



## Case Study

# Bentotex® Geosynthetic Clay Liner (GCL)

### Location:

Fernhill Farm  
Cheddar Road  
Compton Martin

### Client:

Fernhill Farm

### Project:

Construction of a multi-species, soil-based Wetland Ecosystem



### Contractor:

Biologic Design  
Archenhills

**Biologic Design**  
Wetland Ecosystem Treatment

### Geosynthetics Limited

Fleming Road  
Harrowbrook Ind. Est  
Hinckley  
LE10 3DU  
Tel. 01455 617 139  
sales@geosyn.co.uk  
www.geosyn.co.uk

**The Fernhill Farm site is in a very sensitive ecological area; it is in the middle of the Mendip Hills (AONB) Area of Outstanding Natural Beauty as well as being in Bristol Water's SP3 catchment area - a very sensitive aquifer where water is abstracted to supply the reservoirs for Bristol.**

In an effort to create a sustainable resource with support from Mendip Hills AONB and in consultation with the Environment Agency plans were drawn up for construction of a WET System (a constructed wetland ecosystem) for wastewater purification.

In order for the WET System to be totally contained, to be a total absorption system and have no outfall - as was required by the Environment Agency it was calculated that it would need to be 0.7ha (approx 90m x 60m) and be planted with over 10,000 willows.

The Geosynthetics Bentotex® GCL100 Clay Liner was put forward by Biologic Design due to its self-healing abilities it also meant that the contractor did not need to transport any of the welding machinery, power or geotextile protection fleeces associated with manmade HD/LD liners to this remote site.

After providing a study undertaken to assess the effects of root penetration, a method statement and a system of leak



detection (incorporating our Duodrain® GMG412 product) were put forward. All parties reached consensus and were happy that the products would perform in this demanding application. Even though the installation was undertaken during a period of high winds, horizontal rain, fog and some snow - as well as brilliant sunshine - all quite normal for the Mendips, the installation was completely successful and the WET System was operating, with no leaks, less than 2 weeks after the liner was installed.

### ***The benefits of using Bentotex® GCL in this case were:***

*self-healing abilities, It does not need any of the welding machinery, power or geotextile protection fleeces associated with manmade HD/LD liners.*





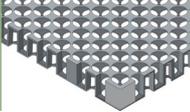
**2 in 1**  
Landscaping Fabric



**Gas Membrane**  
Radon, CO2, Methane,  
Hydrocarbon Control



**RoofCell**  
Sub Surface Drainage  
And Water Storage



**Alert®**  
Contamination Indicator



**Geoglas®**  
Asphalt Reinforcement



**Stratagrid**  
Soil Reinforcement Geogrid



**AquaBlock®**  
Water Containment Liners



**Geomembrane**  
Impermeable Membrane



**Strataweb**  
Slope Stabilisation



**Bentotex® GCL**  
Geosynthetic Clay Liner



**Golpla**  
Grass & Gravel Paving System



**T-Block**  
Modular Retaining System



**Cellweb® TRP**  
Tree Root Protection



**Golpla Pregrown**  
Ready To Lay Paving System



**Telegrid**  
Woven Polyester Geogrid



**DuoDrain®**  
Composite Drainage Product



**Interlock**  
Extruded HDPE Geogrids



**Televev**  
High Strength  
Woven Geotextile



**East Coast**  
Biodegradable  
Erosion Control



**Knotblock®**  
Japanese Knotweed Barrier



**Tenax**  
Soil Reinforcement Solutions



**Ekotex®**  
Non Woven Geotextile



**Landlok**  
Turf Reinforcement Mat



**Total Traffic Exopave**  
Heavy Duty Paver



**Fiberforce®**  
Equestrian Geotextile



**Nicospan**  
Erosion Control



**Trinter**  
Erosion Control Mat



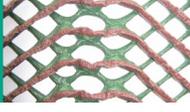
**Fibertex**  
Non Woven Geotextile



**Rhyno®**  
Woven Geotextile



**Turfmesh**  
Grass Reinforcement



**Flexitex**  
Textile Shuttering



**RockBox**  
Gabion Mattresses



**RootBlock**  
Root Barrier

