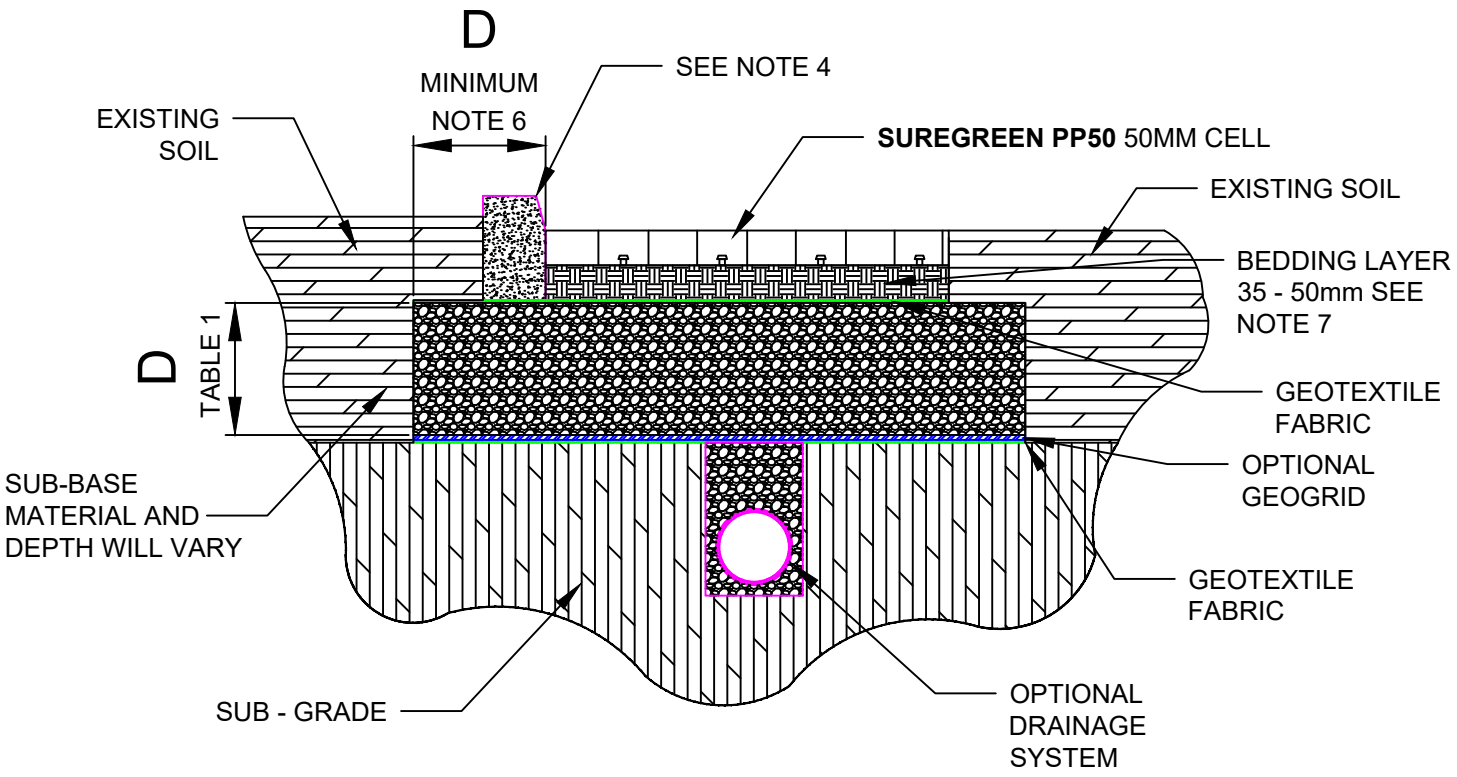
DESIGN GUIDELINES
SUREGREEN PP50
POROUS PAVER GRASS FINISH



DESIGN GUIDELINES

SUREGREEN PP50 is a porous paver that can provide a solution to a wide range of trafficking needs, especially in providing a stable, hardworking free draining surface for grassed or gravel areas. The application might be a busy car park, driveway, or an emergency access route. SUREGREEN PP50 plastic paving grid for ground reinforcement has been designed using carefully selected recycled plastics to be used in demanding circum-stances. This heavy duty polymer and its interlocking nature provides a robust surface able to withstand the dynamic & lateral loads that vehicles impose on it.

The following applications and frequency of use are guides only as this does not take in to consideration the existing ground conditions. Please refer to the full sure green range if product specified does not meet requirements. If you require further assistance please contact our sales team for further guidance on product suitability and installation instructions.

Product

PP50 Porous Paver

Heavy grade plastic porous pavers for grass and gravel.

Typical Applications

Industrial yards, car parks, coach parks, access routes, shed bases and fire access lanes.

Frequency of Use

Loading

DESIGN GUIDELINES
SUREGREEN PP50
POROUS PAVER GRASS FINISH

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

Does the proposed installation area drain well already?
Is there planned to be a slight fall to be built into the design to perhaps aid drainage if aid is needed?
Is the drainage capability of the soils the same at the surface and at 200 to 500mm below the surface?
Has there been previous issues with drainage on site?
Has disposal of any excess water been considered?
Are there SUDS requirements to be considered?

DESIGN NOTES:

1) If a geogrid is being considered as part of the construction profile please ensure that at least 25% of the particle size of the sub-base is bigger than the mesh size used to ensure good shearing / locking.

2) Sub-base particle size should not ideally exceed 60mm and should be less than 5% fi ne material of content of the whole.

3) Please refer to tables 1 & 2 for guidelines to depth of sub-base for specific design profi le to suit site needs. Please note if a geogrid is omitted 50% of the depth of sub-base needs to be added to calcu-lated depth with a geogrid. For example 100mm with geogrid would become 150mm without. For detailed guidance please contact our technical team.

4) It is always good practice to confine SUREGREEN PP50 plastic pavers on the site edges. This could be as strong as 150 x 150mm concrete kerbs or a simple barrier like treated timber. The type of vehicles, frequency of traffic and circulation routes should all be considered when choosing the confinement method for SUREGREEN PP50 in the design.

5) SUREGREEN PP50 has been designed to work within stated guidelines to a slope of 5% or less. The SUREGREEN PP50 can be used on steeper slopes in some cases.

6) Ideally the sub-base should extend out further than the surface area of SUREGREEN PP50. This is so lateral pressures caused by the traffi c loading does not displace the SUREGREEN PP50 on the edge. The extension of sub-base outwards should be the same as the depth of the sub-base. Please see schematic for detail.

7) Root-zone 60/40 should be used for the bedding and filling of the cells of the SUREGREEN PP50 grass pavers. (Please see Installati on document for further details regarding the root-zone specification). Using soils won on site / reused for excavation are very likely NOT to have any medium to long term success due to poor nutrition and drainage properties. Mix-ing soils on site is also not advised.

Note on drainage:

Any sub-base used in the constructi on profi le should be perme-able – for example MOT Type 3. It should be predominantly fi ne material free and able to compact well without losing integrity, stability and permeability/porosity. MOT type 1 can be used but drainage channels need to be considered – please see schematic

DESIGN GUIDELINES
SUREGREEN PP50
PAVER GRASS FINISH

Sub-base thickness:

Use the following charts to confirm the sub-base thickness that is required, based on vehicle load, frequency of use and Soil Strength (CBR %)

Table 1 - Typical Sub-Base Thickness using a Geogrid*

Consistency	CBR % (Strength of Subgrade Soil)	Sub-Base Thickness
Light Vehicles, Cars, Vans & overflow parking	= 1 < 2	260mm
	= 2 < 4	135mm
	= 4 < 6	100mm
	≥ 6	100mm
Coaches, Lorries, Fire Trucks & Occasional HGV areas	= 1 < 2	380mm
	= 2 < 4	190mm
	= 4 < 6	120mm
	≥ 6	100mm

*If a geogrid is not used, sub-base thickness should be increased by 50%

Table 2 - Guidance for estimating sub-grade strengths

Consistency	Indicator			Product	
	Tactile (feel)	Visual (observation)	Mechanical (test)	CBR	CU
			SPT	%	kN/sqm
Very Soft	Hand sample squeezes through fingers	Man standing will sink >75mm	< 2	< 1	< 25
Soft	Easily moulded by finger pressure	Man walking sinks 50-70mm	2-4	~ 1	~ 25
Medium	Moulded by moderate finger pressure	Man walking sinks 25mm	4-8	1-2	25-40
Firm	Moulded by strong finger pressure	Utility truck ruts 10-25mm	8-15	1-4	40-75
Stiff	Cannot be moulded but can be indented by thumb	Loading construction vehicle ruts by 25mm	15-30	4-6	75-100

Viridis House, Toppesfield Rd, Finchingfield, CM7 4NZ t: 01376 503869
e: trade@sure-green.com w: www.sure-green.com