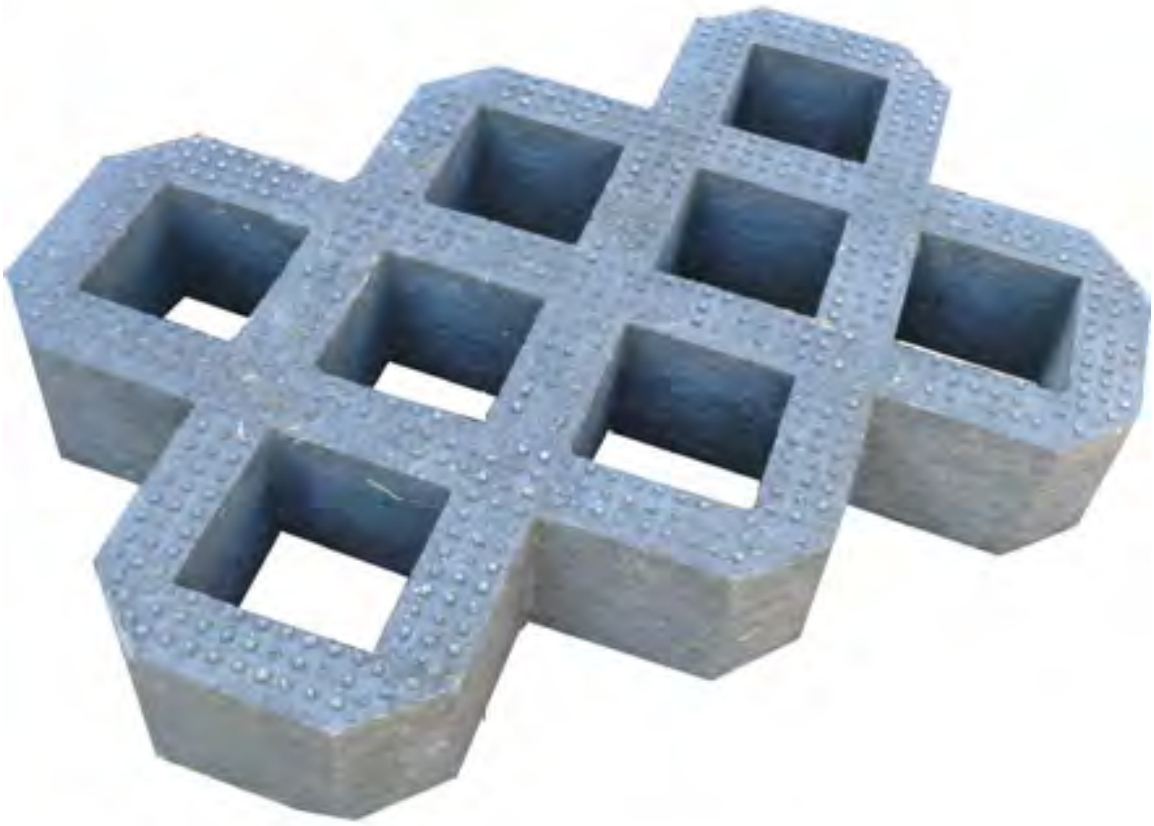
suregreen

The Professional Choice in Landscaping

TRUCK GRID MAX
HEAVY DUTY POROUS PAVERS



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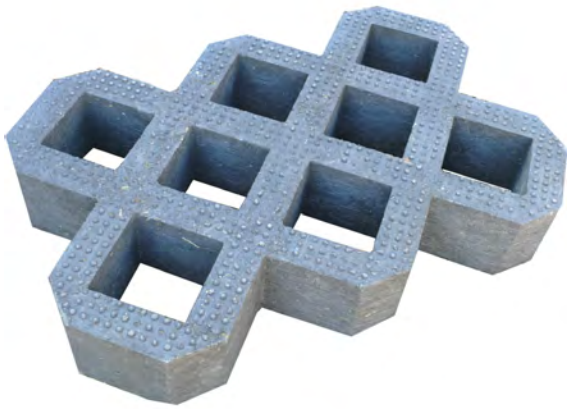
PRODUCT DATA SHEET
SUREGREEN TRUCKGRID MAX
HEAVY DUTY POROUS PAVERS



Description:
Heavy duty, nonslip plastic porous paving grids manufactured using 100% recycled plastics.

Applications :
SUREGREEN TRUCKGRID-Max permeable paving grids provide a wearing surface that is needed to manage the pressures and tensions imposed by heavy weight vehicle movements and harsh dynamic loadings. Can be installed with either a grass or gravel filled surface.

Typical uses would include:
- Intensive use car parking
- Truck parking
- Coach parks
- Heavy use pedestrian paths
- Fire access routes
- Loading bays
- Access routes for pumping stations, solar farms and electric relay stations
- Drives and Driveways where access to sceptic or oil tanks is needed

Features and benefits:
- High compressive strength
- Flexible and resistant to cracking
- Harmless to flora and fauna
- Meet SLW60 loading category (vehicle up to 60 tonnes gross weight)
- Complies with HSE manual handling limits
- Rigid but open cellular design allows the grids to provide both exceptional support and water management.
- Manufactured from 100% recycled plastic
- Open cells can be filled with either gravel or seed depending on your application

Product		Typical Applications	Frequency of Use	Loading
	**Truckgrid - Max Permeable Paving** – Heaviest-grade plastic paving grids. A direct replacement for concrete.	HGV access roads, fork-lift areas, industrial yards, bus and coach parks, car parks, fire access roads.		

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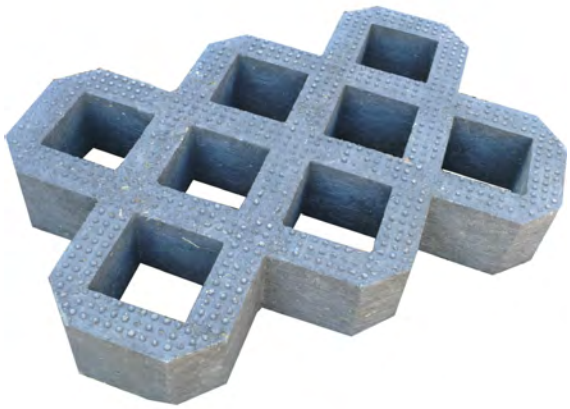

Characteristics	Data
Dimensions	600mm x 400mm wide x 80mm
Weight	Each piece is 9kg per m2
Nominal cell dimensions	Octagonal
Locking & Anti Shear	10 locking connection per pc
Connection method	Interlocking block & groove
Cell wall thickness	5mm
Cell Openness %	90% on top and 60% on base
Polymer	Recycled Polyethylene
Colour	Grey
UV stabilised	Yes
Load bearing capacity (filled)	SWL60 Tested to 180kn with no failure
Environmentally neutral	Yes
Production control	Under ISO Control
Traffic Loading	Tested to DIN 1072
Pavers per m2	4.17

Product	Dimensions (mm) (l x w x d)	Grids per m²	Weight	Material	Colour
TRUCKGRID-Max 80	600 X 400 X 80	4.17	9kg	Recycled Plastic	Grey

All data figures are nominal and are given in good faith. Suregreen Limited reserve the right to amend any data without prior notice. Product variances are provided as a guide and normal production and product characteristics are within these parameters

DESIGN GUIDELINES
SUREGREEN TRUCKGRID MAX
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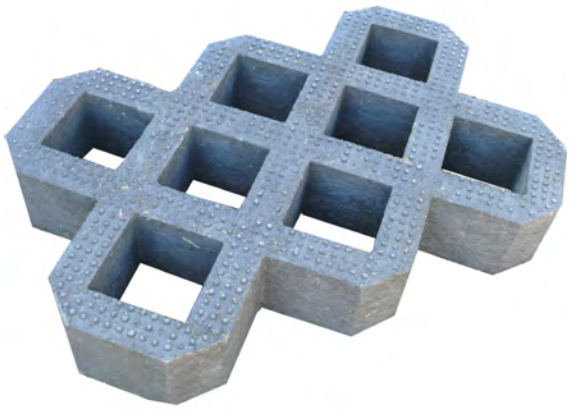

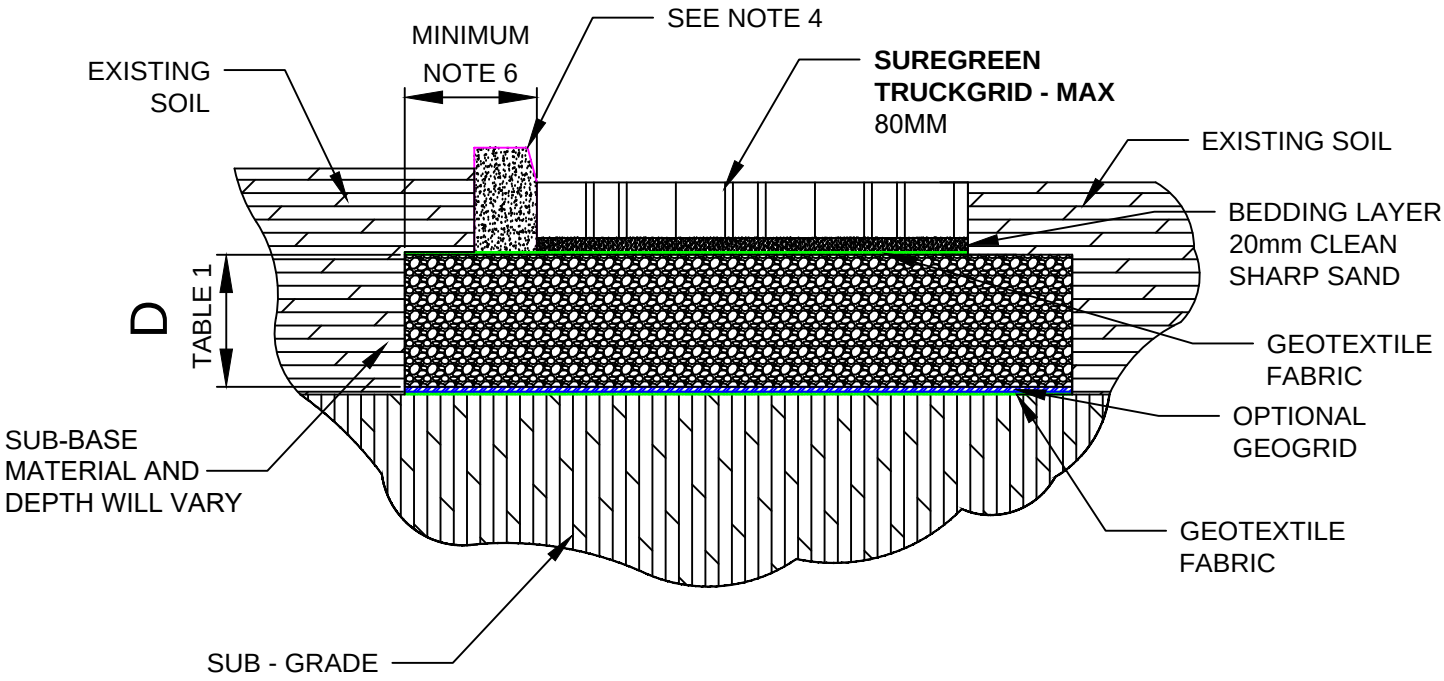

DESIGN GUIDELINES

SUREGREEN TRUCKGRID-Max permeable paving grids provide a wearing surface that is needed to manage the pressures and tensions imposed by heavy weight vehicle movements and harsh dynamic loadings. The need might be a truck park, an industrial yard, HGV access roads, a car park, loading bays, or a fire access requirement. TRUCKGRID-Max provides a porous permeable surface that can meet heavy loading needs and can be used as part of a SUDS programme and so not contributing to /and adding to water overspill and flooding. TRUCKGRID-Max is manufactured from 100% recycled plastics.

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 Suregreen 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		Typical Applications	Frequency of Use	Loading
	**Truckgrid - Max Permeable Paving** – Heaviest-grade plastic paving grids. A direct replacement for concrete.	HGV access roads, fork-lift areas, industrial yards, bus and coach parks, car parks, fire access roads.		

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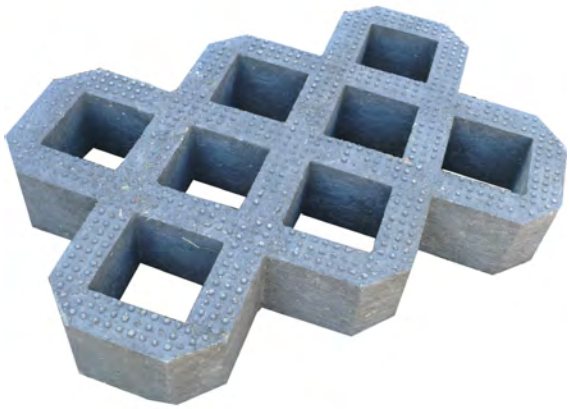

Prior to any work on site, it is highly advisable a site survey – even if only a rudimentary one – is done. Questions to ask may be:

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 geo-grid 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% fine material of content of the whole.

3) Please refer to tables 1 & 2 for guidelines to depth of sub-base for specific design profile to suit site needs. Please note if a geo-grid is omitted 50% of the depth of sub-base needs to be added to calculated depth with a geo-grid. For example 100mm with geo-grid would become 150mm without.

4) It is always good practice to confine TRUCKGRID plastic pavers on the site edges. This should be as strong as 150 x 150mm concrete kerbs because of the possible lateral loadings of possible Heavyweight vehicles. The type of vehicles, frequency of traffic and circulation routes should all be considered when choosing the confinement method for TRUCKGRID in the design.

5) TRUCKGRID has been designed to work within stated guidelines to a slope of 5% or less.

6) Ideally the sub-base should extend out further than the surface area of TRUCKGRID. This is so lateral pressures caused by the traffic loading does not displace the TRUCKGRID 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.
The aggregate for the bedding and the filling of the cells should ideally be specified as 5mm to 10mm sharp angular gravel to BS EN13242. This gives the best results for providing a long term, very low maintenance wearing surface. The gravel pieces interlock /shear with each other and, more importantly with the specially designed TRUCKGRID plastic paver.

7) Smaller angular gravel / particles fill the voids providing a secure, stable and sustainable finish. Single size gravel or rounded gravel / 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.

8) TRUCKGRID when filled to aggregate 5mm to 10mm to BS EN13242 conforms to BS8300:2001 for disabled access.

Note on drainage.

Any sub-base used in the construction profile should be permeable – for example DOT Type 3. It should be predominantly fine material free and able to compact well without losing integrity, stability and permeability/porosity. DOT type 1 can be used but drainage channels need to be considered – please see schematic.

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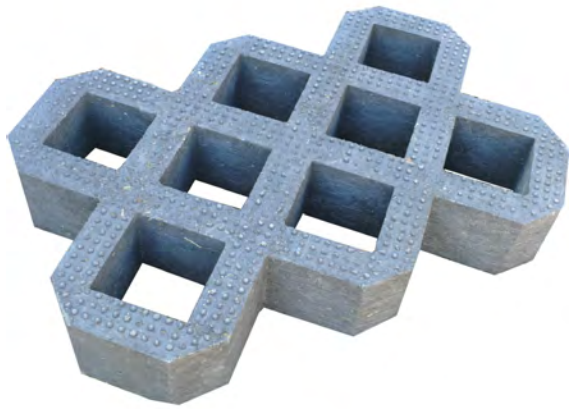

Table 1 - Typical Sub-Base Thickness using a Geogrid*

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

INSTALLATION GUIDE GRAVEL
SUREGREEN TRUCKGRID MAX
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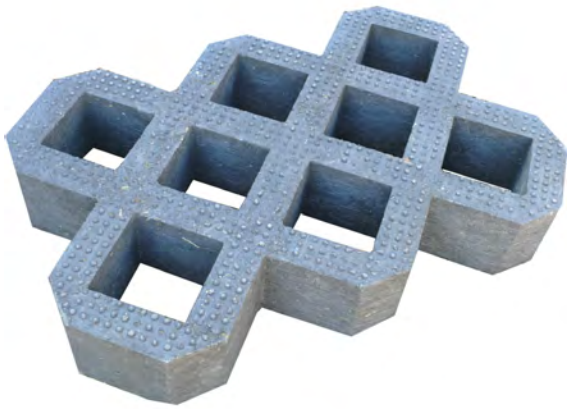

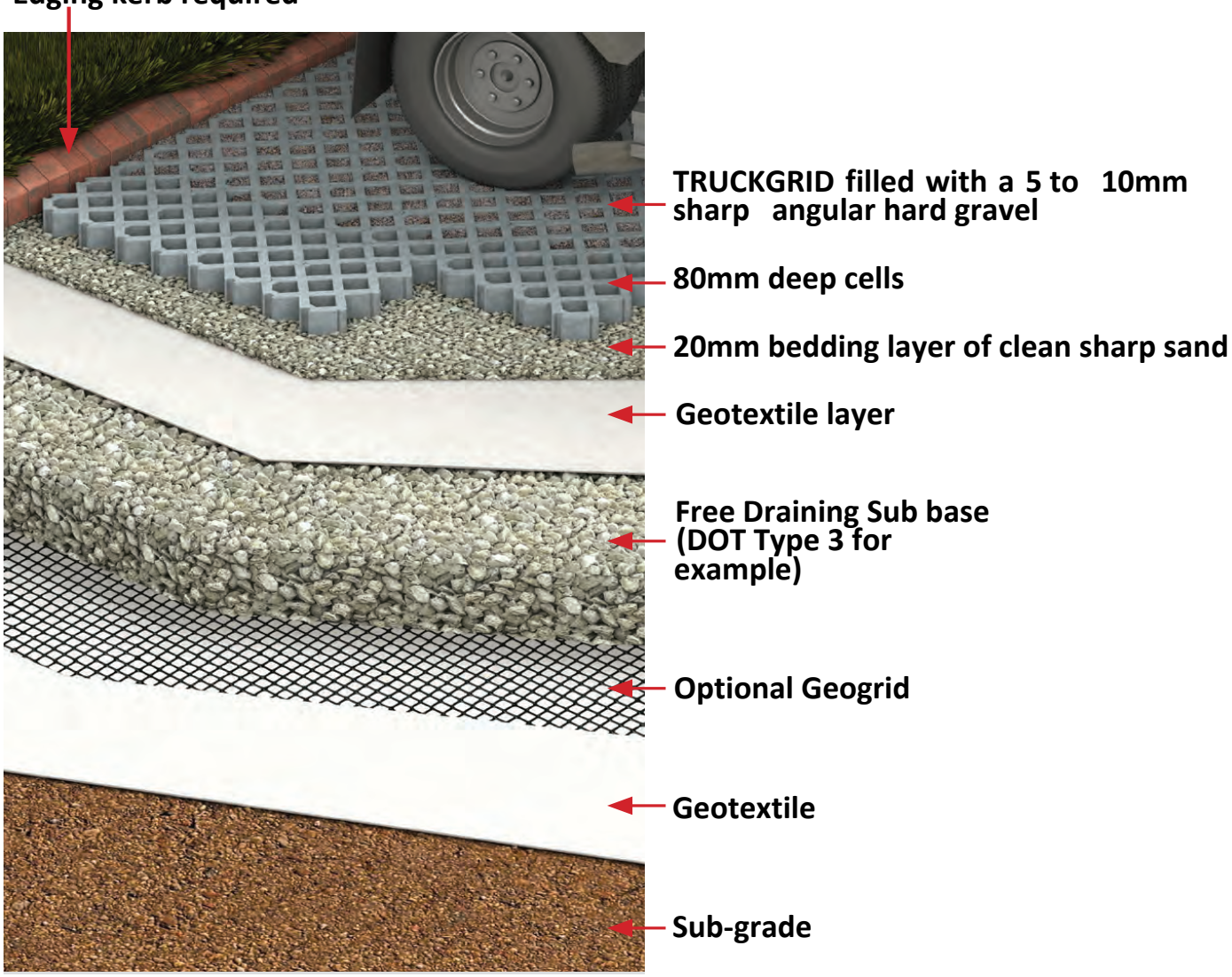

Prior to any work on site, it is highly advisable a site survey, even if only a rudimentary one, is done.

Installation notes:

- It will need to be considered that TRUCKGRID MAX 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.

INSTALLATION GUIDE GRAVEL
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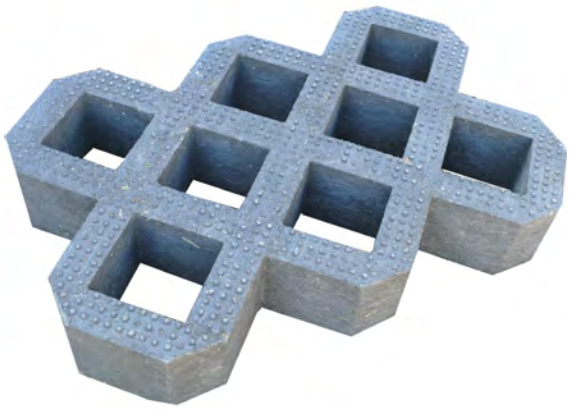

1) The sub-grade: Excavate ground to create a sub-grade at the bottom of the profile. This layer will be the required depth and formation based on the type and frequency of traffic using the soil after installation and the ability of the existing soils to handle imposed loadings. The sub-grade could finish up 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 spread the bedding layer uniform, level to achieve a 20mm thick bedding layer of coarse grit sand. The use of rounded pea shingle/gravel is not recommended. Do not exceed recommended bedding layer thickness. 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 TRUCKGRID MAX porous pavers to be laid onto.

4) Laying TRUCKGRID: TRUCKGRID MAX should be laid from above onto the prepared gravel bedding layer, working from one corner laying adjacent paving grids into their connectors. TRUCKGRID MAX 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: TRUCKGRID MAX needs then to be filled with a mixed 5 to 10mm sharp angular gravel. (the use of rounded pea gravel/shingle is not recommended) With the shearing action of the gravel TRUCKGRID MAX 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. It is not advised to overdress the TRUCKGRID MAX.

Notes on Gravel:
Experience has shown a mixed 5mm to 10mm sharp angular gravel gives the best results for providing a long term, very low maintenance wearing surface. The gravel pieces interlocks /shears with each other, the smaller particles fill the smaller voids and working with the TRUCKGRID MAX, 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.

INSTALLATION GUIDE GRASS SUREGREEN TRUCKGRID MAX

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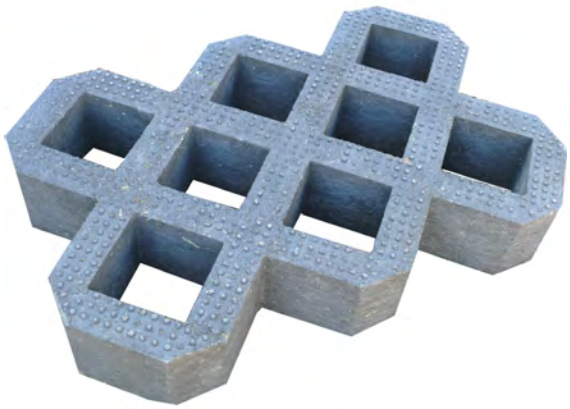

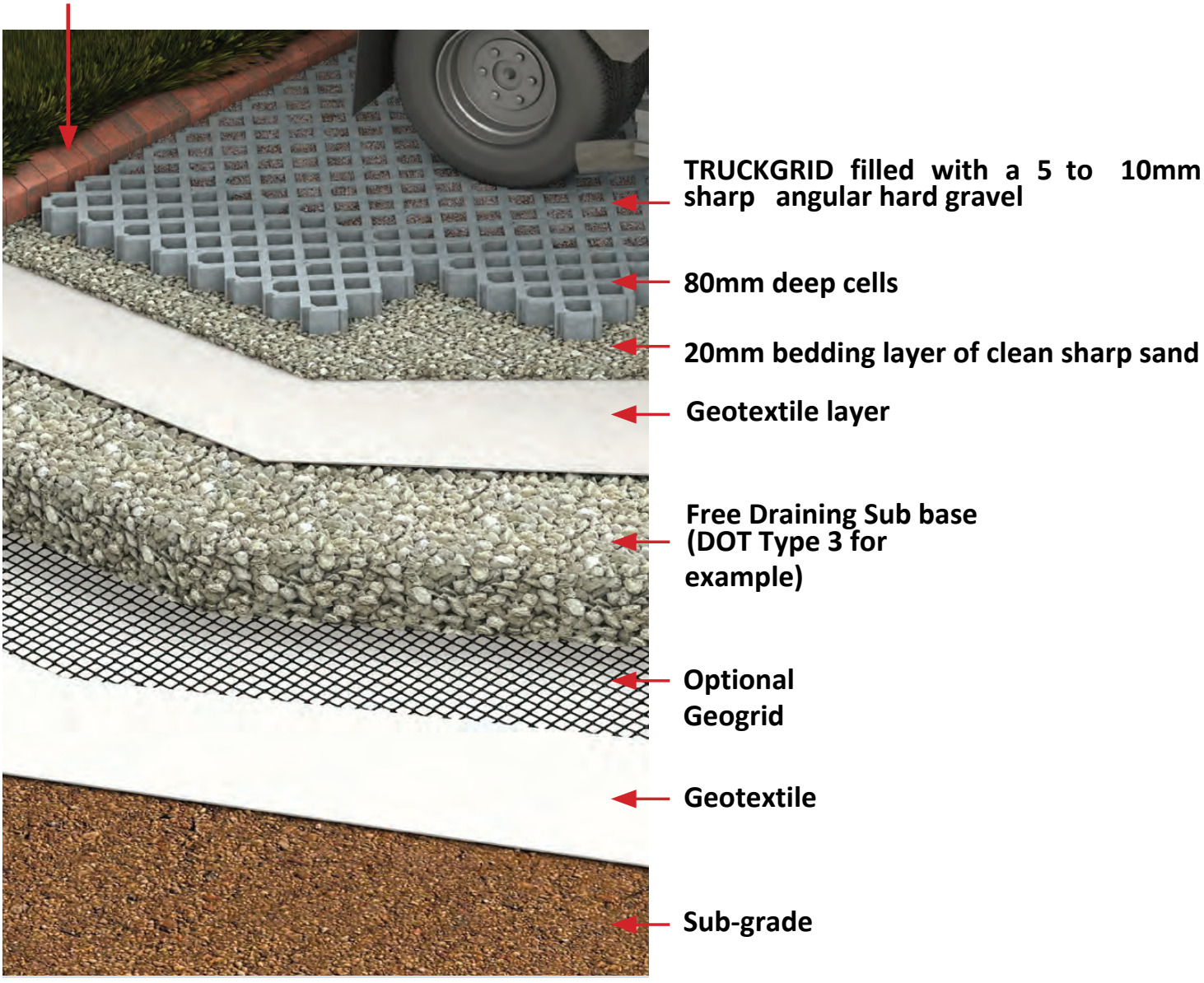

Prior to any work on site, it is highly advisable a site survey, even if only a rudimentary one, is done.

Installation notes:

- It will need to be considered that TRUCKGRID MAX 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.

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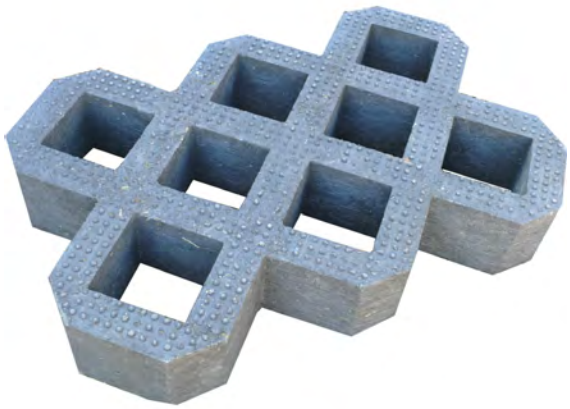

1) The sub-grade: Excavate ground to create a sub-grade at the bottom of the profile. This layer will be the required depth and formation based on the type and frequency of traffic using the soil after installation and the ability of the existing soils to handle imposed loadings. The sub-grade could 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 grass finish, the bedding layer needs to be a free draining, uniform, level & well compacted 20mm thick bedding layer of coarse grit sand to achieve required reduced levels to accommodate the TRUCKPAVE MAX specified. Do not exceed recommended bedding layer thickness. 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 TRUCKGRID MAX porous pavers to be laid onto.

4) Laying TRUCKGRID:

TRUCKGRID MAX should be laid from above onto the prepared gravel bedding layer, working from one corner laying adjacent paving grids into their connectors. TRUCKGRID MAX 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:

When installed, fill the paver cells to just below the top of the TRUCKGRID MAX with a free-draining, soil like root zone used on sports pitches. This type of soil mix will encourage rapid grass growth, aid drainage and be structurally sound within the TRUCKGRID MAX cells. It is very important not to fill to the top or overfill the cells as this will lead to over compaction during use and the grass cover will degrade. A single pass with a light vibrating plate machine or roller may be used to firmly bed the pavers and settle the root zone. The TRUCKGRID MAX filled cells can then be seeded using an amenity hard working grass seed mix and fertilized and perhaps watered if deemed necessary. It is strongly advised that the grass is allowed to become fully established and has been cut a couple of times before the TRUCKGRID MAX is trafficked otherwise there is a risk of damage to the tender growing grass.