



Installation Guide

Gravel Fill



Why EcoGrid?

- Quick and easy to install (100sqm/person/hour)
- Low handling and transportation costs (E30 94 sqm/pallet)
- High loading capacity (E50-800t/sqm)
- Patented safety locking system
- Surface reinforcement with natural drainage
- Extremely versatile (sloping and curving elements, markers range)
- Minimal maintenance
- Weatherproof and environmentally friendly
- Non-slip and crackproof
- Frost proof and UV stable
- Easy to cut with supplied edges available

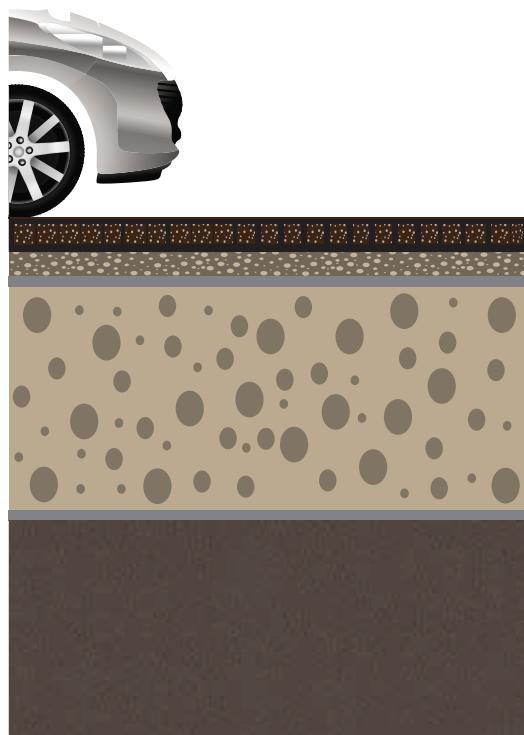
Preparations

Before determining the volume of stone infill for the grids you need, you must calculate the total area and if you are to over-fill the grids. At standard fill rates, infill calculations are:

- 0.051 tonnes per square metre for 30mm grids
- 0.068 tonnes per square metre for 40mm grids
- 0.085 tonnes per square metre for 50mm grids

If you choose not to build a base layer for your installation, the natural movement of the soil layer can cause unevenness. EcoGrid significantly increases the loading capacity of any surface, we always advise to follow the manufacturer's guidelines.

Example Car Park with Sharp Angular Stone



◀ EcoGrid stone infill (6-30mm sharp angular or slate)
EcoGrid screed layer 20-30mm (fine stone or sharp sand)
EcoGrid approved membrane
(Must be thermally bonded with a high permeability factor: EN ISO 11058
min 1500 puncture resistance: EN ISO 12236)

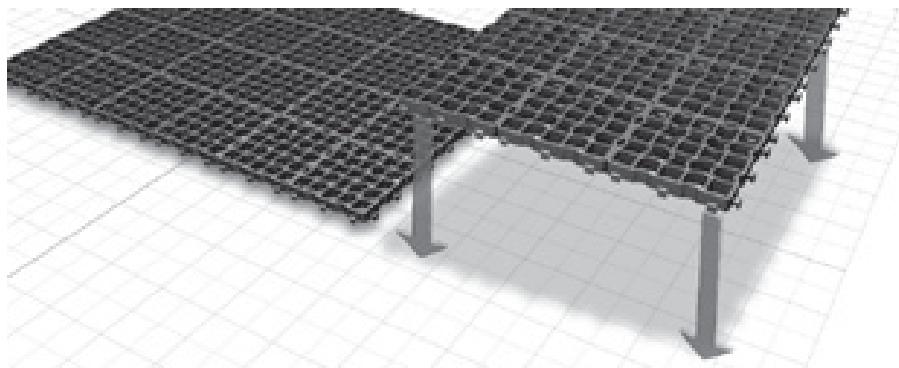
◀ Drainage stone layer
(see CBR and plate testing. Type 3 reduced fines, Type 2 low fines,
or 20mm clean stone, compacted fully)

◀ EcoGrid Securagrid (Optional for areas with low CBR)

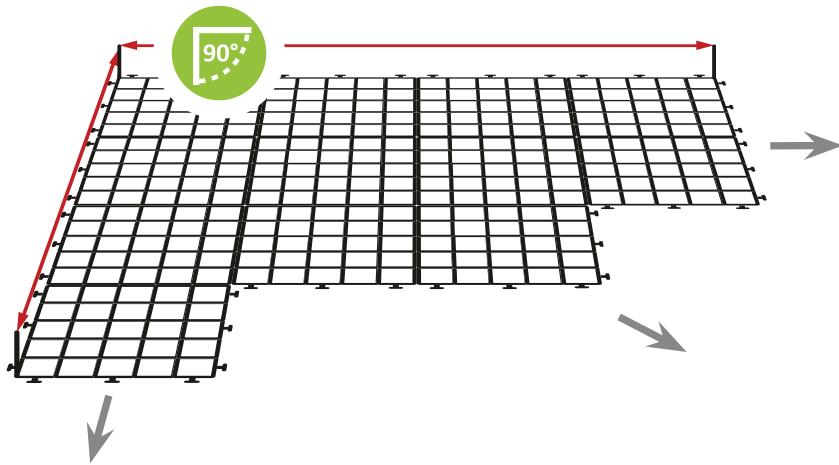
◀ Soil layer (Excavated 1-1.5% falls to a good drainage point)



EcoGrid Installation Guide



EcoGrid is both swift and easy to lay without the need for specialised machinery. The system is delivered in palletised form in layers of 12 grids or 1.33 sqm pre-locked together. These layers are taken off the pallet by one person, offered to the ground, the next layer simply snaps firmly in to place with foot pressure.



Laying

To lay the grids, start in one corner of a wall or building and work out to the ingress/egress point or set a string-line to ensure a 90-degree angle to the house or building. NEVER lay from two different directions as this will create problems ensuring the sections join correctly.

Disconnecting

The pre-connected sheets can be taken apart, if necessary, place a line of grids, piece of timber or screed rail under the male side of the grids and press firmly down on the female side. It may also be necessary to ensure the grids are kept close together to minimise the effect of the safely locking system.

Cutting to size

It is very easy to cut the grids. The ideal method is with an angle grinder which will cut at a walking pace. A circular saw or jig saw can also be used as can a hand saw although progeer would be slow.

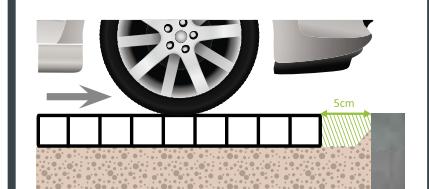
Accessories

Curves: The EcoGrid system can form any curve from shallow to a complete circle with the use of our unique curving accessory.

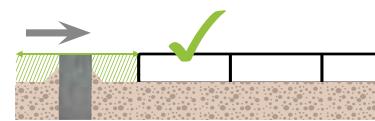
Angles: The EcoGrid angle section can take any surfacing from the horizontal to the vertical.

Markers: We have both raised and flay markers to delineate parking bays, disabled symbols etc.

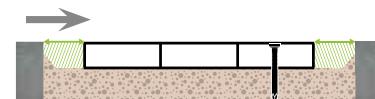
Edges: We have both plastic and Aluminium edges to form raised straight or curved edges.



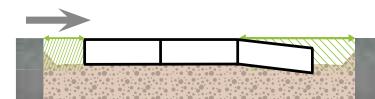
If there are kerb stones in-situ, ensure a gap of 5cm min is left for expansion.



The EcoGrid system should be laid level to surrounding kerbs, edges.



To avoid surface distortion at the edges caused by shear forces of vehicles, the EcoGrid system can be fixed with ground anchors.



As an alternative to J pins, you may also just press down the rear section of the grid.



EcoGrid CBR Guide (California bearing rate)

A CBR is a guide to the amount of sub-base you will require relative to ground conditions and the proposed traffic.

| Application loading | CBR strength of sub-grade soil | DoT sub-base thickness |
|--|--------------------------------|------------------------|
| Fire trucks, coaches and occasional HGV access | >6 | 100 |
| | =4<6 | 200 |
| | =2<4 | 190 |
| | =1<2 | 380 |
| Light vehicle access and overspill car parking | >6 | 100 |
| | =4>6 | 100 |
| | =2,4 | 135 |
| | =1<2 | 260 |

Field guidance for estimating sub-grade strengths

| Consistency | Indicator | | | Strength | |
|-------------|--|------------------------------|-------------------|----------|--------------|
| | Tackle (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 | 2 |
| Medium | Moulded by moderate finger pressure | Man walking sinks 25mm | 4-8 | 1-2 | 25-40 |
| Firm | Moulded by strong finger pressure | Utility trunk ruts 10-25mm | 8-15 | 2-4 | 40-75 |
| Stiff | Cannot be moulded but can be indented by thumb | Nil | 15-30 | 4-6 | 75-150 |



Stone

EcoGrid Things to bear in mind



If it is likely that heavy goods vehicles will be performing tight turns on an EcoGrid surface, it is advised that the grid system is over-filled by a minimum of 20mm to counteract a high degree of lateral loading. Speak to us for guidance on HGV turning areas.



Do not lay from different areas as this may cause the jointing pattern to be offset.
Do not fill the grids until the whole installation is complete. This can cause spreading and make successive jointing difficult.



Standard construction techniques with regard to expansion and contraction joints should always be observed. Ecogrid can expand substantially in hot weather conditions.



Care instructions a hand pulled rake can be used to keep areas tidy, for larger areas a mechanical sweeper can be used.

Still unsure..... No worries.

We have a technical team ready and able to answer any questions that you may have.
Give us a call 0151 639 4281 or email sales@ecogrid.co.uk



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