

Cutting Drainage & Reinforcement

Erosaweb & Fildrain, Luton Dunstable Busway, Bedfordshire, UK



CASE STUDY

Project Description

Luton Dunstable Busway is a new construction connecting these two Bedfordshire towns. Much of the route will run along the line of a disused railway running parallel to the A505 and A5065. The busway comprises a twin track approximately 6 metres wide allowing vehicles to travel in both directions. Each track consists of a 180mm high kerb on each side which the guide wheels run along, and a concrete base to support the rear wheels.

The guideway itself will have a low noise surface which, together with appropriate landscaping, noise barriers and other engineering measures, will minimise the impact on neighbouring properties.

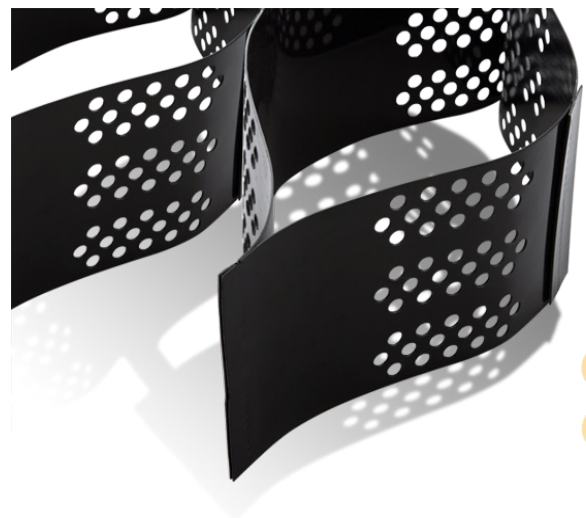
The Challenge

The Busway is built along a disused single track rail line, much of it contained within cutting. In order to fit the 6m wide concrete busway plus the required safe zone, without extending land take outside the existing boundary, it was necessary to steepen the slopes along both sides, whilst maintaining their green finish and ensuring the stability of the slopes.

The second challenge was the drainage requirement beneath the pre-cast concrete busway, as using a layer of drainage stone would have implications on the volume of material that would need to be excavated and carried from site, as well as the cost of importing the stone to site.

Project Information

Client	Luton Borough Council
Contractor	BAM Nuttall
Products	Erosaweb GWX100/300 Fildrain 7SD/NW20XUV
Quantity	5,000m ² & 45,000m ²
Benefits	<ul style="list-style-type: none">• Steep slope stabilisation• Sub-formation capping, drainage and reinforcement• Large rolls for rapid installation



ABG Erosaweb

ABG LTD

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The Solution

ABG's Erosaweb was chosen as three dimensional geocells are specifically designed to contain top soil within their cellular structure allowing vegetation to establish whilst providing long term erosion control along with the required aesthetic finish.

ABG's Fildrain was laid horizontally beneath the concrete construction. Fildrain provided the required drainage capacity at a fraction of the depth required for stone, saving material movements to and from site. Fildrain was delivered to site in large rolls and was quickly and easily installed without the need for specialist plant or training. Fildrain provided capping, reinforcement and drainage functions helping to achieve the load bearing capacity required in the sub-formation. Both solutions enabled significant savings and reduction of the environmental impact during construction.

The ABG Service

ABG provided technical advice and design assistance.



Fildrain Geocomposite drain installation.



Erosaweb panels installation



Fildrain covered prior to installation of trunk sections

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