Press release: £9.5 million Ulverston flood scheme officially opened by the Environment Agency

More than 500 homes and businesses in Cumbria will be better protected from flooding thanks to a new £9.5 million scheme completed by the Environment Agency.

The Town Beck Flood Alleviation Scheme in Ulverston, Cumbria, will reduce flood risk to more than 400 homes and more than 100 businesses, as well as critical tourism infrastructure. A maze of underground water channels (culverts) under the houses, roads and carparks in the town centre have been repaired and/or replaced using innovative techniques and flood defences have been constructed.

Emma Howard Boyd, Chair of the Environment Agency, officially opened the scheme, and said:

> Cumbrian communities know well the devastation that flooding can cause. The Town Beck flood defence will better protect 500 homes and businesses in Ulverston and support England's tourist economy by improving protection for the railway that leads to the Lake District.
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> To achieve this, the Environment Agency has worked closely with local residents, Network Rail, United Utilities and the Council. It's a brilliant example of how partnership working benefits people, the national economy and the natural environment.

Town Beck lies within a steep catchment and predominantly runs underground through the town centre. The new scheme consists of a number of sections throughout the town centre including raising existing flood defence walls, installing new floodgates, repairing and refurbishing the underground water channels (culverts), and building a swale in the natural flood plain to ensure that there is no increase to flood risk in South Ulverston. A new wildflower meadow has also been created as part of the scheme, boosting biodiversity and improving the local environment.

Much of the scheme is underground, so different construction techniques known as 'trenchless technologies' were used. In some cases Environment Agency contractors installed reinforced plastic sleeves to repair pipes – or worked underground wearing specialist breathing apparatus to spray concrete on the inside of the culvert for extra strength.

While this means some of the work isn't visible, it avoided diverting major services – such as gas, water and electric – and allowed construction without having to dig up the road, avoiding unnecessary disruption to residents while

the scheme was underway.

Alternative repair techniques were also used to speed up the completion of the project and to reduce disruption to the town. The potential option for the construction of a flood storage reservoir was replaced with an additional large pipe which runs through the railway embankment and a drainage channel to connect to the flood plain.

The scheme will provide a significant improvement in the standard of protection for the area, which has been affected by flooding several times in recent years – most recently in 2009 and in 2012.

Led by the Environment Agency, the project received strong support from partner organisations including Cumbria County Council, South Lakeland District Council, Network Rail and United Utilities, who provided more than £1 million of contributions towards the development.

Similarly, close links to Ulverston Town Council and local community groups have been vital to minimising the disruption to the Cumbrian town, which has many small to medium businesses and is heavily reliant on the tourist economy.

Adrian Lythgo, Chair of the North West Regional Flood and Coastal Committee said:

> The Town Beck Flood Alleviation Scheme is a great example of how such important work can be completed with little disruption to a town so heavily reliant on the tourist trade.
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> Often people don’t know a river is running beneath their feet or property and could cause such devastating results if flooded. This project has delivered a value for money, quality scheme which I am delighted that the North West Flood and Coastal Committee has supported.

The project was shortlisted for its innovative ways of working at the 2018 ICE North West Civil Engineers Awards.