

Cellweb® TRP

Woodside Cottages, Eversley Cross, Hook



Location:

Woodside Cottages
Eversley Cross
Eversley Hook, Hampshire
RG27 0NP

Client:

Daniels & Associates

Contractor & Installer:

DPL Carpentry

Consultant / Engineer:

Robert J. Moxon

Merchant:

Travis Perkins Trading Co Ltd -
Finchamstead

Hart District Council had approved planning for the erection of two semi-detached houses on land to the north of Reading Road in Eversley which would later be known as 'Woodside Cottages'.

Daniels & Associates contacted Geosynthetics Ltd for some advice in regards to the access road and car park. The two main problems were the fact that the land was low lying and tended to flood but this was further complicated by the several mature trees on the site with large tree protection areas (TPA's) which encroached in both the access road and car park.

Soakaways weren't an option on site so they were also required to allow for connecting all the downpipes and surface water drainage to the public surface water sewer on the

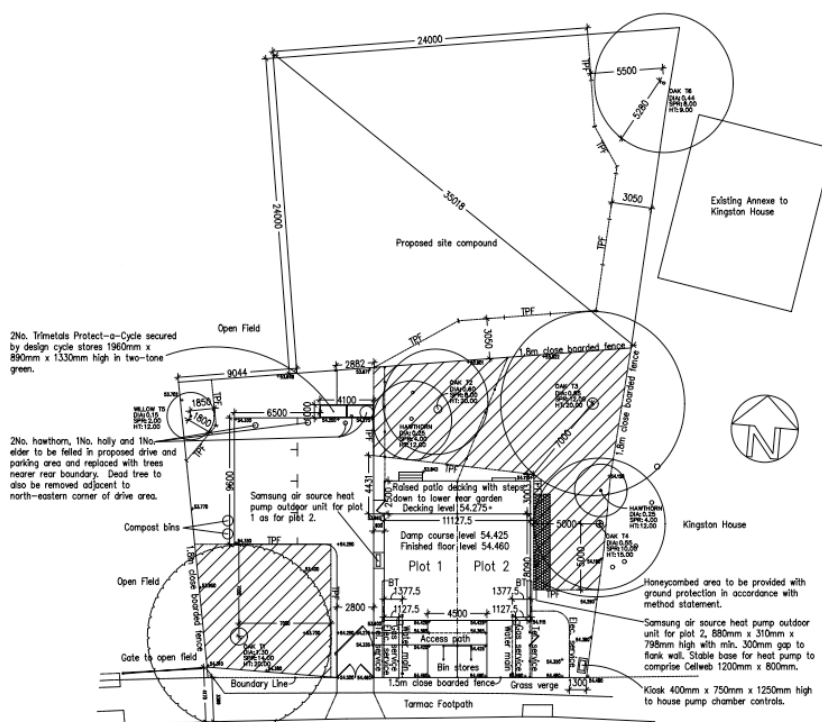


Figure 1 – Plan view: Site and Tree Root Protection areas

Our engineering team reviewed all the information provided by the consultant and following calculations they produced multiple site-specific cross-sections for a solution utilising Cellweb® TRP. Cellweb® is the only cellular confinement system specifically designed and independently test for tree root protection applications. The unique cell size, cell depth and cell wall perforations combine to the strength of Cellweb® TRP to create the market leading tree root protection system. The loads placed upon it, once infilled with a clean angular stone, are laterally dissipated rather than transferred to the soil, protecting the roots below. This enables free movement of water and oxygen, ensuring that nutrient supplies to the tree roots are maintained.



Geosynthetics
Engineered Solutions

Fleming Road
Harrowbrook Industrial Estate
Hinckley
LE10 3DU

Tel. 01455 617 139
sales@geosyn.co.uk
www.geosyn.co.uk

Case Study

Cellweb® TRP

Woodside Cottages, Eversley Cross, Hook



The proposed solution consisted of laying several layers of Cellweb® TRP to achieve the required levels and then installed in conjunction with drainage systems without compromising the health of the trees and resolving the drainage issues.

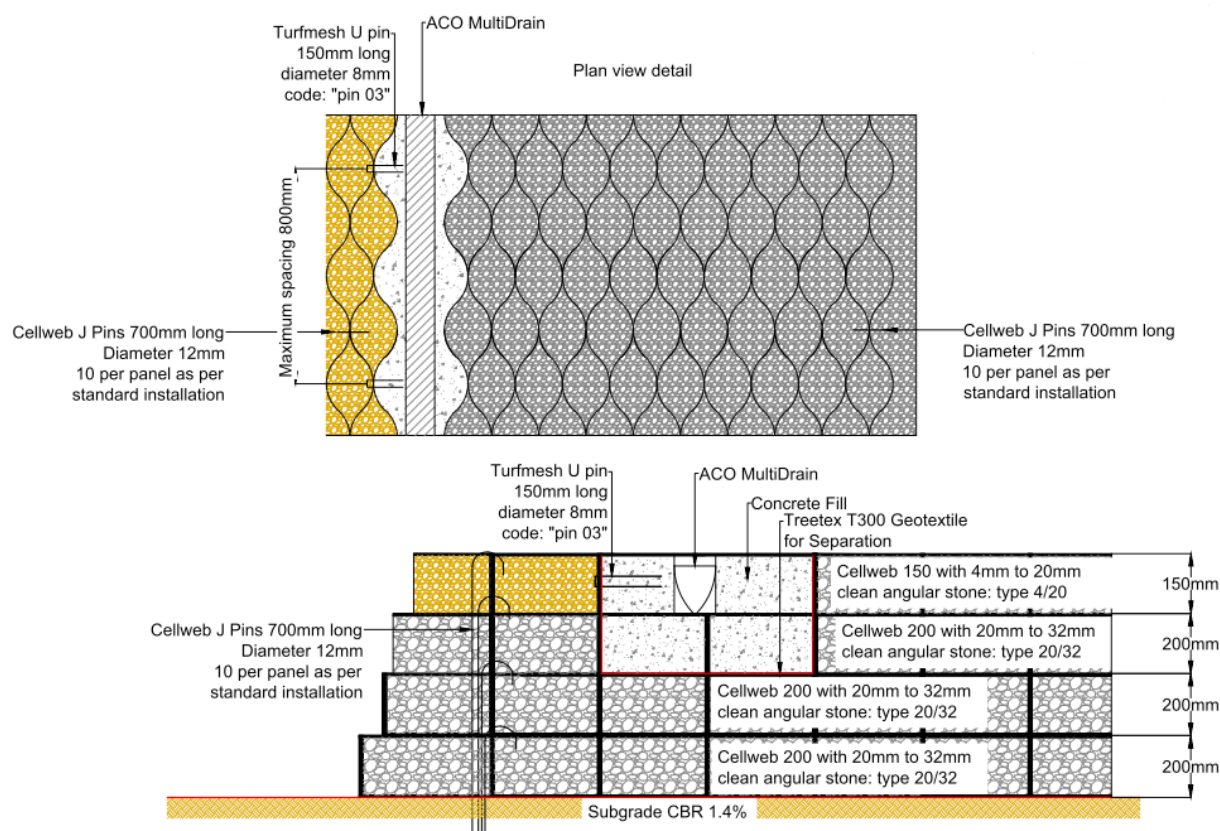


Figure 2 – Cellweb® TRP Solution and drain detail

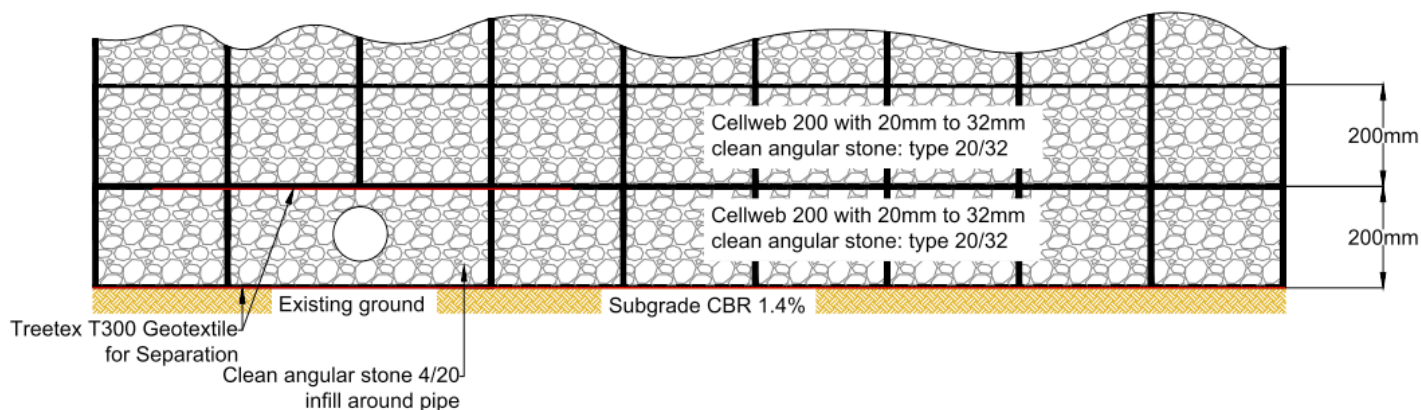


Figure 3 – Cellweb® TRP Solution and pipe detail

Case Study

Cellweb® TRP

Woodside Cottages, Eversley Cross, Hook



Image 1. Cellweb alongside drainage pipe



Image 2. Cellweb alongside drainage pipe

Case Study

Cellweb® TRP

Woodside Cottages, Eversley Cross, Hook



According to the Geotechnical Report, the ground profile comprised soft to firm gravelly silt resting upon medium dense to firm sandy gravelly clay and clayey gravelly sand. Groundwater level was found near the surface (400mm – 500mm bgl), having an effect on the soils strength. For the calculations of the access road and carpark it was assumed a subgrade with a CBR of 1.4%.

Construction traffic was considered as the critical loading for the design, resulting in a minimum depth of 200mm for the Cellweb® TRP. As mentioned above, several layers of Cellweb were laid up to achieve the different levels across the site. The base layers of Cellweb 200mm were filled with clean angular Type 20/32 (single size aggregate 20mm to 32mm) for drainage purposes and the top panels of 150mm and 75mm were filled with clean angular stone Type 4/20 (4mm to 20mm blended aggregate).

DPL Carpentry Services constructed the access road and carpark using the Cellweb® TRP system following our design and installation guidelines. Once we'd completed the scoping agreement and terms and conditions, the site was issued a free tree guarantee. Cellweb® has been utilised in the market since 1998 with zero failures but in the unlikely event that the system were to fail, the guarantee covers the replacement of the dead tree(s) up to a value of £10,000 per tree. The guarantee also covers the replacement of the Cellweb® TRP system which has failed up to the value of £50,000. The life span of the guarantee is 10 years from the date of invoice for the Cellweb® TRP. Geosynthetic Ltd were also available to offer assistance in regards to installation.

For advice on the construction of any of hard surface through root protection areas please contact the TRP team on 01455 617 139 or email sales@geosyn.co.uk.



Case Study

Cellweb® TRP

Woodside Cottages, Eversley Cross, Hook

