

ROOT PROTECTION AND WALKWAY TRIALS DEPARTMENT OF CONSERVATION - BAY OF ISLANDS

GEOWEB CELLULAR CONFINEMENT SYSTEM FOR WALKWAYS

Product: Geoweb

It is common for visitors to our National Parks and conservation areas to want to get close to Kauri trees, but the tree's sensitive surface rooting system is happier living under deep, undisturbed mulch rather than coping with the stress of hundreds of tramping feet trying to get up close.

Department of Conservation was looking for solutions to protect Kauri tree roots and prevent the spread of the phytophthora that attacks Kauri, where spores are spread by roots and water through damage to vulnerable roots. Geoweb cellular confinement system for permeable pavements was one of the products trialled for this application. Geoweb is a cost effective alternative to hard surface pavements and at the same time offers the advantage of providing an unrestricted movement of water from the surface through the infill material to the root system below. By confining the infill, the system improves load distribution thereby reducing stresses on the foundation soil and root system and reduces long-term maintenance requirements and associated costs.

The 150mm deep Geoweb was placed on top of the existing track surface and was filled with GAP50 and bark nuggets. With this trial, bent rebar was used to pin the Geoweb. However, ATRA clips and 400mm Geoweb pins form the ATRA Anchor system which maintains the alignment and level of the Geoweb system during the filling operation as well as improving long term resistance to sliding and uplift. A surface layer of GAP20 and 10% clay was lightly compacted to create a walking surface.

Geoweb is very versatile and can be cut, stretched and shaped to match the path or pavement geometric layout. Geoweb is also available in a range of panel depths with 100mm and 150mm the most commonly used for load bearing applications.

Geoweb is well suited for handling and transportation as it is supplied in collapsed form that can easily be expanded once out on site. The light weight of each panel, flexibility in handling and ease of transporting makes it an ideal product for sites where access is difficult and where the use of construction equipment is limited. The trials are ongoing and results for root penetration and water movements will be monitored and recorded in future case studies.

Client / Contractors name:

DEPARTMENT OF CONSERVATION – BAY OF ISLANDS

Products used:

GEOWEB GW30 150MM PANELS, ATRA ANCHORS,
400MM GEOWEB PINS

Construction date:

COMPLETED AUGUST 2009



Expansion of Geoweb sections



Placement of combination of GAP50 and bark



Geoweb melds with the undisturbed track

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