



CellWeb TRP®



Tree Root Protection Guaranteed



Geosynthetic

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CellWeb TRP® System

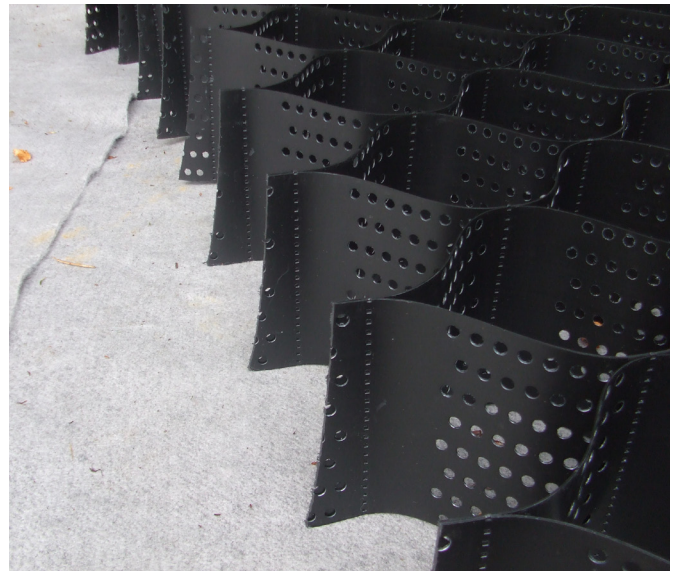
Tree Root Protection System



The Consequences Of Tree Root Damage During Construction

It is an offence to cut down, lop, uproot, top, wilfully damage or destroy a protected tree without authorisation. Trees can be protected under the Town and Country Planning Act 1990 and the Town and Country Planning (Trees) Regulations 1999. Trees are protected when they are the subject of Tree Preservation Orders (T.P.O) or within Conservation Areas, subject to certain exemptions. Retention and protection of trees on development sites is also secured through the use of planning conditions.

On a construction site all trees with a Tree Preservation Orders need to be managed in accordance with BS5837 2005 (Trees in relation to construction); failure to comply with these orders can be a costly affair as many parties have discovered.



Fishponds, Ketton

There are two offences which apply equally to trees protected by Tree Preservation Orders and those within Conservation Areas:

- Firstly, anyone who cuts down, uproots or wilfully destroys a tree, or who lops, tops or wilfully damages it in a way that is likely to destroy it is liable, if convicted in the Magistrates Court, to pay a fine of up to £20,000. If the person is committed for trial in the Crown Court, they are liable on conviction to an unlimited fine. The Courts have held that it is not necessary for a tree to be obliterated for it to be “destroyed” for the purposes of the legislation. It is sufficient for the tree to have been rendered useless as an amenity.
- Secondly, anyone who carries out works on a tree that are not likely to destroy it is liable, if convicted in the Magistrates Court, to a fine of up to £2,500. In addition to directly carrying out unauthorised works on protected trees, it is an offence to cause or permit such works.

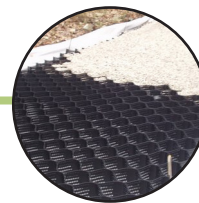
Developers and building contractors are often completely unaware that ‘compaction of soils within the Root Protection Area (RPA)’ constitutes wilful damage to the tree. When vehicular or pedestrian access within the RPA is necessary, either for the construction operation or final site access, the effects of this activity must be addressed and the ground must be protected. When tracked or wheeled traffic movements are involved, the ground protection system should be designed by an engineer and take into account the loading involved.



Shelton Road, Shrewsbury

The Solution:

Geosynthetics CellWeb TRP® System



The Solution According to BS 5837:2012

“Appropriate sub-base options for new hard surfacing include three-dimensional cellular confinement systems

(BS 5837 2012 section 7.4.2 Note 1)

The CellWeb TRP® Solution

CellWeb TRP® is the market leader in the United Kingdom and Ireland for tree root protection. CellWeb TRP® cellular confinement system protects tree roots from the damaging effects of compaction and desiccation, while creating a stable, load bearing surface for vehicular traffic. CellWeb TRP® complies with BS 5837:2005 and APN 1. It provides a no-dig solution, is tried and tested having been used successfully since 1998. It is the only tree root protection system which has been independently tested and it is the only tree root protection system which is guaranteed for 20 years. See page 6 for the full terms and conditions of the guarantee.



Fishponds, Ketton

Field Trials

Geosynthetics Limited are the only company in the UK and Ireland to carry out live, completely independent field tests on the performance of a 3 dimensional cellular confinement system when used in a no-dig tree root protection system application. The results prove that CellWeb TRP® significantly reduces the compaction of sub-soils within the root growth limiting parameters established by K D Coder, 'Soil damage from compaction'. University of Georgia. July 2000. A copy of the report is available upon request.

CellWeb TRP® Product Guarantee

Geosynthetics Limited prides itself on a providing a reliable, consistent service; including technical advice, on site support and installation guidance. Geosynthetics Limited provides a 20 year guarantee for the CellWeb TRP® tree root protection system. This guarantee gives the client, the tree officer and arboricultural consultant the confidence that the designed system will perform as intended without damaging the health of the tree.

See page 6 for the full terms and conditions of the guarantee.

CellWeb TRP® System

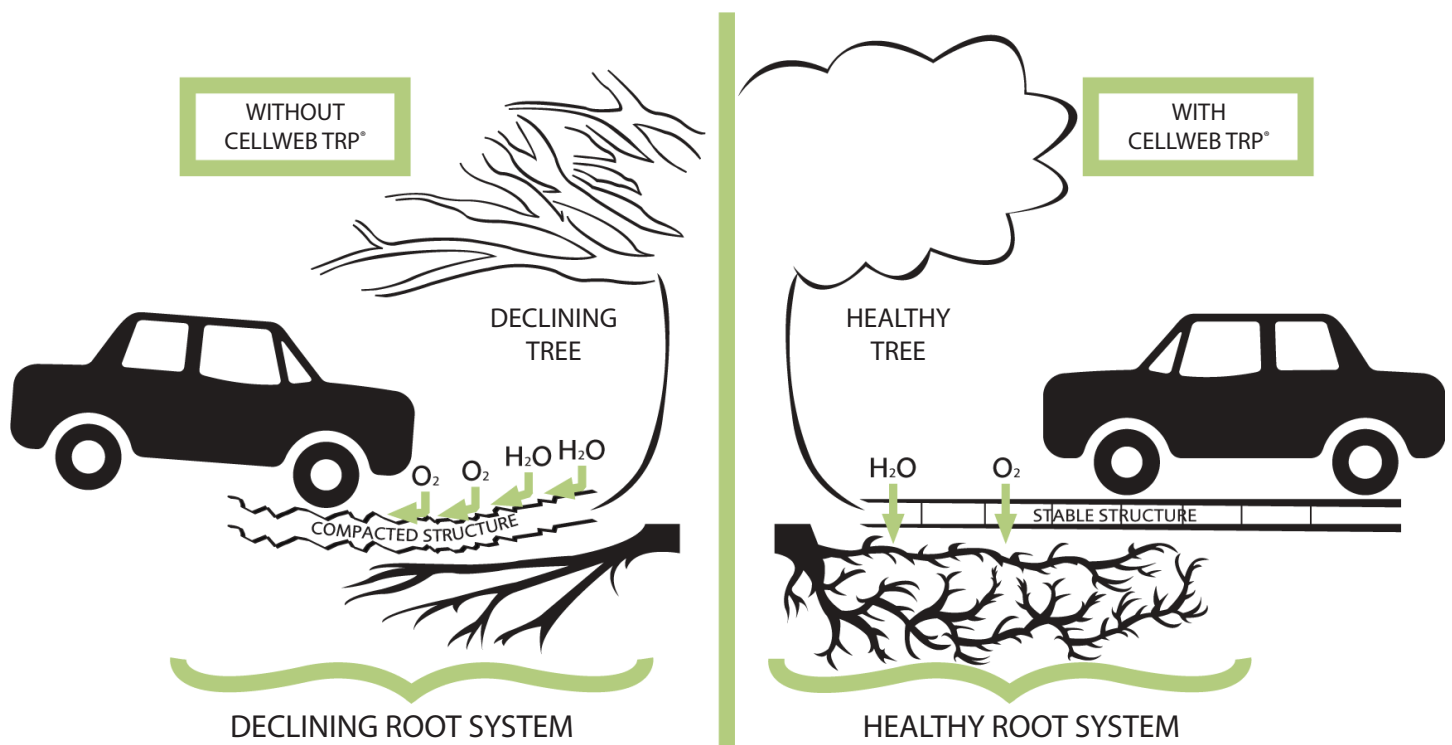
How the System Works



How CellWeb TRP® Works

CellWeb TRP® is a cellular confinement system that confines aggregate materials and makes them stronger, thus increasing the bearing capacity of the sub base materials. Research shows that CellWeb TRP® acts as a stiff raft to distribute wheel loads and reduce their magnitude at the base of the construction, thus maintaining the soil bulk density at levels that are suitable for tree root growth.

CellWeb TRP® is used around the world to provide cost effective hard surface construction over tree roots and is the system of choice for Tree Officers and Arboriculturists. For more information on this subject see CellWeb TRP® Fact Sheet No 1.



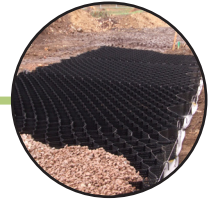
Water and Oxygen Transfer Through the CellWeb TRP® System

The CellWeb TRP® system is constructed using open aggregate infill and CellWeb TRP® has perforated cell walls. The pore spaces between the aggregate particles are greater than 0.1mm in diameter. This open structure is far more permeable than typical soils and allows the free movement of water and oxygen so that supplies to trees are maintained.

For more information on this subject see CellWeb TRP® Fact Sheet No 2.

CellWeb TRP® and Pollution

How CellWeb TRP® Deals With Catastrophic Oil Spills



How CellWeb TRP® Deals With Pollution

Where possible a permeable pavement system should always be constructed above the CellWeb TRP® system. The effective removal of pollution from runoff by permeable pavements is well known. Worldwide research has shown runoff that has passed through permeable pavements has low concentrations of pollutants.

Small spills of oil will be dealt with within the joints between the paving blocks and in the aggregate used within the system. However, large catastrophic spills are a different matter.

For more information on this subject see CellWeb TRP® Fact Sheet No 3.



Castle Gardens



Ambleside Lake District



Harcourt Aboretum

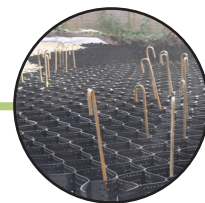
The Treetex® geotextile used in the CellWeb TRP® system has two functions. Treetex® separates the sub base aggregates from the soil beneath and it traps oil within its structure and allows it to degrade aerobically within the pavement construction. The structure, thickness and weight of Treetex® creates the perfect environment for this to happen. Most importantly tests prove that Treetex® will absorb 1.7 litres of oil per square metre, this is 4 times more effective than standard geotextiles.

Treetex® is an intrinsic part of the CellWeb TRP® system; and must be in conjunction with the CellWeb TRP® in order to guarantee the success of the system.

Please see page 6 for full details of the guarantee.

Geosynthetics CellWeb TRP® System:

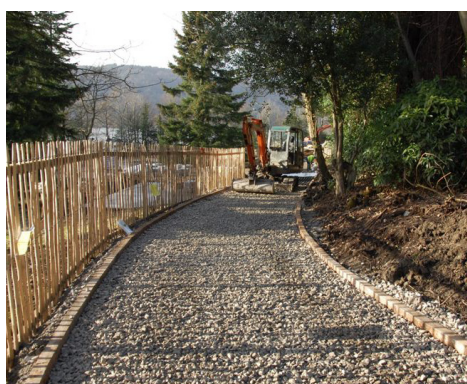
A Proven No Dig Solution



Advice, Design and Product Selection

Geosynthetics Limited has been supplying the CellWeb TRP® system since 1998 and has vast experience in its application. No two contracts are the same and we understand the factors that need to be taken into account to specify the correct CellWeb TRP® product.

We provide a free consultation, design and advisory service to find the solution that is most cost effective and beneficial for your site. Our service includes product selection, engineering calculations, CAD drawings and full instructions to help you from project conception to completion.



*Fallbarrow Park, Windermere:
Prior to CellWeb TRP® Installation*



*Fallbarrow Park, Windermere:
CellWeb TRP® Installation*



*Fallbarrow Park, Windermere:
Completed CellWeb TRP® Installation*

Final Surfacing

The benefits of the CellWeb TRP® system can only be maintained if a suitably porous final surface is selected. An ideal surfacing is the Golpla grass reinforcement and gravel retention system, a visually attractive surface that has the advantage of being fully porous. Alternatives include block paviors, porous asphalts and loose or bonded gravel.

Always Use CellWeb TRP®

The CellWeb TRP® system is the only research backed system of its kind in the UK with a 100% success rate. CellWeb TRP® has been specifically developed for the Tree Root Protection market. The system is supported by 15 years of data and thousands of installations making it the system of choice for the majority of Tree Officers and Arboriculturists in the UK.

CellWeb TRP® is uniquely identifiable. It is manufactured with a bright green panel on each side. When installed the green panels are laid adjacent, creating a green band across the construction.



Woodcock Hall, Yorkshire

CellWeb TRP® Product Guarantee



We hereby guarantee CellWeb TRP® against the death of any tree caused by a failure of CellWeb TRP® which its installation was intended to protect for a period of 20 years starting from the date of this guarantee.

Conditions of Guarantee

1. The details set out below must be correct in all respects.
2. We can only guarantee CellWeb TRP® where its installation has been carried out to high standards. Therefore our guarantee will only be applicable where:
 - (a) we have provided the designs in relation to the installation,
 - (b) the installation has been carried out by suitably proficient contractors,
 - (c) the installation has been carried out strictly in accordance with the installation specification/method statement available at the time of the installation,
 - (d) CellWeb TRP® has been incorporated into the installation above (and where specified as necessary, below) a Treetex® T300 Geotextile (or such updated replacement product as we may recommend), and
 - (e) the installation has been carried out using pins and panel staplers purchased from us or using similar products which are of the same or a higher quality.
3. If you experience any problems with the installation, you must tell us immediately. You must allow us onto the site at all reasonable times so that we can inspect the site and the installation to determine whether the CellWeb TRP® has failed.
4. As we need to determine whether the CellWeb TRP® has failed or whether the tree has been killed or damaged by another cause, you must not allow anyone else to examine the installation before we have the opportunity to inspect it as damage could be caused to the installation by any other inspection. If you do let third parties onto the site or you or your agents interfere with the installation this guarantee will lapse.
5. Your use of the surface and the traffic flow over the installation must be (and at all times have been) in accordance with the information provided to us at the time of the design of the installation. We can only provide designs based on the information you give to us and will have recommended the relevant CellWeb TRP® product according to that information.
6. This guarantee is for the benefit of the landowner of the site from time to time provided that you give us notice of the new owner on any transfer of ownership. We suggest you provide a copy of this guarantee to your solicitor when transferring the property.
7. Where a tree which was intended to be protected by the installation dies and we conclude that this was caused by a failure of CellWeb TRP® then we shall:
 - replace the dead tree with a tree as close to the dead tree (as available generally in the marketplace) as possible subject to a maximum replacement cost of £10,000; and
 - replace the CellWeb TRP® which has failed (but not any other part of the installation where the CellWeb TRP® has not failed) subject to a maximum replacement cost of £50,000.
8. Our total liability to you under the terms of this guarantee shall be limited to our obligations set out above and our liability to you for any other losses you may suffer is excluded to the fullest extent permitted by law. For the avoidance of doubt, we shall have no liability to you whatsoever for any damage to trees or a CellWeb TRP® installation caused by anything reasonably beyond our control, including for instance pollution.

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