

## MUSSELBURGH

By Avril Campbell

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A LEADING geographer from Musselburgh has called for "nature-based solutions" to be used as part of Musselburgh's £42million flood protection scheme.

Professor Roger Crofts, Scottish Natural Heritage's first chief executive, said: "Rather than continuing to fight nature with short-term engineered solutions, we need the two approaches to be working together."

He is opposed to the "costly" removal and replacement of several town bridges because "a few tree trunks might get caught on the pillars in the river and raise the water levels".

"The simple alternative is to place tree catchers above the Ivanhoe Bridge downstream of the main concentration of willows.

"The money saved can then be redeployed to more imaginative solutions along the coast upstream," he argued.

The Musselburgh Flood Protection Scheme aims to introduce defences against a one-in-200-year risk of flooding in the town.

The Scottish Government would pay 80 per cent of the contract cost, with East Lothian Council paying the additional 20 per cent.

The work will see defence barriers run from Tesco on the east bank of the River Esk out to the coast and along to join the existing sea wall there.

On Eskside East (by Tesco), the barriers will extend up to Inveresk and thereby all around Eskmills.

On the west side of the town, the barrier will run from Brunstane Burn on its edge, along the coast and inland at the mouth of the Esk to Campie Road.

Bridges over the river in the town identified to be removed and replaced are Goosegreen footbridge, Elec-



Professor Roger Crofts underneath the Rennie Bridge in Musselburgh during a flood at the River Esk in October

tric Bridge and Shorthope Street footbridge. It is also proposed to replace the Ivanhoe footbridge.

Professor Crofts, who lives near the River Esk and is a member of the Esk Valley Trust, highlighted the need for nature-based solutions throughout the catchment of the River Esk.

He said: "Nature-based solutions are now a universal approach to addressing the effects of climate change, loss of biodiversity and poor stewardship of the land.

"They are also a requirement of the Flood Risk Management (Scotland) Act 2009.

"Our children and grandchildren will not thank us for ignoring the opportunity of planting trees in the Esk rivers catchment, of digging ponds to retain water, of blocking drains made redundant by old farming practices, and of actively allowing flood plains to flood, all of which will slow the flow of water downriver over the coming decades.

"Yet, we are told that these

options are not viable and will not work, and the only catchment management measures are use of two redundant reservoirs."

He said he would like to see the Esk River Improvement Group, established by local MSP Colin Beattie, facilitate the development of an Esk Catchment Action Plan led by the Scottish Environment Protection Agency with full support of Nature Scot, East

**"Nature-based solutions are now a universal approach to addressing effects of climate change**

Lothian Council and Midlothian Council.

"A bid to the Scottish Government's Nature Restoration Fund would help to realise this natural common sense plan, reduce the cost of the Musselburgh Flood Pro-

tection Scheme and enable the money saved to be used for long-term nature-based measures," he claimed.

He said that, rather than build the wall planned for the river banks from the Roman Bridge to the coast, "simple, cheap and visually unintrusive barriers" should be provided for the entrance to the grounds of each property, for use when water levels are predicted to be high.

Drainage pipes from properties should be fitted with non-return valves, and an offshore barrier to reduce the amount of seawater in the estuary considered, he added.

The project team highlighted that "significant sustainable solutions" were included in the preferred scheme approved by East Lothian Council's cabinet in January last year.

These measures include a debris trap to catch trees around the Cowpits area upstream of the A1 road bridge, and the repurposing of two historic reservoirs in the

South Esk catchment.

An offshore barrier to reduce flood risk "would not be a natural or sustainable intervention", it added. This was considered in 2019 and discounted due to prohibitive costs and negative environmental impact on the Firth of Forth 'Special Protection Area'.

Conor Price, project manager for the Musselburgh Flood Protection Scheme, said: "The project team recently attended Professor Crofts' presentations to the Esk Valley Trust in August and Musselburgh Conservation Society in early November.

"We respect his intentions and praise his efforts to challenge society to restore nature, and eliminate the need for engineered solutions to flood risk.

"However, we do not believe the natural solutions he advocates would be effective against the truly massive scale of flooding that Musselburgh is at risk from.

"Any solution taken forward has to be quantifiable, economically viable and deliverable. It must also be effective in all seasons and over many years.

"We have invited Professor Crofts to meet with the project team to expand on his arguments and we look forward to hearing new ideas and potential delivery strategies above and beyond the many nature-based solutions that the project has already considered."

Mr Beattie, MSP for Midlothian North and Musselburgh, said: "Generally speaking, I favour natural solutions to the flood risk management, although clearly that will not suffice everywhere. More information is awaited on the final proposals, at which point it should be possible to gain a clearer picture of what those solutions will look like on the ground."