



Project Description

The Taylor Wimpy and Barratt Homes development on Henthorn Road, Clitheroe presented the project consulting engineers with an interesting challenge. Running across the development was an existing water course which required realigning and profiling. Part of the watercourse was channelled through a culvert with the remainder left as an open channel to form a green area within the development.

The Challenge

In order to maximise the available land for housing, the slopes of the culvert bank were to be as steep as permissible whilst taking into account the safety of the new residents.

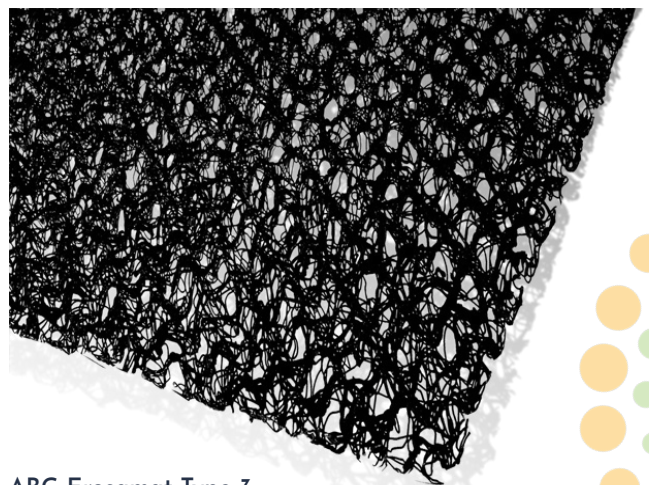
The slopes of the channel were to be vegetated. Betts Associates, acting as the consulting engineer, deemed the inclusion of an erosion control mat necessary for the side slopes to prevent erosion of the topsoil before establishment of the vegetation.

During periods of heavy rainfall the water flow velocity down the face of the slope was considered a risk, so the use of a short-term biodegradable mat was discounted. The long lengths of the slope mean that the erosion control mat also needed an inherent tensile strength to withstand the load applied by top soil before the vegetation root structure was established.

The base of the channel would also need a system capable of withstanding high peak flows within the watercourse.

Project Information

Client	Taylor Wimpey/ Barratt homes
Contractor	X & P McGuigan Civil Engineering
Products	Erosamat Type 3 & Erosaweb GWX100/300
Quantity	5,000m ² & 1,000m ²
Benefits	<ul style="list-style-type: none">• Speed of installation• Long-term protection• Cost effective solution• Helped achieve the desired visual appearance



ABG Erosamat Type 3

Erosion Control

Channel and slope protection, Erosamat, Clitheroe, UK



The Solution

Having considered various options it was decided that **ABG's Erosamat Type 3** offered the necessary performance requirements for the steep side slopes. **Erosamat Type 3** comprises a three dimensional structure of entangled filaments to create a long lasting, environmentally friendly, flexible erosion control mat. In combination with vegetation it forms both an effective erosion control surface and a vegetative root reinforcement layer. The bottom of the channel required an alternative solution. Here ABG proposed **Erosaweb**, a geocellular system infilled with graded crushed stone. Used in water flow channels it dissipates energy by containing the granular fill and producing a rip-rap type performance.

The ABG Service

ABG provided a holistic design by combining both **Erosaweb** and **Erosamat** allowing engineers to achieve the desired visual effect for the channel whilst ensuring the groundwork contractors could quickly and simply install the required protection.



Erosamat's open three dimensional structure allows the product to quickly bind with root systems



Erosamat (slope) & Erosaweb (base) used in combination to form a complete geosynthetic solution



Both Erosamat and Erosaweb are flexible allowing for ease of installation

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