

## Introduction

Trees are a valuable natural resource that are critical in maintaining the ecosystems we all rely on, but are increasingly under threat from urban development. Trees can be damaged by construction activities, most frequently when the tree root systems are compacted, contaminated by waste, or deprived of oxygen and water. For these reasons it is very important to protect tree root zones during construction activities.

## Tree Root Protection Guidance

The principles of tree root protection are set out in BS 5837:2012 Trees on construction sites, and Arboricultural Practice Note 12 (APN 12) "Through the trees to development" published by the Arboricultural Advisory and Information service. These documents recommend that no excavation is undertaken over the area of the tree's root ball, and suggests that a cellular confinement system is used to retain a no-fines sub-base material and distribute load to the ground beneath. This system will allow rainfall and oxygen to infiltrate to, and harmful gases to escape from, the underlying soil. As a minimum, it recommends that a geotextile separator is placed beneath the geocell and sub-base; where additional reinforcement is required on weak ground a geogrid may additionally be required.

## ABG Solution

ABG **Abweb TRP** is a geocellular confinement system comprising a honeycomb structure of polymer (HDPE) strips securely bonded at the joints by ultrasonic welding. It is folded flat for transport and expanded on site. When expanded the cells measure 150 or 200 mm deep and approximately 200 to 300 mm diameter. The honeycomb walls of Abweb TRP can be solid (Abweb GW) or perforated (Abweb GWX).

ABG **Abweb TRP** is fully compliant with BS 5837:2012 Section 7.4.2 Note 1 and accomplishes the following objectives:

- Offers a no-dig solution with no mechanical damage to the existing tree roots
- Provides a stable running surface for the required road and vehicle loadings
- Delivers significant reduction in the loads transferred from above to the tree roots
- Prevents harmful compaction of the soils in the root protection area
- Provides a porous, flexible structure to protect the tree's essential supply of water and oxygen
- Eliminates the risk of a potential fine for causing damage to or demise of a tree subject to a Tree Preservation Order
- CE marked product with long term performance for 120 years



ABG recommends the use of a geotextile separator such as **Terrex SNW40** beneath the **Abweb TRP**, as a minimum, over consistent and reasonably firm ground. The added benefit of **Terrex SNW40** is that it provides a water treatment function that complies with the requirements and best practices of The SuDS Manual to filter pollutants such as vehicle oil spill ages etc. Where the ground is soft or offers variable levels of support, a geogrid such as **Abgrid 30/30** should be placed upon the geotextile. ABG will be pleased to provide site-specific advice on request.