polycon
surface water drainage

LITE GRID

Service . Range . Knowledge

Welcome To **Polycon**

Polycon is identified as one of the leading manufacturers, distributors, and suppliers of channel drainage in the UK. We focus towards creating a diverse range of water solutions, in a variety of different materials, including composite, polymer concrete, SMC, and steel.

Polycon's unique look at the market and expert knowledge of the industry ensures that we can supply a wide range of high-quality products suitable for any application. This includes building drainage, landscaping, sports facilities, distribution centres, highways, and airports.

Our design team provides innovative and efficient hydraulic solutions to ensure we can offer the best product/ solution for your drainage needs. We have a vast and experienced overview of our working industry and have been manufacturing, distributing, and selling channel drainage for over 8 years. We thrive on acting upon your feedback to improve and develop our products to fit flawlessly with the constantly changing market and demand from our customers.

At Polycon we focus our attention on professionals who sit within the construction industry, targeting our products to specifiers, architects, engineers, and contractors. Therefore, we understand the importance of expanding our product portfolio to create the most efficient surface water drainage systems.

We are a dynamic and evolving company with a focus on quality, innovation, and service. As a result, you can rely on us to handle your project needs in every way to the best of our ability.

Service • Range • Knowledge

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LITE GRID

Polycon's Lite Grid is a revolutionary development in ground reinforcement. It offers a multitude of benefits that make it a highly attractive choice for a wide array of applications, including construction sites, green car parking areas, private lanes and access roads, golf courses, pathways, and drives, as well as green roofs and rooftop gardens.

Manufactured in the UK from 100% Recycled material which is diverted from landfills. The Lite Grid is the environmental and sustainable solution of choice to prevent ground erosion. The honeycomb pattern tiles provide an interlocking system that can be laid at ground surface level and then either filled with stone, or gravel or can be seeded.

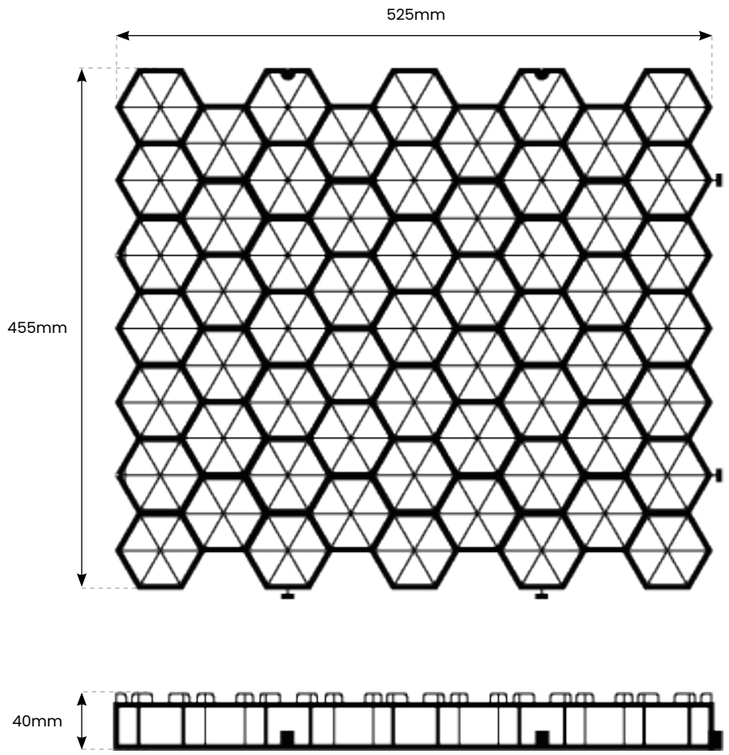
Applications

- Construction sites
- Green car parking areas
- Private lanes and access roads
- Pathways and drives
- Golf courses
- Landscapes
- Equestrian and livestock facilities
- Green roof and rooftop gardens
- River and road embankments
- Towpaths
- Embankment stabilisation
- Residential driveways
- Cycle routes
- Equestrian routes

LITE GRID

LITE GRID

Polycon's Lite Grid's versatility and numerous advantages, including easy installation, lightweight design, cost savings, durability, sustainability, and strength, make it a versatile and practical choice for a wide range of applications. It not only improves the efficiency and safety of various spaces but also contributes to sustainable and environmentally conscious practices across industries.



Lite Grid - Specifications

Reference	Description	Length	Width	Height	Weight	Load Class
LGC	Lite Grid Channel	525mm	455mm	40mm	1.65kg	A15/B125/C250/D400

Benefits

- Quick and easy to install
- Lightweight and easy to handle
- Surface reinforcement with natural drainage
- Reduced on-site costs
- Minimal maintenance
- Non-slip and crack-proof
- Weatherproof and environmentally friendly
- Frost and UV-resistant
- Dimensionally stable preventing gravel migration
- Sustainable choice for ground reinforcement
- High strength: tested to 22 t/m² unfilled, and up to 60 t/m² with sand/stone infill
- Axel weight 16 tonne
- Nonexpanding
- Low transport and handling costs Manufactured out of recycled plastic
- 100% recycled & recyclable

Specifications

Grid Dimensions	**455mm x 525mm x 40mm**
Wall thickness	**4mm**
Weight per panel	**1.65kg**
Weight per pallet	**482.79kg**
Tiles per m²	**4.18**
m² per pallet	**70m²**
Load capacity	**250kn/m² when filled**
Unfilled	**22.3 tonnes/ m² (based on SGS lab-tested compressive strength: 218.4kPa)**
Filled with sand/stone	**Estimated up to 60 tonnes/m² (tested to 586 kPa with sand)**
Axle Load Capacity	**Up to 12 tonnes (depending on infill and sub-base)**
Material	**100% recycled UV stable polyolefin**
Temperature stability	**-50°C to 90°C**
Chemical resistance	**Sodium chloride, ammonia, acid rain, petroleum products, hydrocarbons**

Installation Guide

The following instructions are intended as a guide only. In general, the same preparation procedures used for traditional paving solutions used in the construction of footpaths, driveways, and access routes should be adopted. These guidelines assume that a sub-base is to be used beneath the paving system. Engineering advice should be taken where necessary and any questions should be directed to Polycon's technical team by emailing us at **sales@polycon.co.uk** or by calling us on **0151 424 9747**.

1. The areas to be protected should be marked out and excavated to the following depths depending upon the final use. Remember to add the depth of the Lite Grid to the figure quoted if the Lite Grid is to finish to the surface.

PROJECT	TYPICAL DEPTH
Patios / Garden Paths	75mm - 100mm
Driveways / Public Footpaths	100mm - 150mm
Heavy Uses	150mm - 225mm
Highways	150mm +

Please note the use of Polycon Lite Grid profiles as the edging boards - further details upon request.

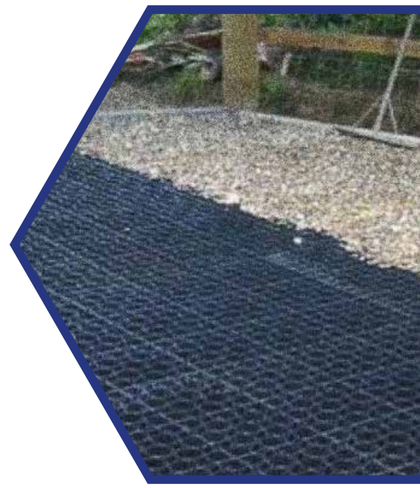
2. Once the full area is excavated the sub-base can be installed. Compact the full area to be as level as possible using either a vibrating plate or for larger areas a vibrating roller.

3. A thin 40mm layer of sharp sand/soil mix should be laid over the sub-base to level out any imperfections or hollows in the surface of the sub-base. If the area is to be grassed this mix will provide a suitable substrate for grass root survival and growth.

4. Once the area is level the Lite Grid can be interlocked and laid. The Lite Grid is delivered in pre-locked 1 square meter sections to aid installation however any that need to be cut should be measured and cut before installation where possible leaving full, complete cells along the outer edge.

5. The area can then be backfilled with the medium to be used. If using gravel we recommend the use of a 10mm or less as this will ensure better filling of the cells. If this area is to be grassed, we recommend using a 70/30 root zone mixture; this will prevent the hard compaction of the cells which could be associated with just using topsoil which would limit grass growth. Initially fill to about 10mm below the top surface of each grid as this will protect the grass in its initial growing phase. The whole area can then be seeded and watered.

6. An optional weed suppressant membrane can be used on top of the sub-base before applying the sharp sand as this will prevent weed growth but will allow for natural drainage of rain water the ground below.



**** Regular tight turning of vehicles and 'dry' steering may cause damage to the Lite Grid units and/or displace gravel infill; vehicle manoeuvring should be carefully considered at specification/design stage. Gravel filled units may require some maintenance when subjected to regular channelised and turning traffic loadings.****

This means:

- ***Tight or dry turning (turning the wheels while stationary) can damage the grid units.***
- ***Such actions can also displace the gravel infill, potentially leading to system degradation.***
- ***The design phase should account for this kind of stress.***
- ***Maintenance may be needed for areas under repeated turning stress.***

Contact Polycon prior to installation for technical assistance.

Polycon Surface Water Drainage

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