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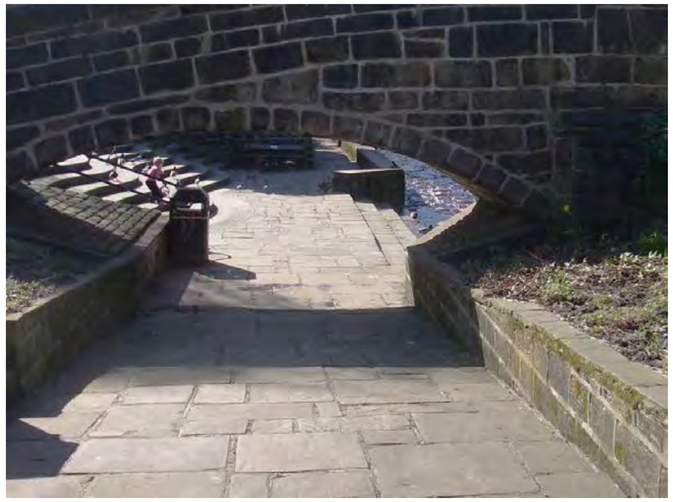
# Existing Material Palette

This board shows the existing materials used for cladding in Hebden Bridge, reflecting the common use of locally sourced stone.



View of ramp near the Packhorse Bridge

Paving detail on Bridge Gate

Paving detail on Bridge Gate

Works required to reduce flood risk in the Conservation Area will complement the historic character of stone buildings where possible. Local stones include sandstones, gritstones, shales and mudstones.

Existing stone buildings and walls tend to be regular, with varying finishes depending on the age of the structures.

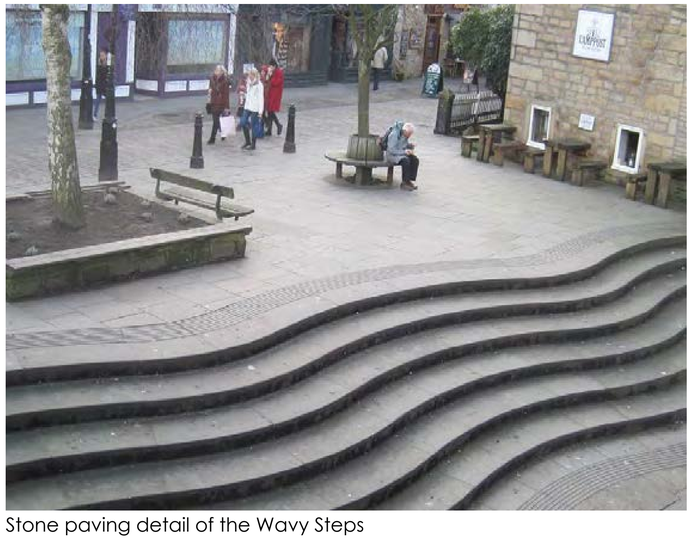
The older buildings tend to be built in squared rubble and laid in course. Mortar is recessed and weathering tends to darken the colour and appearance of the stonework.

The streetscape consists of a variety of materials, including tarmac, old and new York stone flags, cobble stones and flush kerbstones.

The presence of trees in the town centre influences the riverscape. Artwork, including lettering, is present in several locations. Ideally this will be retained and potentially enhanced.

Materials will be selected with reference to the local vernacular to help maintain character and enhance the areas unique sense of place.

Riverside properties



Stone paving detail of the Wavy Steps

## Options for flood wall cladding

Coursed split face building stone - buff sandstone finish, © Black Mountain Quarries

Existing stone wall in Hebden Bridge with coping stone

Carnoustie Wall - random coursed pitched face wall in sandstone © Tradstocks 'Overwood' - Tradstocks LTD

Stone clad flood wall topped with glass along its length © EA

Stone clad flood wall with inserts of full height glass © EA

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# Possible Flood Walls Options

## Self-raising flood barriers

Self-raising barriers are suitable in areas where permanent flood defences may impede movement and interaction with rivers.


© Flood Control International

Advantages

- Passive measure
- No moving mechanical parts
- Uses flood water to drive mechanism
- Fast response to flooding
- Flood barrier hidden when not in use
- Pillars may be clad in local materials

Disadvantages

- Requires end pillars and sometimes intermediate pillars
- Requires maintenance, there may be issues with sediment build up
- Deep excavation required for installation

© Flood Control International

© EA

## Glass walls

A stainless steel frame with flood glass panels on top of the flood wall may be a suitable option in some locations to allow views across the river. Materials used for wall construction will be in-keeping with local materials.

Where feasible flood defences will not isolate the town from the riverfront. Defence solutions which can be set back or maintain access and views will be considered to preserve the amenity value and character of waterfront spaces.

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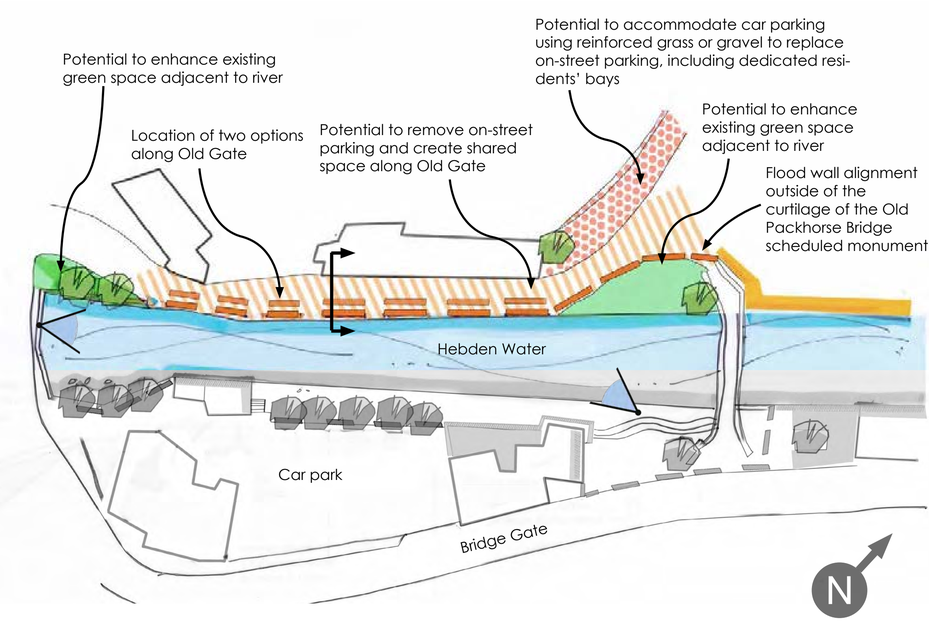
# Indicative Sketches - Old Gate

## Possible options along Old Gate




Existing walls/buildings as part of potential flood defence

Existing trees retained

Existing trees potentially at risk - further survey required to establish root extent and potential impacts

Potential flood wall and flood barrier alignment

Potential shared space

Potential replacement car park area

Section line

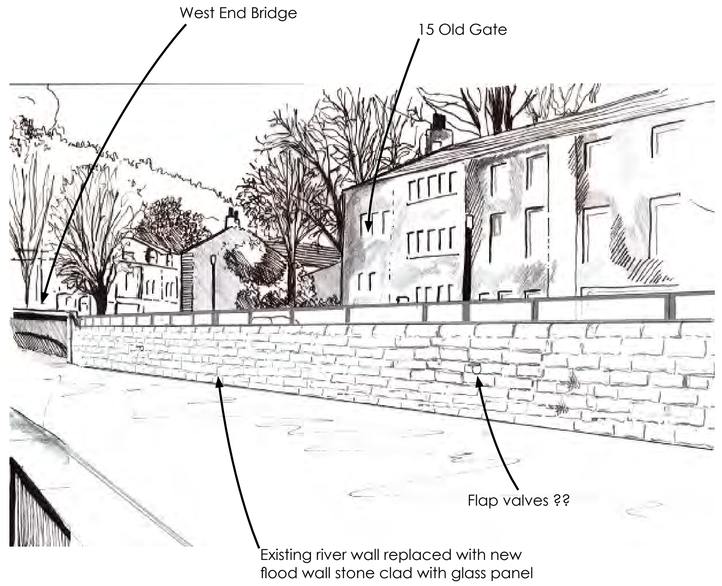
Sketch viewpoint

## Indicative layout plan

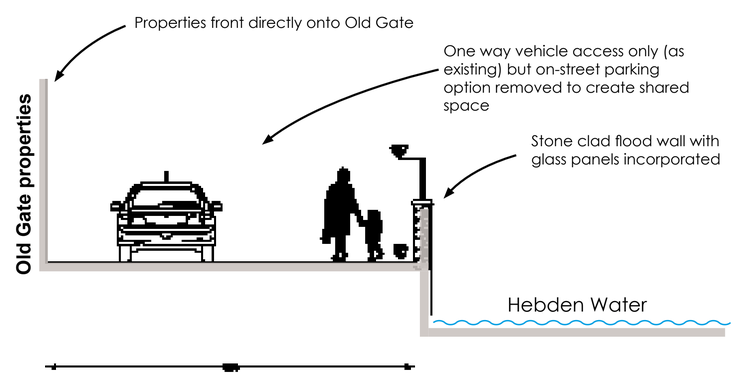
The Old Gate roadway is very narrow, 6m wide at the narrowest point. Vehicular access,
on-street parking, pedestrian footpath and properties fronting are all key features of the area. Containment options along Old Gate will create a more enclosed character. There are opportunities to develop a shared space along Old Gate and enhance existing green spaces.

Defence solutions will create new opportunities to improve pedestrian access and maintain views along the river front for pedestrians.

**Option 1 - Old Gate: extension of existing river wall with glass flood panels fixed on coping.**



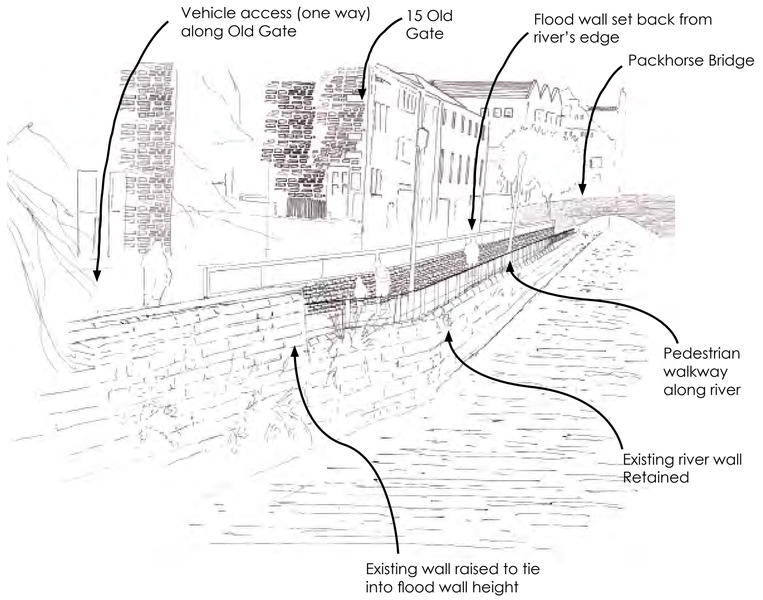

**View from riverside walkway close to the wavy steps looking towards West End Bridge.**



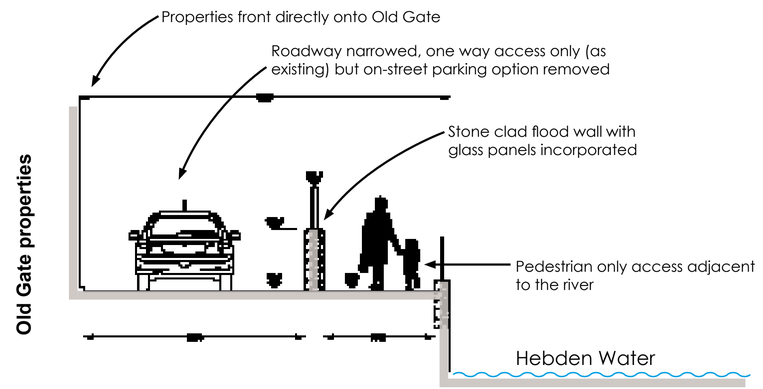

**Section showing extension of existing river wall with part stone clad flood wall and part glass.**

- Part-stone clad flood wall and part flood glass
- Relocation of on-street parking and creation of shared space

**Option 2 - Old Gate: New flood wall set 1.8m back from existing river wall, with glass panelling fixed on coping.**




**View from New Road Bridge towards the Packhorse Bridge.**




**Section showing new flood wall set 1.8m back from existing river wall, with glass panelling fixed to coping.**

- Part stone clad flood wall and part flood glass
- Pedestrian walkway adjacent to river

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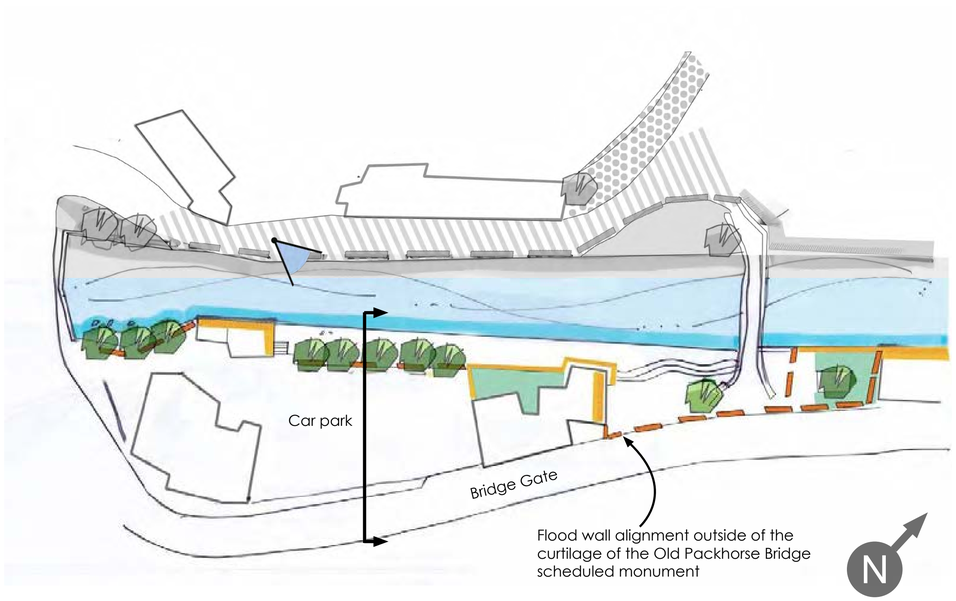
# Indicative sketches - Bridge Gate: St Pol's Car Park




Existing walls/buildings as part of potential flood defence

Existing trees retained

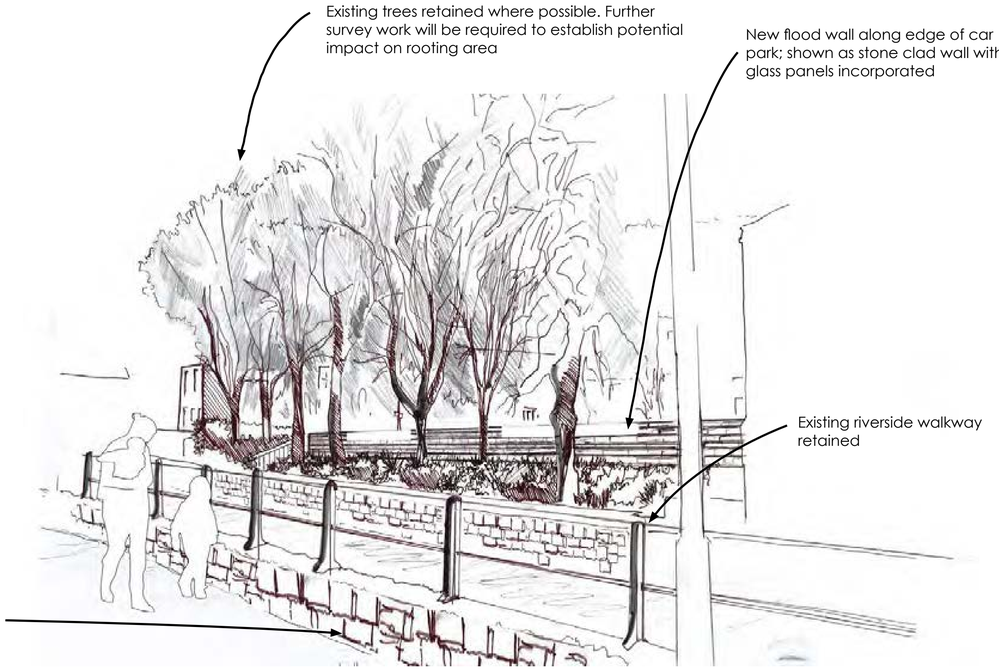
Existing trees potentially at risk of removal - further survey required to establish root extent and potential impacts

Potential flood wall and flood barrier alignment

Existing cafe terrace retained

Section line

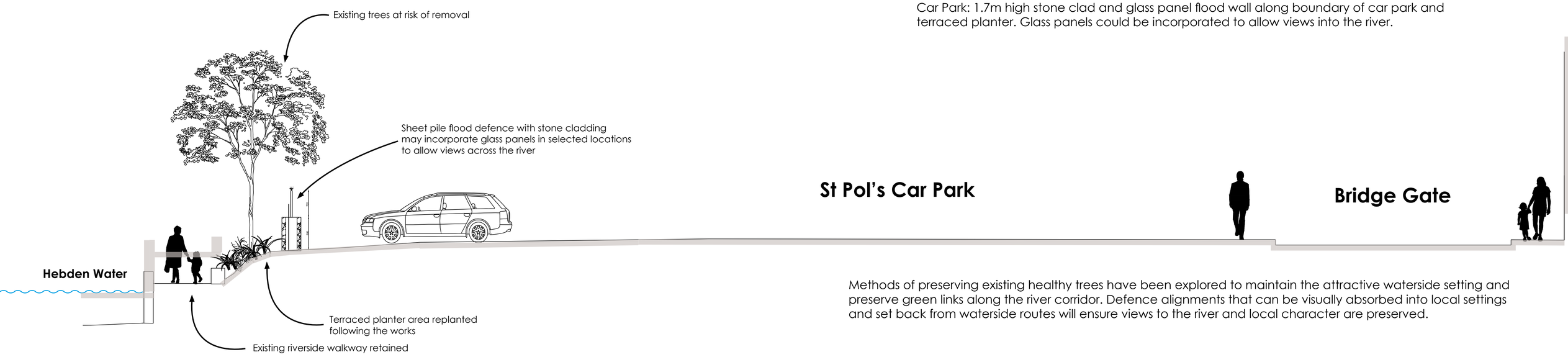
Sketch viewpoint




**View from Old Gate towards St Pol's car park**

Car Park: 1.7m high stone clad and glass panel flood wall along boundary of car park and terraced planter. Glass panels could be incorporated to allow views into the river.

## Indicative layout plan




**New flood wall set back from river, along boundary of terraced planter**

Methods of preserving existing healthy trees have been explored to maintain the attractive waterside setting and preserve green links along the river corridor. Defence alignments that can be visually absorbed into local settings and set back from waterside routes will ensure views to the river and local character are preserved.

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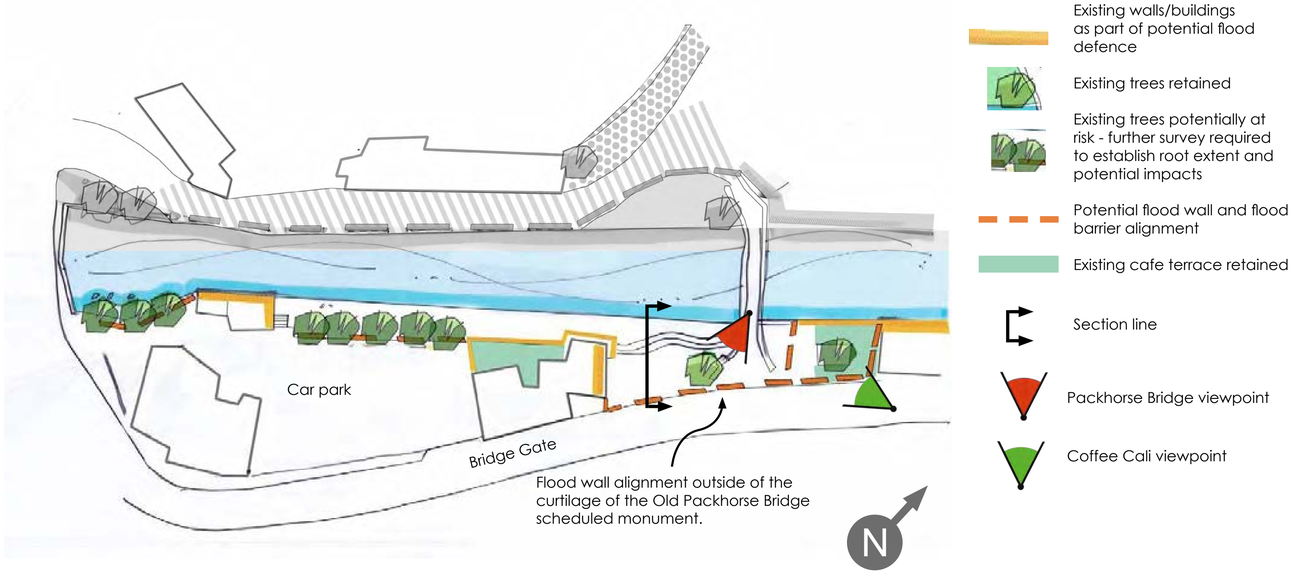
# Indicative sketches - Bridge Gate at the Wavy Steps




Existing walls/buildings as part of potential flood defence

Existing trees retained

Existing trees potentially at risk - further survey required to establish root extent and potential impacts

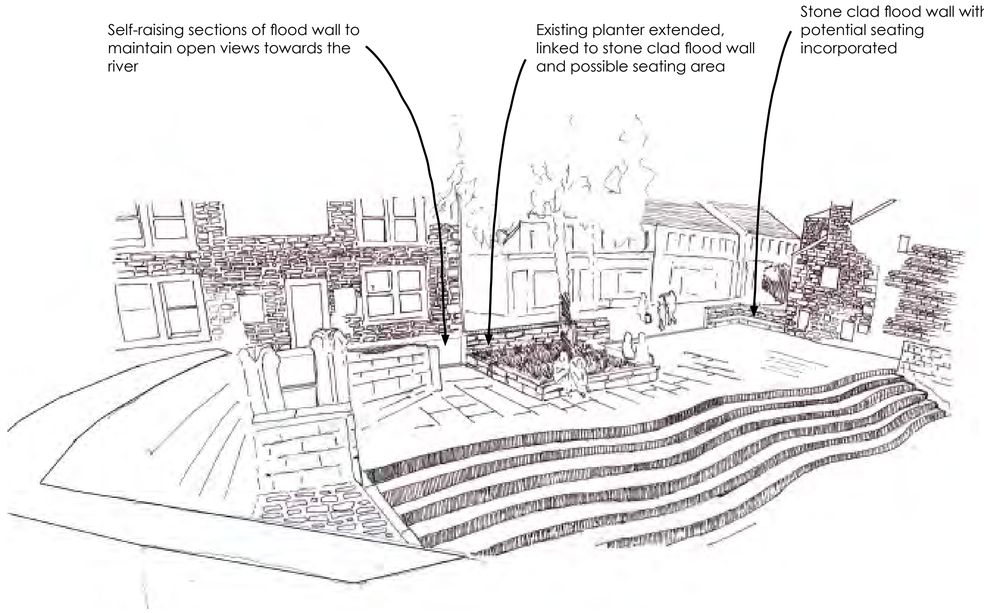
Potential flood wall and flood barrier alignment

Existing cafe terrace retained

Section line

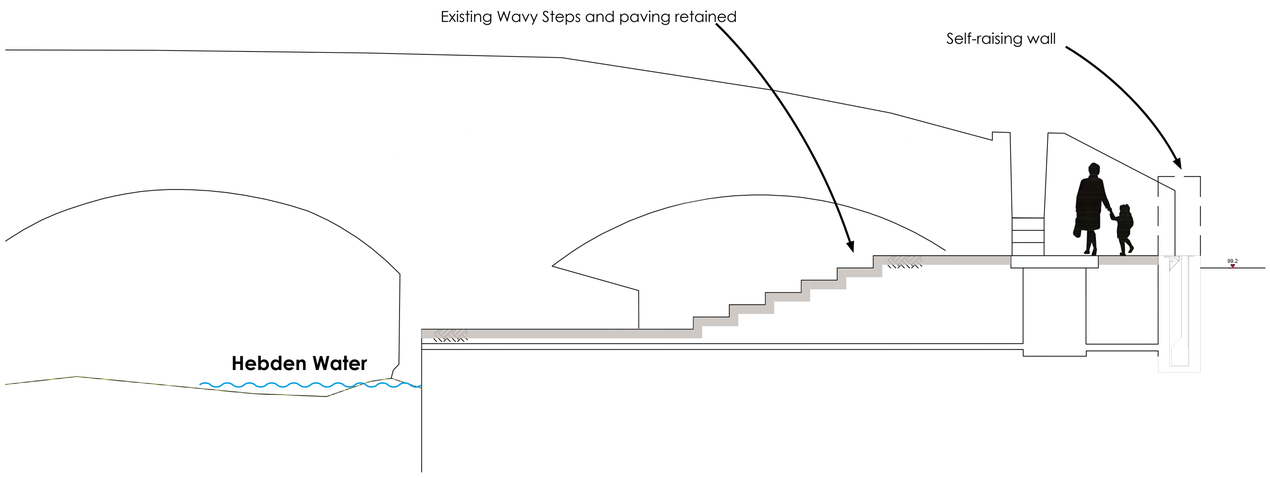
Packhorse Bridge viewpoint

Coffee Cali viewpoint



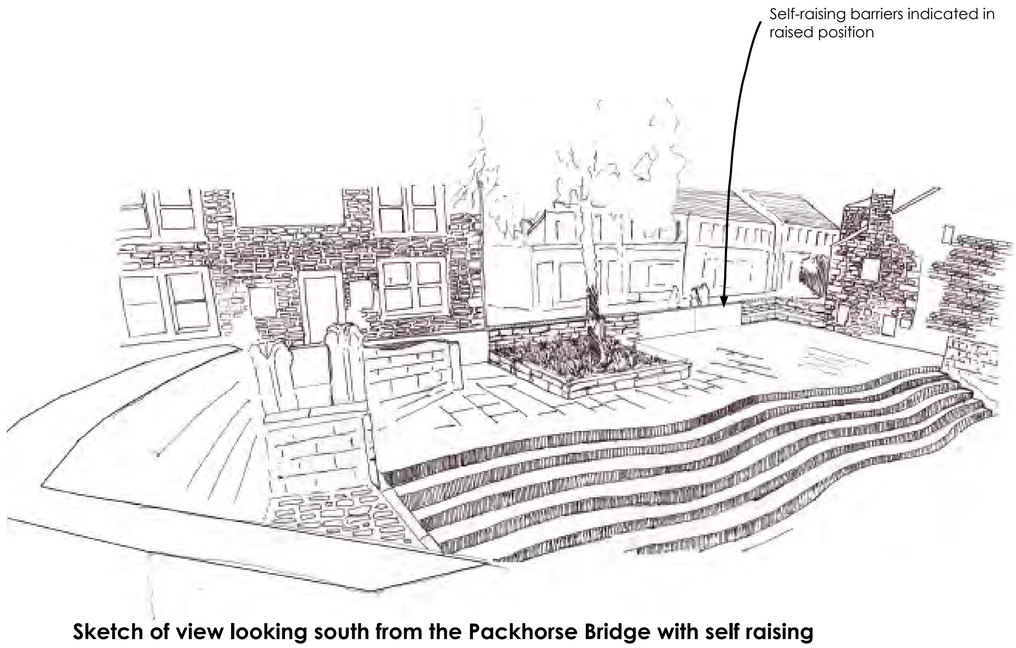

**Sketch of view looking south from the Packhorse Bridge with self raising barriers**

## Indicative layout plan




**Section of Wavy Steps showing self-raising barrier**

To maintain the open aspect and amenity value of the riverfront, defences could be set back and incorporate elements of seating with self raising sections in times of flood.




**Sketch of view looking south from the Packhorse Bridge with self raising barriers fully raised**

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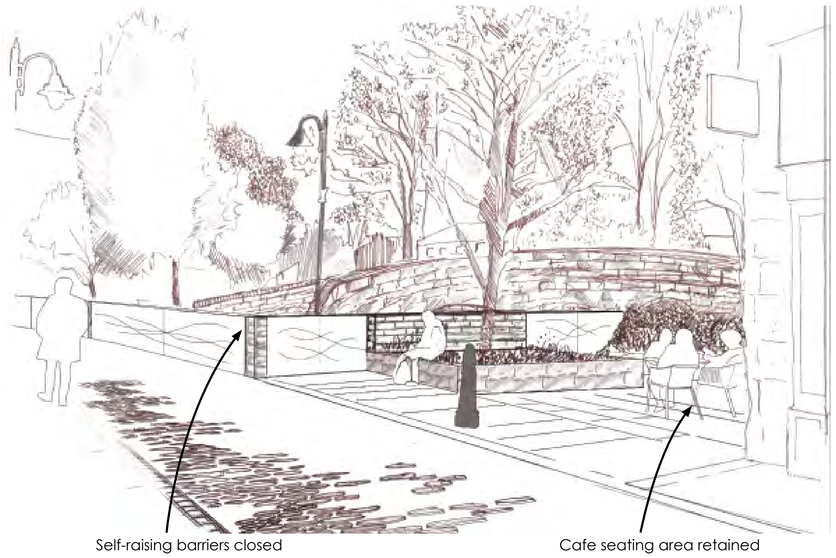
# Indicative sketches - Bridge Gate: Coffee Cali

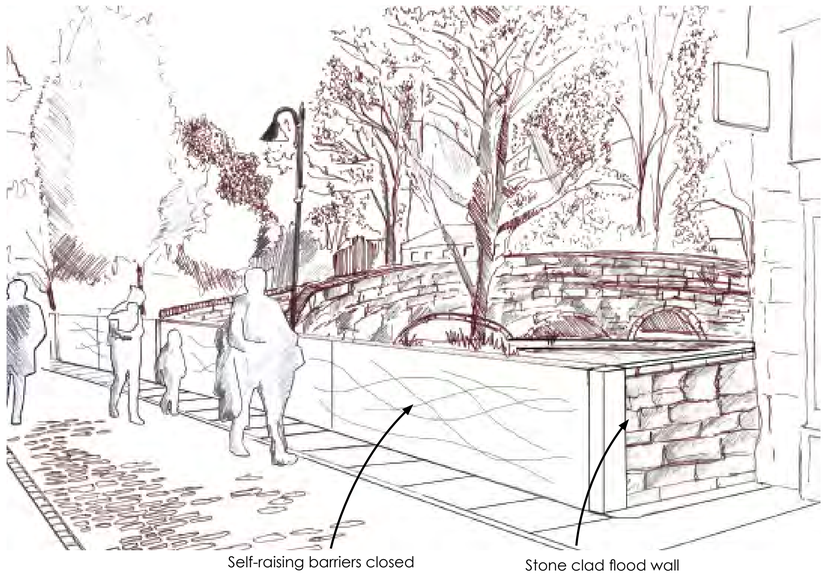
**Possible options along Bridge Gate and Packhorse Bridge - Conceptual arrangement from Bridge Gate toward Packhorse Bridge at Coffee Cali**


**Option 1 - Bridge Gate: Self-raising walls and fixed walls, showing the walls down.**


**Option 2 - Bridge Gate: Self-raising walls with fixed stone wall, showing the walls down.**




**Option 1 - Bridge Gate: Self-raising walls and fixed walls. Raising walls to be embedded in existing foot ways and entrances, with fixed stone walls to follow alignment of existing planting areas.**




**Option 2 - Bridge Gate: Self-raising walls with fixed stone wall. Raising walls embedded in existing foot way, with a fixed stone wall meaning that realignment of the foot way to be necessary.**

The visual and physical impact of defences around areas of public realm and amenity will be mitigated to maintain views, local character and function. Various options have been considered to help preserve and protect a unique waterfront setting.