

Structural Drainage

Bridge Abutments, Deckdrain, Port Talbot, Distributor Road, UK



CASE STUDY



Project Description

The Port Talbot Distributor Road is part of a regeneration plan for the Port Talbot area designed to open up land for attracting business and leisure facilities. The new road known as 'Harbour Way' is a dual carriageway running between junctions 38 and 41 of the M4. The existing A48 Port Talbot bypass ran through urban areas causing noise, pollution, poor safety and journey times for local residents. This highly prestigious contract was funded by the Welsh Assembly Government who had given a challenge for innovative whilst working within tight programme and budget requirements.

The Challenge

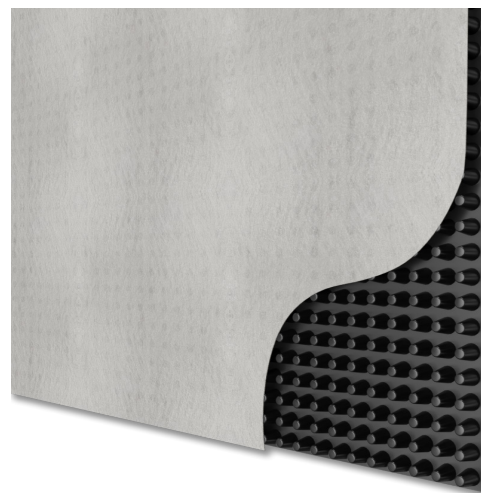
The new road has a mixture of structures including underpasses and bridges including the busy Swansea to London Paddington railway line with limited possession periods. Speed of installation was a key consideration as much of the work was carried out under complex traffic management. Structural drainage was needed for all the earth retaining structures. Traditional methods, such as porous blocks or no fines concrete require manual handling equipment which results in slow installation and potential damage to bituminous waterproofing layers. Access to structures was limited posing potential issues with site deliveries and installation on this congested site.

The Solution

The contractor Costain investigated more modern innovative and financially beneficial drainage systems such as the **ABG Deckdrain**. The BBA approved **Deckdrain**

Project Information

Client	Neath Port Talbot Council
Contractor	Costain
Product	Deckdrain 1200S/ST170 BBA
Quantity	5,000m ²
Benefits	<ul style="list-style-type: none">• Rapid installation• Light weight - no handling equipment required• Cost savings over traditional method• Protection to waterproofing• BBA approved



ABG Deckdrain back of wall drainage

ABG LTD

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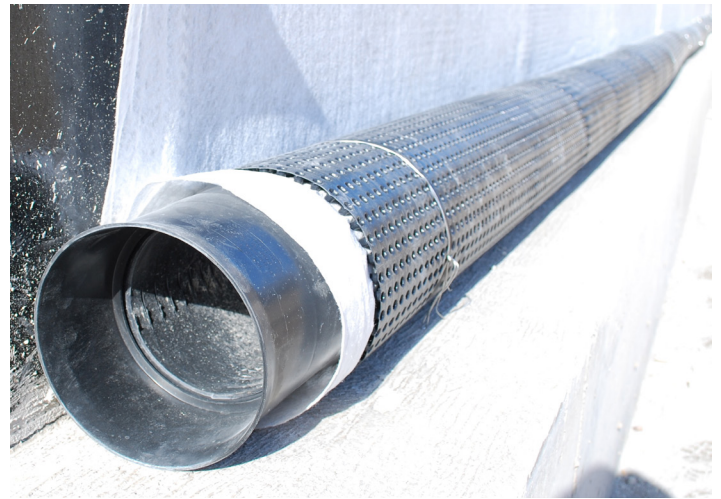


geocomposite offers considerable financial and handling benefits complemented by superior flow capacity and high compressive strength. The lightweight rolls come in standard off-the-shelf sizes of 1.1 x 50m or 2.2 x 25m and are laid horizontally in progressive lifts along with the waterproofing and backfill. The composite has a filter to prevent clogging and a high flow core providing additional impermeable protective layer.

Deckdrain, approved by Neath Port Talbot Council, Welsh Assembly Government and Network Rail, assisted in the completion of the scheme within budget and on time. Costain received national recognition for this project with the award of 'Considerate Constructors' 2013 and 'Constructing Excellence in Wales' 2012.

The ABG Service

ABG provided design advice and appropriate material grade selection for site specific flow rate and crush strength requirements to Neath Port Talbot Council and practical guidance for installation to Costain.



Deckdrain wrapped around perforated pipe feeding water directly into the pipe. Geotextile prevents backfill clogging inlet holes.



Roll of Deckdrain ready for next horizontal lift with no delay or interference with backfill operation



Deckdrain allows compaction close to the structure and provides protection to the waterproof coating

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