The Environment Agency (EA) and Middlesbrough Council (MC) are working in partnership to reduce flood risk from the Marton West Beck in Middlesbrough.

We looked closely at a range of options and now the project team has designed new flood risk management measures which will provide improved protection to 485 homes in central Middlesbrough. 244 of these homes will be protected from a 1 in 75 year flood event which is a flood which has a 1.3% chance of happening in any given year.

The scheme will cost £4.8m and will provide £59m of economic benefit to Middlesbrough over the next 50 years. The business case has approval from central Government and construction work will start in June 2020.

Current flood defences

Flood defence assets on the Marton West Beck comprise of a number of debris screens to prevent culverts being blocked by debris and litter.

Currently, there are a number of walls along the Marton West Beck which act as flood defences but they were not specifically designed to do this.

The Marton West Beck is also not easy to maintain at present due to the lack of access points to the channel. So we are looking to improve all of these elements.

What have we done so far?

The EA has commissioned Mott MacDonald and Bam Nuttall (together known as BMM) to use our integrated flood risk modelling to design the new flood alleviation scheme, which takes into consideration the flood risk from different sources, including the rivers, sea, sewer networks and surface water.

We now have approval from central Government to go ahead with construction of the new scheme.
How does the scheme work?

Trash Screen in Albert Park

At present, the screen in the corner of the park prevents large rubbish entering the culvert and therefore stops the beck that runs beneath Park Vale Road from blocking. Any blockage in the culvert would force water out of the beck causing damage and flooding. However, it is possible for the screen to block which forces water out of the channel and this provides the greatest risk to homes in the area and further north into the town. The new design of trash screen will reduce the impact that debris and rubbish has on the flood risk. The new screen will still catch the rubbish but will allow the water to flow into the culvert by using the new side screen. This will also make it easier and safer for our staff to clear the screens.

Flood Walls

New formal flood walls are required on the banks of the beck adjacent to Park Vale Road in Albert. These new walls will be constructed near the new screen to help retain the water in the park and preventing it from flowing down Park Vale Road to people’s homes.
A new raised defence is also needed around the north end of the Lower Lake in Albert Park to retain and prevent water overflowing from the lake. This will mean some landscaping changes to the footpath, cycle path, and park entrance in the corner near East Lodge.

Walls are also required on the open section of channel in the Borough Road and Lytton Street areas. These walls will help prevent flooding from the Beck but also extreme tidal events.

**Surface Water Management**

As part of the scheme, we will also be creating three earth bunds or small raised grassed hills, which will intercept surface water flows in times of extreme rainfall. These bunds will retain water so the river water can be managed by the flood walls downstream. One bund will be in Albert Park and there will be two upstream near Newham Beck.
What’s next?

Our contractor BMM intends to begin construction at the start of June and therefore will be setting up construction sites and compounds in the coming weeks.

There will be some minor disruption to public open space, such as a small part of Albert Park and footpaths on Sandy Flatts in Tollesby; however we will continue to work with the council to keep disruption to a minimum wherever possible.

One element of the scheme requires planning permission and so the application will be submitted in the very near future, allowing that section of defence to be built later in the year.

How can I find out more information?

The latest information about the scheme can be found online here: www.middlesbrough.gov.uk/marton-west-beck-flood-scheme

If you would like more information or have a specific question, please get in touch with us via MartonWestBeck@environment-agency.gov.uk and we will be happy to help.