MARKET SECTOR:
Environmental

LOCATION:
Calke Abbey, Ticknall
Derby, DE73 7LE

INSTALLER:
Geosynthetics Limited
National Trust

Case

STUDY

CELL WEB TRP
Calke Abbey
Ancient Tree Protection

The

BACKGROUND

'The Old Man of Calke' is Calke Abbey's oldest tree and is thought to be up to 1200 years old.

With the average age of large oak trees in Britain being 200 years it certainly is the 'Old Man' of oak trees. Put into context, this means that this tree would have been 200 years old when William the Conqueror arrived in Britain.

Many years of heavy footfall had caused a significant increase in soil compaction beneath one side of the tree. This had resulted in reduced water and oxygen availability to roots beneath this compacted ground. This was reflected in the crown, which was displaying accelerated and significant die back on the footpath side. A solution needed to be found to alleviate the existing soil compaction and minimize further future compaction, ultimately preventing further die back.

Our Client's

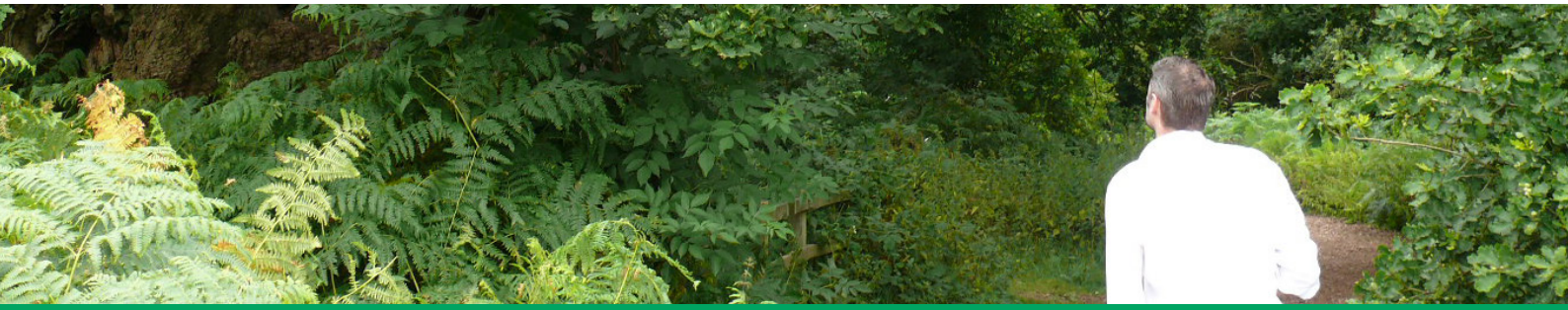
REQUIREMENTS

Provide a solution to prevent further dieback of 'The Old Man of Calke' at Calke Abbey

A solution needed to be found to alleviate the existing soil compaction and minimize further future compaction, ultimately preventing further die back.

TECHNICAL REQUIREMENTS:

- Solution to alleviate existing soil compaction and encourage decomposers
- To minimise further soil compaction



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

www.geosyn.co.uk

Our Value Engineered

SOLUTION

Geosynthetics' engineering team and in house arboriculturalist worked with Brian Muelaner, the ancient tree advisor at the National Trust, to provide a solution to prevent the further decline of this ancient tree.

A 90mm layer of mulched wood chip was applied to the existing ground surface before the installation of the Cellweb®TRP system. This was used to encourage decomposers such as earth worms to help alleviate the ground compaction and aerate the soil.

A layer of Treetex geotextile was then laid on top, acting as a separation layer and pollution control measure. Panels of Cellweb®TRP were then laid on top of the Treetex and infilled with a clean angular stone. The Cellweb®TRP would minimise any further compaction within the rooting environment, while decomposers would naturally aerate the ground, reducing soil bulk density. The use of Cellweb®TRP infilled with clean angular stone would also allow the continued permeation of water and gas exchange between rooting environment and atmosphere.

This whole project was designed, supplied and installed courtesy of Geosynthetics. The Geosynthetics Tree Root Protection Team donated their time, knowledge and products to ensure that this tree will survive for generations to come.

"This is an exciting new development in how to reduce compaction damage from vehicles and footfall to an ancient tree's roots, made possible by the generous donation by Geosynthetics in time, expertise and materials."

BRIAN MUELANER
Ancient Tree Advisor
National Trust

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