#### Case

# STUDY

**BENTOTEX® GCL** Piddlehinton Tree Root Protection

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### The

### BACKGROUND

ECO Sustainable Solutions identified a need locally in Dorset for an anaerobic digestion plant.

The proposed site had a limited footprint available. In order to proceed with the development as planned and utilise the Bentotex<sup>®</sup> GCL 100 as the containment layer of choice, some engineering and installation details needed to be considered.

Early concerns about cat-ion exchange due to the "Chalky" alkaline nature of the underlying soil were laid to rest by a laboratory test report.

### Our Client's REQUIREMENTS

A sustainable solution for tree root protection.

#### The Bentotex<sup>®</sup> was put forward initially because of it's ease of installation and it's self-healing properties.

Bentotex<sup>®</sup> GCL is lapped and sealed using Bentotex<sup>®</sup> granules; it does not need specialist welding like a traditional manmade liner. If the full site footprint was to be made available, the batters at the perimeter of the bunded area needed to be > 45°.

This presented a problem with the 300mm of required cover over the Bentotex<sup>®</sup> GCL; It is difficult to retain the fill on a slope greater than 30°. To enable the use of Bentotex<sup>®</sup> GCL we put forward a solution that employed the use of our Envirogrid cellular confinement system.



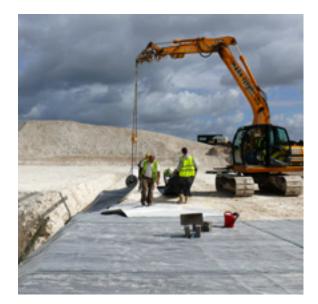
Tel. 01455 617 139 Email. sales@geosyn.co.uk

# Our Value Engineered SOLUTION

The proposed solution using Bentotex<sup>®</sup> GCL in conjunction with Envirogrid had benefits to both client and contractor:-

- Full site footprint could be utilised
- One contractor could complete the entire installation
- The GCL provides a resilient secondary containment liner
- The desired green finish could be achieved around the site perimeter.

When commissioned and working the plant will produce renewable energy by handling a large percentage of Dorset Counties food waste as well as providing high grade fertiliser material to nearby farms. The benefits of using Bentotex<sup>®</sup> GCL in this case were: Full site footprint could be utilised, One contractor could complete the entire installation as it does not need specialist welding like a traditional manmade liner. The GCL provides a resilient secondary containment liner due to its self-healing abilities.





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