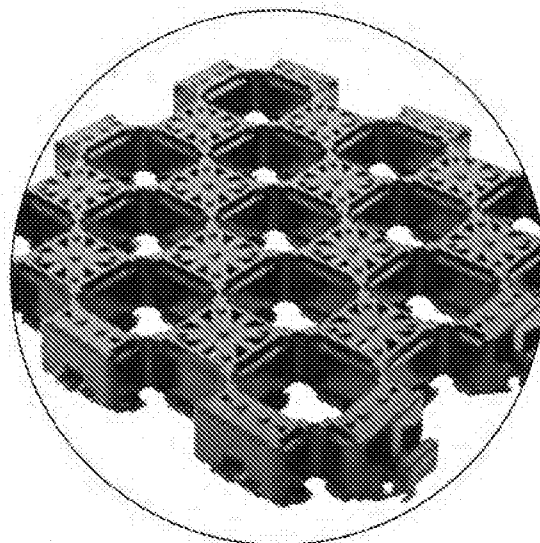


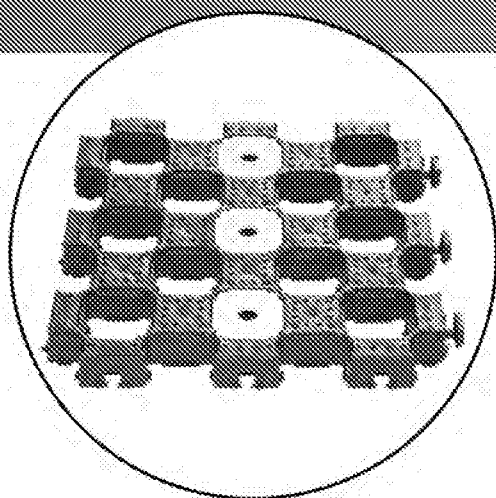
CellPave™ AP from Groundtrax is a 'no-dig' anchored ground reinforcement paving tile.

CellPave™ AP has a great deal of applications and may be used in many situations such as driveways, access tracks, vehicle parking, airfields, helipads, parks, caravan parks, farms, golf paths, grass verges, mobility paths and many more. Installing CellPave™ AP tiles is simple and easy. Using a vibratory roller CellPave™ AP can be placed in existing grass areas. If required, they can also be placed in soil and onto a prepared sub-base. Additionally, they can also be upturned and back-filled with sand, soil or gravel.



DESIGN

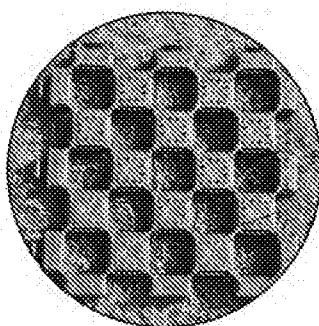
CellPave™ AP has a unique design which suppresses resurgence of mud from below. The openings ensure effective drainage. Ground anchors on the underside of the tiles ensure the best possible fixing, even in poor ground or under heavy loads. Over time, the integration with the ground also increases as the existing grass root intertwines with the tile structure.



CellPave™ AP with
snap-in markers

FEATURES

- Resistant to most aggressive substances
- Grass grows back through the tile, preserving the character of the environment
- Tiles allow water to pass through them
- Natural drainage maintained
- No splintering or risk of injury
- Planning permission not required for most applications
- No special tooling or skills required for installation
- Easy to install yourself in a very short time
- Tiles can usually be rolled into unprepared soft grass surface*
- Can be removed later, if required
- Low cost when compared to alternative options
- Normally requires no excavation, unlike most other grass reinforcement products
- Robust Clip System
- Simple 'snap-in' markers available



APPLICATIONS

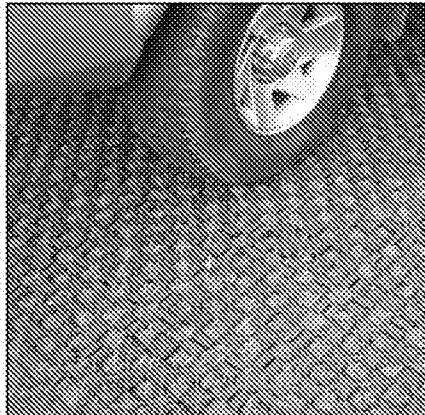
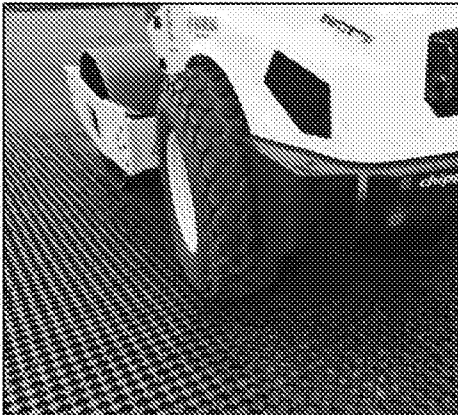
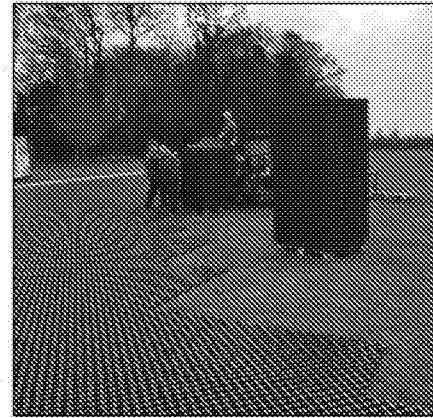
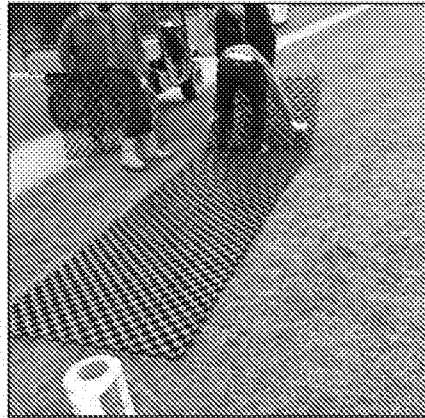
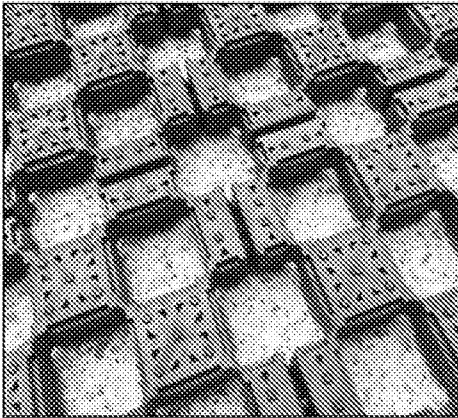
- Green parking areas
- Emergency vehicle access
- Temporary and permanent roadways
- Road protection
- Embankments
- Driveways
- Tree beds
- Golf walkways
- Caravan parking
- Ménages
- Hard standing storage areas

Data Sheets, Installation & Design Guidances
and Case Studies can be downloaded from www.groundtrax.com/downloads

CELLPAVE™ AP

ANCHORED GROUND REINFORCEMENT PAVER

GROUNDTRAX



MATERIAL:	Recycled PE/PP
TILE DIMENSIONS:	302mm x 302mm wide x 37mm (+/-2%) <i>*not including connecting lugs</i>
MAT SIZE:	1220mm x 920mm (4 x 3 tiles)
WEIGHT:	6.2kg per m ² (+/-2%) / 550grams per tile
NOMINAL CELL DIMENSIONS:	50mm x 50mm
CLOSED SURFACE AREA:	50% / Raised points for grip
CONNECTION METHOD:	Edge loops and tabs
CELL WALL THICKNESS:	5mm (+/-2%)
LOAD BEARING:	Up to 160t/m ² <i>*depending on ground conditions and preparation</i>
COLOUR:	Black
UV/FROST/OIL/SALT RESISTANT:	Yes
PALLET DIMENSIONS:	1220mm x 920mm x 2340mm / Contains 876 pavers / 73 layers (80m ²) / Total pallet weight 500kg



For more information, contact us
today or visit our website:

www.groundtrax.com

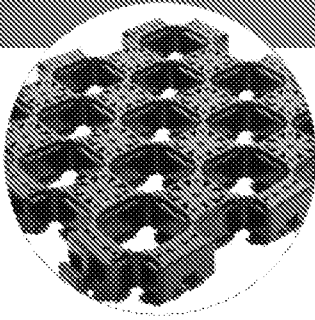
GROUNDTRAX

Ground Protection and Reinforcement

Telephone: 03456 800008 | Fax: 03456 800208

E-Mail: info@groundtrax.com | Website: www.groundtrax.com

CELLPAVE™ AP - Anchored Ground Reinforcement Paver INSTALLATION GUIDE



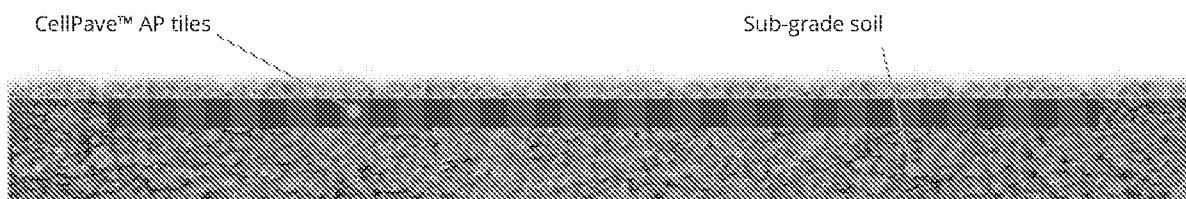
CellPave™ AP is a 'no-dig' anchored ground reinforcement paving tile.

There are two options for the installation of CellPave™ AP, depending on the application and existing ground conditions, which must be taken into consideration. In many cases it is possible to compact the CellPave™ AP tiles directly into grassed/soft ground.

Option 1: Installation onto an existing grass surface

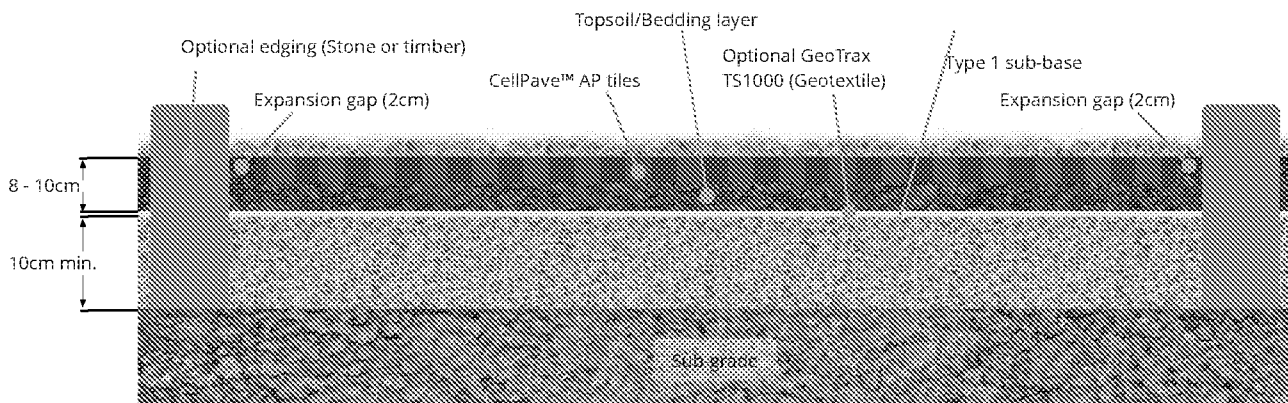
When CellPave™ AP is to be laid directly on the existing grass surface, the grass should be cut as short as possible beforehand. Small undulations can be levelled out using topsoil or a sand/soil mixture (20:80). The CellPave™ AP sections are laid out in position and clipped together using foot pressure row by row.

NOTE: Installation should only take place when the ground is soft enough to ensure the sections can be compacted into the surface easily and completely. Installing in either dry or very wet or muddy conditions should be avoided.



Option 2: Installation with ground preparation (eg. on a sub-base or with a drainage layer)

In cases of extreme water-logging, very soft or uneven ground, or where heavy loads and/or frequent traffic are expected, some drainage is advisable and some ground preparation or foundation may be required. The top turf can be removed and a sub-base between 10-40 cm deep (depending on intended use) prepared. This should be levelled and compacted. If necessary a levelling layer of sand approx. 2 cm deep can follow. Finally, a layer of topsoil or a sand/soil mixture (20:80) of approx. 8-10 cm lightly compacted depth is added (quality grass seed should be mixed in with the sand/topsoil). A membrane may be used between the bedding layer and sub-base.



CELLPAVE™ AP - Anchored Ground Reinforcement Paver INSTALLATION GUIDE

General Installation Instructions

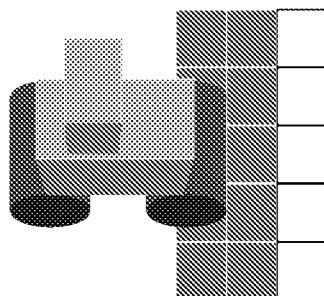
Row by row, the CellPave™ AP tiles are placed in position, joined together using foot pressure on the clips and compacted into the prepared area. On ground that has been disturbed or levelled we strongly recommend that some grass growth is established before installation of the matting as this provides for the best stability and grass coverage. 6-8 weeks growth, sometimes less, is generally sufficient. To save time on newly prepared areas, CellPave™ AP can also be compacted into recently laid turf.

Rolling/compacting CellPave™ AP sections into the ground

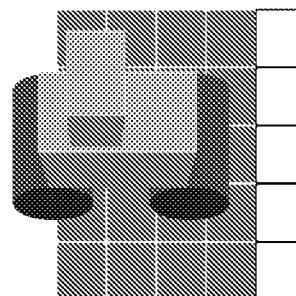
The ideal method to be used will depend on the prevailing ground conditions, size and shape of the area to be installed. A tandem vibrating roller (min. 3.5 - 5 tonnes or heavier) is the best option. On gravel or soft ground (eg. after levelling/grading), a heavy duty compactor plate (approx. 750 kg) can be used initially. Motorised tampers/rammers are ideal for smaller areas. The tiles can subsequently be rolled. The last row of mats should be left unrolled at the end of each pass, to which up to a further 1- 2 rows of CellPave™ AP can be attached (see diagram below). When rolling, it is important that not more than 3 rows of CellPave™ AP tiles are laid in front of the roller, otherwise sections may bunch up and form a wave when rolled, making the compaction process more difficult.

The individual CellPave™ AP elements are specially designed with expansion tabs to allow for expansion during hot temperatures. Therefore, care should be taken when rolling or compacting the CellPave™ AP sections into the ground to ensure the tiles are not pushed completely together and that a small gap between each element remains. The CellPave™ AP tiles should be rolled in slowly "with the grain" in a straight line. Turning or abrupt braking or changes of direction should be avoided initially. After each pass, the position of the roller should be offset sideways for the next pass, while maintaining the general heading.

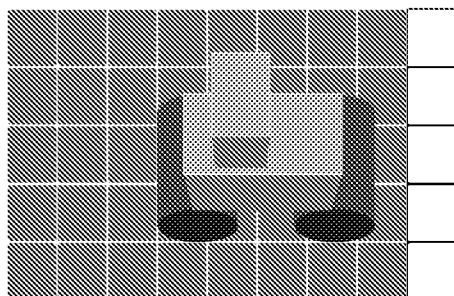
1: CellPave™ AP strip laid out 3 tiles deep and first two sections rolled in, leaving last row unrolled



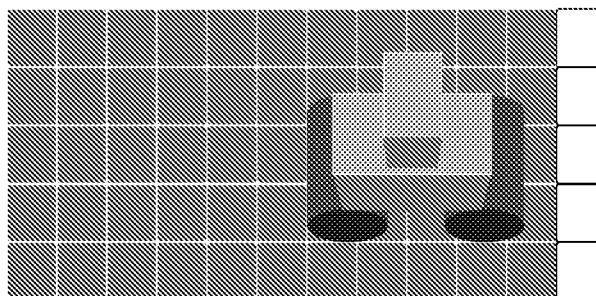
2: Maximum of two further rolls of CellPave™ AP tiles added and rolled in, leaving last row unrolled



3: Continue to add 1-2 rows at a time and roll in always leaving last row unrolled



4: Large areas are progressively built up and rolled in using this method



Rolled sections



Unrolled sections

CELLPAVE™ AP - Anchored Ground Reinforcement Paver

INSTALLATION GUIDE

The CellPave™ AP tiles must be completely compacted into the ground for correct installation and to provide the optimum load bearing capabilities. Insufficient compaction may subsequently lead to rutting and an uneven surface developing once the area is trafficked.

NOTE: If the tiles are not laid correctly or laid against immovable objects such as posts or curbs which could prevent expansion, this could result in small undulations forming during hot weather or extreme frosts. We therefore recommend that an expansion gap of approx. 2 cm should remain between the tiles and any immovable object rolling/compacting. If necessary the tiles should be cut to allow for this expansion gap.

Removing or reseating individual tiles

CellPave™ AP tiles are supplied pre-assembled into pallet sized mats. Individual tiles can be separated from neighbouring tiles (for example to achieve a specific width) by simply levering out the clips from above with a medium-sized flat screwdriver (see photo). Tiles so removed can then be re-attached in another position if required. Angles or curves can be achieved by progressively offsetting rows of tiles by one interlocking clip at a time. To meet exact width requirements or if irregular shapes or edges are required that cannot be achieved by offsetting the connecting clips, CellPave™ AP tiles can be easily cut using a saw, angle grinder or disc cutter.

Maintenance after installation

In the first few weeks after installation, the CellPave™ AP should be checked regularly to see that they remain flat and fully embedded in the surface, especially where there is little grass, after a ground frost or very hot temperatures. If there has been some initial movement the area can be rolled or compacted again. Once sufficient grass has grown back through the tiles, this will further strengthen the bond between the CellPave™ AP matting and the ground which should prevent further undulations or movement occurring and provide the best stability and load bearing capabilities. Subsequently it is good practice to roll the reinforced area at intervals (eg. annually) to correct any slight unevenness and ensure the ground remains well compacted. Grassed areas reinforced with CellPave™ AP can be mown as previously with standard mowing equipment. If the grass cuttings are not collected, they will build up on the surface over time. In some cases, after a period of time which can vary depending on use and ground conditions, a layer of soil and vegetable matter may gradually build up on top of the CellPave™ AP tiles. If this becomes excessive it can be removed from small areas by scraping off manually, or mechanically from larger areas using agricultural yard scrapers, turf cutters or similar machinery. We can provide additional information on the various methods which can be used. In areas with poor drainage that are heavily trafficked when waterlogged, it is possible that some areas may become undermined over time with low spots forming. This may encourage further pooling of water and an increase in the problem if not dealt with. In such cases, bark chips can initially be used to absorb excess moisture and reduce mud. For a long term and effective solution the CellPave™ AP tiles in the affected area should be temporarily removed and the low spots filled with compacted gravel and a mixture of new, well draining soil/sand before replacing the tiles. In extreme cases, additional drainage should be considered.

Disclaimer:

As ground conditions, installation procedures and intended use of the CellPave™ AP varies from site to site, we cannot accept any guarantee for suitability of the system for a specific application. For this reason we also cannot accept any liability resulting from use of the CellPave™ AP system. We recommend that adequate trials are undertaken by the customer, to ascertain the product's suitability for the particular application in question.



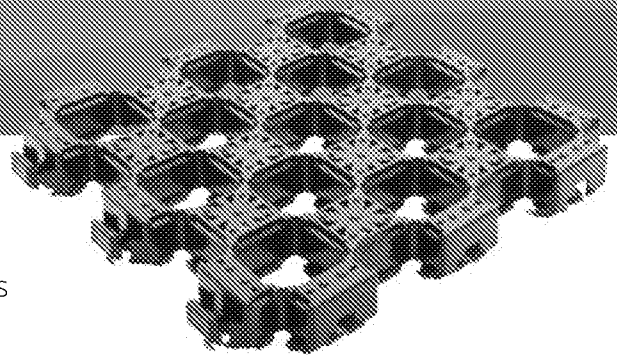
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CELLPAVE™ AP - Anchored Ground Reinforcement Paver

CASE STUDY



CLIENT: **SURF BAY HOLIDAY PARK**
LOCATION: **BIDEFORD, DEVON**
CONTRACTOR: **SELF INSTALLATION**

INTRODUCTION

CellPave AP™ from Groundtrax is a 'no-dig' anchored ground reinforcement paving tile. Installing CellPave™ AP is quick and easy. Using a vibratory roller CellPave™ AP can be simply rolled into existing grass areas. If required, they can also be placed in soil and onto a prepared sub-base. Additionally, they can also be inverted and back-filled with gravel.

ISSUE

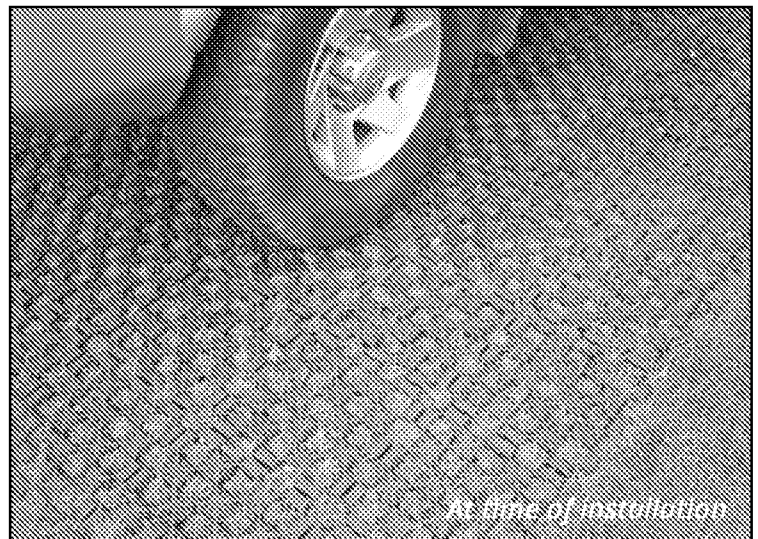
Situated in Westward Ho!, Surf Bay Holiday Park offers self-catering static caravans & apartments of 4* standard. Grassed areas between the caravans get a lot of use and are often subject to rutting in poor weather. Surf Bay needed a solution that was not only quick and easy to install, but also offered protection along with providing grip for cars and 4x4s. Installing a sub-base for each installation was not an option due to the number of areas and the high cost involved in doing so. It was important that grass was able to grow through the product and over time, be hidden so as to keep the appearance of a grassed area.

SOLUTION

CellPave™ AP was chosen for its robust and hardwearing design and the fact that as it was being installed on free-draining ground - no sub-base was required, consideration was also given to the fact that CellPave™ AP is SuDS compliant. CellPave™ AP pavers have been designed to be installed with both gravel and grassed infills. A number of areas across the park were protected with CellPave™ AP and the surfaces were able to be trafficked immediately.

Following the installation, Nigel Angrave, Director commented:

"As the owner of a number of Holiday Parks in the South of England, we were looking for an alternative to hard standing areas and CellPave AP fitted bill. We have been so pleased with the product so far and as such, have placed an additional four orders. It is now installed across many areas and the ground is looking well established and the product is working very well. We will be using Cellpave AP in other areas and on our other parks too."



At time of installation



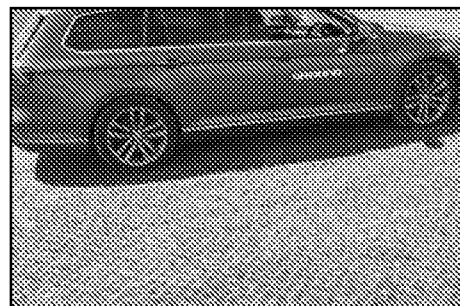
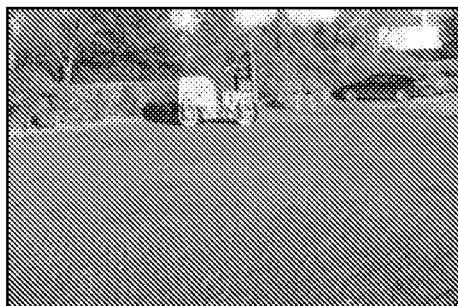
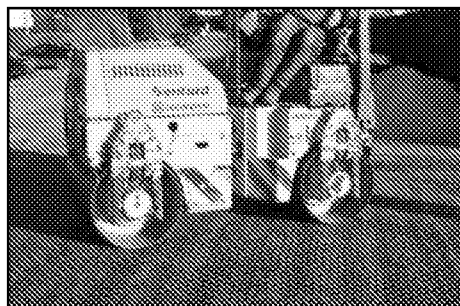
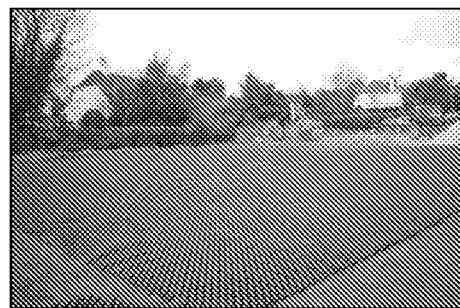
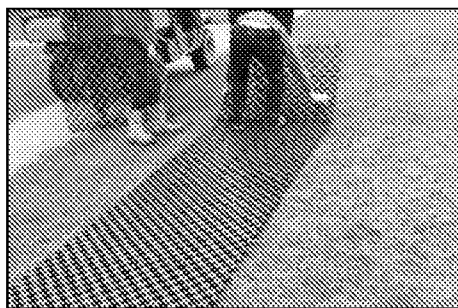
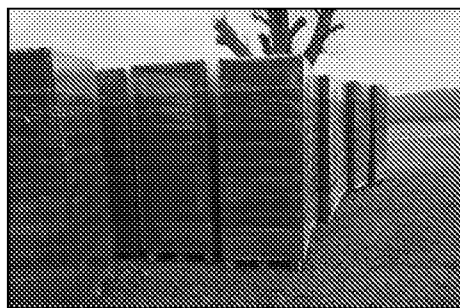
After two weeks

CELLPAVE™ AP - Anchored Ground Reinforcement Paver

CASE STUDY

BENEFITS

- 1 Ready for use immediately
- 2 Easily installed with a vibratory roller
- 3 Green appearance maintained
- 4 Much lower overall cost as no sub-base is required
- 5 More than doubles the load bearing capacity of the existing grassed areas
- 6 Grip profile for additional grip
- 7 Large quantities immediately available from stock
- 8 Planning permission not usually required
- 9 No special tools required for the installation
- 10 Does not sink into the ground in wet conditions



PRODUCT SPECIFICATIONS

- **Dimensions:** 302mm x 302mm x 37mm (+/- 2%)
- **Nominal Weight:** 550g per paver (6.6kg/m²)
- **Nominal Cell Dimensions:** 50mm x 50mm
- **Cell Wall Thickness:** 5mm (+/- 2%)
- **Material:** Recycled PE/PP
- **Colour:** Black
- **Closed Surface Area:** 50% / Raised points for grip
- **Connection Method:** Edge loops and tabs
- **Load Bearing:** Up to 160t (depending on underlying ground)
- **Assembled Size on Pallet:** 1220mm x 920mm (4x3 tiles)
- **Pallet Quantity:** 80m² / 876 tiles
- **Pallet Weight:** 500kg
- **Pallet Dimensions:** 1220mm x 920mm x 2340mm



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