



M80 Filter Drain Recycling

Cumbernauld to Haggs | M80 DBFO

Carnell worked in collaboration with BEAR Scotland, the maintenance contractor for Highway Management (Scotland) Ltd who operate and maintain Transport Scotland's M80 DBFO, to undertake filter drain refurbishment between junctions 5&7.

Using the StoneMaster process to recycle the filter drain media in-situ, provided several carbon, safety and road user benefits over the traditional dig-out and replace method.

The 2,800m length of filter drain was brought back to specification in 9 night shifts. By only taking away non-compliant material, 420 lorry journeys were removed from the network, while the reduction of materials, haulage and waste disposal led to a **reduction in CO2e emissions of almost 30 tonnes.**

The innovative SmartScan survey which took place in advance, identified the areas of filter drain most in need of attention, enabling a targeted solution, making best use of available funds.

In producing a fully functioning filter drain which will extend the life of the carriageway, StoneMaster removed a tonne of non-compliant material every 7.0 linear metres of filter drain. This is what fills the voids in the filter media, reducing the drains effectiveness.

Safety was improved through reduced roadworker exposure, while the risk to road users was minimised through an 82% reduction in lorry movements in and out of the work zone.

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"Good working with you on this project. It's an impressive machine."

Laura Gray, Asset Manager
BEAR Scotland



We imagineer tomorrow today

Filter Drain Recycling



Efficiencies

1

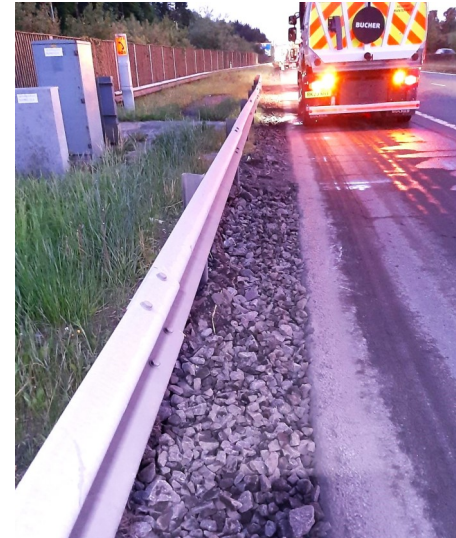
- SmartScan provides a fast and accurate filter drain condition survey to support targeted interventions.
- This identifies areas that need refurbishment and those that don't require an intervention.
- StoneMaster also has greater outputs compared to the dig-out and replace method.



Mission Zero

2

- StoneMaster significantly reduces the production of green house gases (CO2e), therefore supporting Mission Zero and the ambitious target to reduce transport carbon emissions by 75% by 2030.
- All reusable material is returned to the drain, with only the silt and fines removed from site.



Think Safe, Home Safe

3

- Filter drain maintenance supports the Climate Change Risk Assessment for Scotland, as we expect to see 'increased rainfall on the wettest days of the year'.
- Better drainage means improved safety for road users as water is effectively removed from the surface, minimising risk.

- 1) SmartScan survey on the M80.
- 2) StoneMaster in action on the M80.
- 3) The M80's "better than new" filter drain.

Benefits

Using StoneMaster on the M80 to recycle the filter drain in-situ resulted in:

- 2,800m of safer road.
- Re-use of 2,282 tonnes of aggregate.
- 5,736 fewer HGV miles transporting materials.
- Reduction of 15,049m³ CO₂e. The equivalent volume of 6 hot air balloons!



"We often talk of saving the planet, but the truth is that we must do these things to save ourselves."

Sir David Attenborough