Tree Root Protection

Woodland Access, Abweb TRP, Center Parcs, Woburn, UK

Project Information

Client	Center Parcs
Contractor	Birse Construction / ABG Installs
Product	Abweb TRP
Quantity	4,700m²
Benefits	• No dig, no compaction solution • Allows close vehicular movements to trees less tree removal • Porous open surface feeding roots with water, oxygen and nutrients • Savings on subbase depth • Fast and easy construction

Project Description

The Center Parcs Woburn is the fifth village development of the holiday chain in the UK and represents a major investment by the firm. Following completion of all the requirements of the planning consent construction began early in 2012 for a target opening date of spring 2014. The requirements of the planning consent included building a new roundabout, the diversion of public rights of way and the creation of new bridleways and cycle paths around the development complex. Many of these bridleways and cycle paths were through mixed forest comprising mature and semi-mature deciduous trees intermixed with some blocks of coniferous plantations in which the holiday village was to be constructed.

The Challenge

Whilst the planning authorities requested that these infrastructure works were undertaken they also insisted that they used a method sympathetic to the environment and ideally using no-dig construction methods that would not damage the roots of the trees through which the access roads and bridleways were to be constructed.

The Solution

The ABG Abweb TRP geocell structure solution was adopted, within the road construction, supported by Aboriculture Practice Note 12 (APN12). As such the Abweb solution is widely accepted by Tree Protection Officers for this application. The three-dimensional cellular structure when filled, mitigates the

ABG Abweb TRP

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vertical load pressure on the sub-soils containing the tree roots, thus preventing damage through compaction and root starvation. Surface vegetation is removed and the ground is carefully levelled so as not to damage the underlying tree roots making sure they are just covered. A layer of ABG Terrex nonwoven geotextile separator is placed to prevent upward migration of fine particles allowing the granular fill material to remain porous. The Abweb TRP is then expanded to the specified road width and pinned using steel pins forming diamonds shaped pockets which are then filled with the granular material. The cells act as a permanent formwork to the road surface in this no dig solution. Water, air and nutrients can flow into the underlying soil allowing the tree roots to flourish whilst being protected from vehicular loading.

The cellular structure reinforces the granular fill reducing the need for subbase saving up to 50% of fill material over a non-reinforced solution.

The ABG Service

ABG's technical department were able to give advice on the correct size and or Abweb required for the given loading and soil conditions. Assistance with installation was given.

Simple and fast "no-dig" installtion. Expand Abweb TRP to form cells, pin into place and fill and with porous granular material allowing air and water to reach tree roots. Abweb acts as a platform for vehicles protecting the roots from wheel damage

Rutting caused by traffic before the Abweb is placed

Can be trafficked immediately protecting the tree roots

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