

Structural Drainage

Bridge Abutments, Deckdrain, A14 Cambridge to Huntingdon, UK



CASE STUDY

Project Description

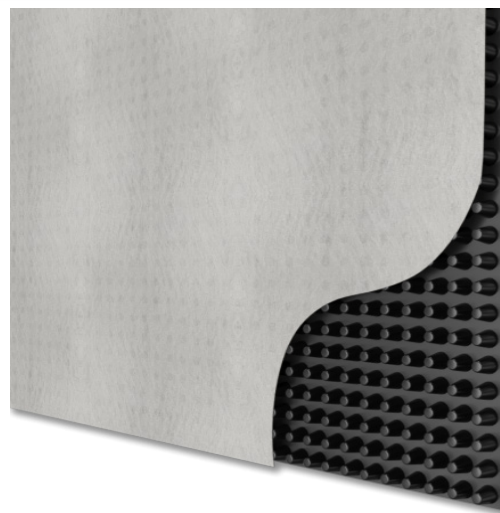
The A14 is a strategic trunk road which runs between the M1 Catthorpe Interchange and Felixstowe. The A14 is dual carriageway for most of its route and carries up to 85,000 vehicles per day of which many are HGVs heading to the Port of Felixstowe. Volumes of traffic are now much greater than were anticipated by the original design. The stretch between Cambridge and Huntingdon is one especially prone to peak time delays and has a poor safety history. Highways England, along with their delivery partner A14 Integrated Delivery Team, are upgrading the carriageway to improve safety, improve air quality and unlock development potential in the area. Some of the scheme involves on-line improvement works and other areas are complete off-line new construction.

The Challenge

The project involved the construction of a number of structures which were on the key timeline of the project. Many of these structures were of a considerable size and required structural drainage that could be rapidly and safely installed. Traditional methods such as porous blocks were deemed to be slow to construct and posed a high risk of damaging the waterproofing when being manoeuvred into place. Manual handling equipment is required to install traditional systems and construction output is typically low. Furthermore, due to their size and weight, moving materials around on site posed significant logistical problems. Other options considered, such as nofines concrete, required formwork and were expensive to place. Often additional earthworks operations are required further slowing scheme progression.

Project Information

Client	Highways England
Contractor	A14 Integrated Delivery Team
Product	ABG Deckdrain 750S/NW8 and Deckdrain 1250S/NW8
Quantity	7,000m ²
Benefits	<ul style="list-style-type: none">• Reduced labour & plant costs• Reduced pollution resulting from site plant and delivery vehicles• Rapid installation• High flow capacity• Protection to waterproofing



ABG Deckdrain

ABG LTD

E7 Meltham Mills Road, Meltham, Holmfirth, HD9 4DS • +44 (0)1484 852096 • www.abgltd.com

a Bontexgeo Group company

Structural Drainage

Bridge Abutments, Deckdrain, A14 Cambridge to Huntingdon, UK



The Solution

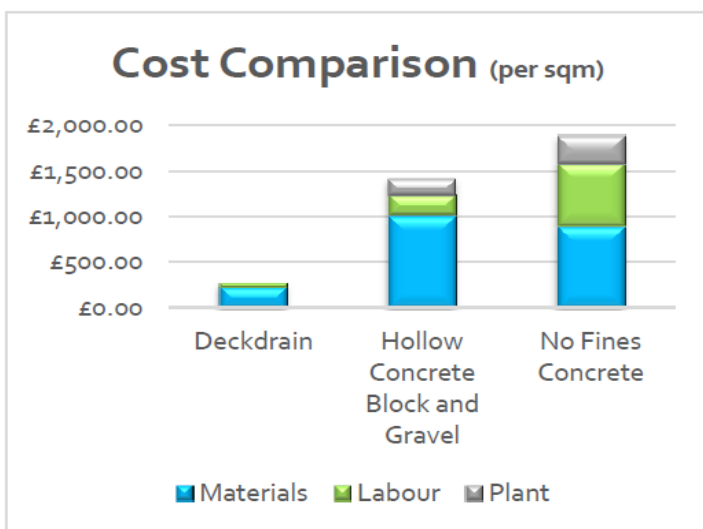
The Contractor recognised the successful use of ABG **Deckdrain** drainage geocomposite on previous schemes and proposed its use to the consultant and Highways England. On this project the high strength **Deckdrain 750S/NW8** and **Deckdrain 1250S/NW8** were chosen to withstand anticipated passive earth pressure movement. **Deckdrain** allowed for safer installation compared to porous blocks as there is no need for heavy machinery due to its lightweight and easy to handle nature. This in turn reduced installation time, labour costs and vehicle movement on site.

The ABG Service

ABG provided technical support to aid product selection and gain approval from Highways England. ABG and the A14 Integrated Delivery Team entered the Deckdrain concept and were shortlisted for the Sustainability Category for the 2019 Construction News Awards .



Easily and safely placed in cramped working conditions. Deckdrain provides protection to waterproofing from backfill operation



Cost savings over traditional methods based on A14 site team assessments



Site reported installation rates of up to 550m² per hour

ABG LTD

E7 Meltham Mills Road, Meltham, Holmfirth, HD9 4DS • +44 (0)1484 852096 • www.abgltd.com

a Bontexgeo Group company