

12 What is suggested east of Bridgefield Bridge?

Bridgefield Bridge

The existing parapet railings to the Bridgefield Bridge will need to be infilled to provide sufficient 'freeboard' during high flows. Freeboard is the height of a structure (such as the top of a bank, floodwall or bridge deck) above the expected water level. It can be described as a safety margin that makes allowances for uncertainties, such as wave action, local channel variations and the behaviour of the water.

The railings will be replaced with walls, which will be finished in materials that are similar to those between the White and Bridgefield bridges.

[Right] Railings to the Bridgefield Bridge will be replaced by solid parapets.

The existing flood walls are likely to be reinforced from behind, or faced with materials that reflect the character of the buildings alongside the bridge.

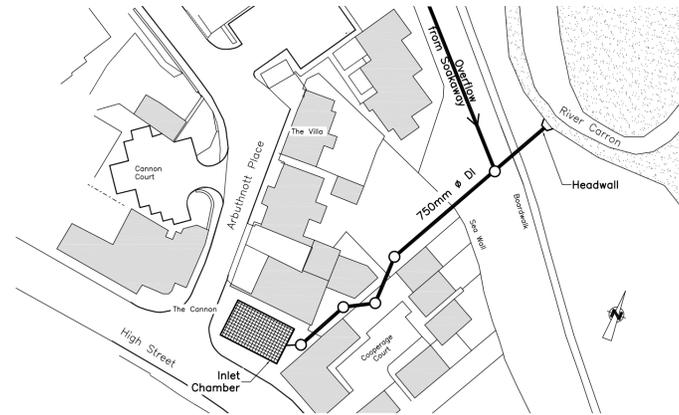


Bridgefield to the Coastal Path

The walls along both sides of the river are of variable quality and will leak or become unstable when subjected to high water levels. We need to plug gaps in the walls, strengthen and raise existing walls along both sides of the river downstream of the Bridgefield Bridge to the coast.

New pumping stations and drainage

We have considered the possibility of surface water building up behind new flood defences, or where water cannot drain to the river during high river levels. New pumping stations will be required to relieve this 'secondary flooding'. They will be positioned below ground level, with only a control kiosk visible.



[Left] New drainage will run from the junction of Arbuthnott Place and High Street to an outfall at the Carron. The inlet chamber will be situated at the existing raised planter [above].

The Arbuthnott Street and High Street area is a natural low point where surface water collects. This could also include flood water from the immediate surrounding area - including the Bervie Braes - and any flows that escape from the Glaslaw Burn and River Carron at Low Wood Road. Improved drainage is planned for this area and will reduce the risk of flooding, although it will not be entirely eliminated.

The upstream defences will reduce this risk, along with a new pumping station. The pumping station is likely to be constructed at the edge of the beach, near the mouth of the Carron. The new structure will be mainly underground, apart from a control box and access manholes.

A new pumping station may also be required to the north of the Carron River. This may be located on Cameron Street, near the White Bridge, or on the corner of Market Lane and the Bridgefield Bridge.



[Above] The Water of Leith scheme in Edinburgh included pumping stations. These are visible only through the presence of green control kiosks.

Coastal flooding

The scheme described on these boards is designed to protect against flooding from the River Carron and Glaslaw Burn, as well as surface water within the town. Flooding related to tidal effects is included within the river modelling, but flooding to coastal areas does not form part of this scheme.