optional drainage system

Sub-grade

Prior to any work on site, it is highly advisable a site survey, even if only a rudimentary one, is done.

#### Installation notes:

- It will need to be considered that SURE GREEN PP50 porous plastic pavers will require an edge retention system / kerb of some kind. This should be as substantial as 150mm x 150mm concrete road kerbs, steel, plastic or treated timber.
- It may be prudent to check if the type of soil on the surface is the same 200 to 400mm under the surface.

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**1) The sub-grade:** Excavate ground to create a sub-grade at the bottom of the profile. This layer will required depth and formation based on the type and frequency of traffic using the soil after installation and the ability of the existing soils to handle imposed loadings. The sub-grade could finish could be as little as 100mm or as much as 500mm below the existing surface. It is advisable that the sub-grade is compacted. On top of the bottom layer, unroll and place a geotextile onto the prepared subgrade. A geo-grid can also be applied to reduce the depth of sub-base used and also reduce the amount of spill caused by works.

**2) The sub-base layer:** On top of the sub-grade a sub-base layer needs to be installed. The depth of this layer would have been pre-determined at an earlier date. The sub-base needs to be composed of a free draining sharp angular fill material (angular stone /aggregate), 95% of which the particle size is of a mixed nature between 5mm to 45mm (DOT type3 or similar) with reduced fine content which would produce a stable and porous sub-base / hard-core after compaction. The sub-base needs to be compacted to the required depth. At the top of the sub-base a second geotextile separation layer needs to be installed.

**3) The bedding layer:** For a gravel finish, the bedding layer needs to be a free draining, sharp angular 5 to 20mm gravel laid to a depth of approximately 35mm on top of the top layer of geotextile that has been installed above the sub-base. This bedding layer may require compaction using a vibrator plate or roller. The bedding layer will be required to be smooth and level to allow an even surface for SUREGREEN PP50 porous pavers to be laid onto.

**4) Laying SUREGREEN PP50:** SUREGREEN PP50 should be laid from above onto the prepared gravel bedding layer, working from one corner laying adjacent paving grids into their connectors. SUREGREEN PP50 plastic paving grids can be cut on-site using a handsaw, jig-saw or other mechanical saw to match site / client requirements, shapes and obstacles.

**5) Filling the Pavers:** SUREGREEN PP50 needs then to be filled with the same 5 to 20mm sharp angular gravel. With the shearing action of the gravel SUREGREEN PP50 becomes locked within the gravel and so is able to resist the dynamic loadings imposed by the surface traffic. A light whacker plate after filling may be applied to 'settle' the gravel and then a small top up to refill the cells if necessary.

#### Notes on Gravel:

Experience has shown a 5mm to 20mm sharp angular gravel gives the best results for providing a long term, very low maintenance wearing surface. The gravel interlocks / shears with each other and, more importantly with the specially designed SUREGREEN PP50 pavers. The smaller particles fill the smaller voids and working with the PP50, this gives a secure, locked sustainable finish.

Single size gravel or even worse rounded gravel like pea shingle will in due course lead to issues and failure. The more rounded and single size the gravel, the quicker problems are likely to happen.