

# Highway Drainage

Fildrain Type 6, A1 Dishforth to Leeming Improvement, UK



Case Study

## Project Description

The Highways Agency commissioned the improvement of the A1 between Dishforth to Leeming. The road is an all-purpose two lane carriageway carrying in the region of 50,000 vehicles per day. Constructed in the early 1960's the route failed to meet current alignment standards and had a number of non-standard access junctions. The route had a poor safety, congestion and journey time record.

A joint venture between Carillion and Morgan Sindall carried out the 12 mile (19.3km) upgrade.

## The Challenge

Highway drainage represents a significant part of any scheme including edge of carriageway drainage which protects the sub-base from water damage. This is normally achieved using a stone filled trench which means importing large quantities of carbon sensitive drainage stone from distant quarries. Achieving this on a live restricted main carriageway is problematic from a safety and ecological point of view. Any method which reduces the use of imported granular material along with reduced excavation and disturbance of the carriageway shoulder is welcome.

## The Solution

The contractor proposed a findrain Type 6 from the Highways Construction Details drawing number F18 and Specification for Highways Works Clause 514 with Appendix 5/4.

## Project Information

Client Highways Agency

Contractor Carillion – Morgan Sindall JV

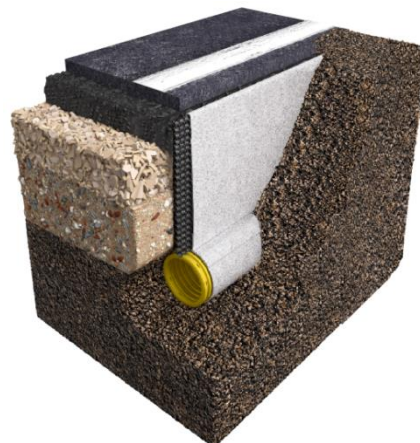
Consultant AECOM/Grontmij

Products Fildrain Type 6

Quantity 20,000lin.m

## Benefits

- Rapid installation in narrow restricted working area
- Re-use of excavated materials
- Avoid quarried stone
- Carbon Saving
- Barrier to protect sub base
- Material cost savings
- No materials to landfill



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The contractor chose the now BBA certified **ABG Fildrain Type 6** as a suitable findrain, saving 4000tonnes against the crushed stone option. **ABG Fildrain Type 6** provides vertical drainage on both sides whilst acting as a barrier protecting the sub-base from inundation from the verge. It is a double cusped drainage geocomposite fully wrapped with a filter geotextile with an integral pipe sleeve. The unit is laid alongside the trench, threaded with perforated pipe, dropped into a narrow trench and backfilled by pushing and compacting the excavated soil back into the trench adjacent to the drain. The surface is then covered with soil or a shallow apron of stone.

### The ABG Service

Assistance with cost comparisons and provision of staged delivery to suit this narrow corridor site. Supplied relevant documentation to assist with approvals.



**ABG Fildrain composite with integral sock to allow the threading of a perforated pipe ready for installation**



**Minimum excavation using narrow trenching bucket**



**Backfill by simply pushing and compacting fill next to ABG Fildrain Type 6**

Contact ABG today to discuss your project specific requirements and discover how ABG past experience and innovative products can help on your project.