Turf reinforcement module for porous vehicular surfaces
WHY GRASSRINGS?

Grassrings is a 100% recycled injected moulded structural grid system used to stabilise and reinforce grass. This system will prevent compaction of the root zone resulting in a grass trafficable surface.

Studies show that compaction of the top 30mm of soil underneath grass must be prevented. If this layer becomes compacted, grass roots are unable to obtain necessary oxygen, moisture and nutrients from the soil causing the grass to suffocate and die. Grassrings will prevent this compaction.

BENEFITS

• Open grid provides over 90% root development area and 100% grass cover.
• Grid is flexible – will follow undulations.
• Manufactured from 100% recycled chemical resistant UV stabilised impact resistant polymer.
• Supplied in 500mm x 500mm or 1000mm x 1000mm clip together panels.
• Curves can be laid with minimum wastage as joints can be staggered and panels easily cut to follow borders.
• Grass roots can grow laterally between the rings without hindrance.
• The ring design is the strongest shape for grass paving in that it has no weak corners. Grassrings has been independently tested to sustain loads of 500 tonnes per square metre with no sign of failure.
• Can be supplied in custom size rolls for fast installation.
STORM WATER PERCOLATION

Grassrings systems retain the permeability of natural surfaces. The trafficable area installed does not increase run-off.

When Grassrings systems are installed over a base of clean angular gravel, the absorption rate will be higher than that of open fields.

SUSTAINABLE HIGHWAY DRAINAGE

A Grassrings lined swale will prevent erosion from water movement and mowing machines. Increased permeability will be achieved by reduced surface compaction levels. This will result in oily residues and organic matter being retained and broken down in the top layer of soil and vegetation.

Grassrings can be used for the strengthening of embankments and watercourses.

ENVIRONMENTAL BENEFITS

- Reduces the requirement for hard surfaces.
- Reduced storm water run off.
- Waterway contamination reduced by the pollutant removal capability of grass.
- Erosion control.
- 100% recycled plastic.
- Reduces reflective heat.

Use it in your sustainable urban drainage schemes (SUDS).
LARGE SCALE OVERFLOW PARKING
Grass parking areas for event parking (stadiums, arenas, exhibitions etc) have significant environmental benefits being an attractive green permeable surface.
Grassrings will provide a 100% grass surface.
As shown above, the Grassrings reinforced parking bays combined with a porous hard surface for the heavy wear areas, will provide the ultimate environmentally acceptable solution.
The Grassrings markers can be used to clearly define parking bays or provide ground signage.

CURB SHOULDER PARKING
Roadside verge parking whether in residential or industrial areas causes serious rutting and ongoing expense for local authorities.
Grassrings installations will solve these problems being a permanent green structural solution.
The visual impact and structural integrity of access roads to sites in environmentally sensitive areas is of all importance. Grass roads can be constructed which are suitable for very heavy vehicles and require minimal maintenance. They can be used to provide all weather access to windfarms, water treatment works and other remote service utilities.
PRE-SEEDING FERTILIZERS
A good quality pre-seed fertiliser is essential for the establishment of a healthy grass sward.

The GreenBlue pre-seed fertiliser has been thoroughly tested in Grassrings applications.

The mixture of 10% nitrogen, 15% phosphate and 10% potassium will provide for the germination and establishment of the grass plant within the structural Grassrings profile.

GRASS SEED
We strongly recommend the use of BAR 10 with RTF grass seed. This particular mixture is

- Deep rooting.
- Tolerant of waterlogging and drought.
- Shade tolerant.
- Provides excellent soil stabilisation for erosion control.
- Outstanding recovery after wear.

ROOT ZONE
A 70% sand and 30% recycled compost mix provides the optimal growing conditions for the grass and will retain the porosity required in the long term.

WATER STORING POLYMER
This easy to apply granular polymer will achieve significant improvements in the establishment of grass under conditions of moisture stress.

The base course design of a Grassrings installation is porous. This polymer will absorb water from the soil and will slowly release this moisture store which greatly assists newly seeded areas to overcome temporary drought.
GRASSRINGS INSTALLATION GUIDELINES

1. Remove soil to depth of base course (see ‘Base Course Depth Guide’ below) plus 50mm. Install a porous geotextile to base and sides of excavation to provide additional base course stability.

2. Add required depth of base course (clean angular load bearing stone without clay fines) and compact to engineer’s requirements. This levelled to be 40-50mm below final finish level.

3. Add and spread evenly a thin layer (20-30mm) of sand (rounded root zone sand with an even sized particle distribution) and wash/roll into base course. This sand is washed in to fill the gaps in the top 50mm of stone. The base course stone should still be visible after this process.

4. Spread evenly a layer of water storing polymer at a rate of 4kgs per 100m². This will help to retain and release moisture for the grass roots during the establishment period.

5. Lay Grassrings onto prepared base, ensuring the modules are securely interlocked. Grassrings joints can be staggered to avoid wastage on corners.

6. After laying Grassrings, cut around obstructions, trees, gates, curbing etc using cutting pliers or secateurs. If required, demarcation markers can be installed by firmly pressing them into the empty rings until clicked into position. Spread evenly a grass starting fertilizer (10-15-10 granular pre-seed) at a rate of 7kgs per 100m² over the empty rings.

7. Half fill (15mm approximately) Grassrings with a suitable root zone (70% sand and 30% composted material) of suitable growing pH (6.5-7.2).

8. Spread grass seed (product reference Bar 10 with RTF or Bar 30 with RTF if a limestone base course has been used) at a rate of 5kgs per 100m² over half filled rings.

9. Finish filling Grassrings with the specified root zone material. To fill Grassrings use a large broom to leave top of the rings just exposed. Root zone must not be above the top edge of Grassrings.

10. Seeded area should be fertilized again (10-15-10 granular pre-seed) at a rate of 7kgs per 100m². Thereafter the area should be kept moist and be protected from traffic for a period of 6-8 weeks or at least two mowings. The grass must not be cut shorter than 30mm.

NOTE

All spreading of polymer, fertilizer and grass seed should be carried out using a mechanical rotary spreader to ensure even cover at the specified rate.

Consideration should be given to potential additional watering requirements during extended periods of dry weather. This can be designed into your rain water management system.

These instructions are provided as a guide only and are made without warranty since the installation and conditions of use are beyond our control.

BASE COURSE DEPTH GUIDE

<table>
<thead>
<tr>
<th>Dimension A – traffic type</th>
<th>75mm – 100mm</th>
<th>100mm – 150mm</th>
<th>200mm – 300mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrians</td>
<td>Light vehicles</td>
<td>Trucks</td>
<td></td>
</tr>
</tbody>
</table>

GRASSRINGS INSTALLATION GUIDELINES
PRODUCT SPECIFICATION

Injection moulded panels 500mm x 500mm x 30mm high rings with robust positive snap fit connectors (six each side) for easy and fast site laying.

Colour: Black.
Rolls available: 500mm – 3000mm to custom sizes at extra cost.

GRASSRINGS DELIVERY

Grassrings supplied in 1000mm x 1000mm clip together panels. 100m² per pallet leads to reduced freight cost and reduced transport carbon emissions.