

Vision

“Reduce flood risk and improve the riverside environment in Guildford to enhance wellbeing, support green growth and a sustainable future”



Objectives



Reduce flood risk to Guildford town centre, making it more resilient to climate change.



Develop a scheme in partnership which achieves positive outcomes for the environment



Build better connections between Guildford town centre and the River Way



GUILDFORD
BOROUGH



Environment
Agency



SURREY
COUNTY COUNCIL

The scheme



The **Environment Agency** has been working in partnership with Guildford Borough Council (GBC) and Surrey County Council (SCC) for several years to find a sustainable flood risk management scheme for Guildford.

Guildford has a history of flooding from the River Wey. Significant floods have caused damage to homes and businesses, as well as disrupting vital infrastructure such as roads and utilities.

The risk of flooding in Guildford will get worse with climate change and unfortunately, it's only a matter of time before we see another serious flood.


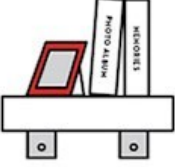


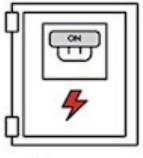




We want to ensure Guildford's communities are as protected as possible from the increased risk of flooding we'll see in coming decades. This is why we're working to develop a sustainable long-term flood risk management scheme for Guildford town centre.

The **Guildford Flood Alleviation Scheme** would reduce the high level of flood risk to the town centre. As well as directly benefiting residents, this will keep the city open for business in times of flood, helping protect Guildford's thriving economy.

Managing current flood risk



The Environment Agency has well tested flood-protection plans in place for Guildford, working with others, including the fire service and Surrey County Council, to help those at greatest risk. We encourage people to check their own flood risk and sign up for Environment Agency flood alerts.

FLOOD ALERT PREPARE	FLOOD WARNING ACT	SEVERE FLOOD WARNING SURVIVE
 <p>Pack medicines & insurance docs</p>	 <p>Move things upstairs or to safety</p>	 <p>Follow emergency services' advice</p>
	 <p>Turn off gas, water & electricity</p>	 <p>Immediate danger? Call 999</p>
 <p>Visit the flood warning information service</p>	 <p>Move family, pets & car to safety</p>	 <p>Stay safe</p>

We carry out annual river maintenance on the River Wey which includes vegetation management, removal of blockages and weir maintenance. This helps the river flow freely and reduces the risk of flooding to communities.

You can sign up to get flood warnings if your home or business is at risk of flooding. The service is free>>

<https://www.gov.uk/sign-up-for-flood-warnings>

Managing current flood risk



We have a temporary defence management plan for Guildford, covering Mary Road and William Road. This tells us how temporary flood barriers could be put up to protect homes and businesses in this location if property flooding is expected. The temporary defence plan was successfully deployed in December 2019 and February 2020 when flows in the River Wey were high.

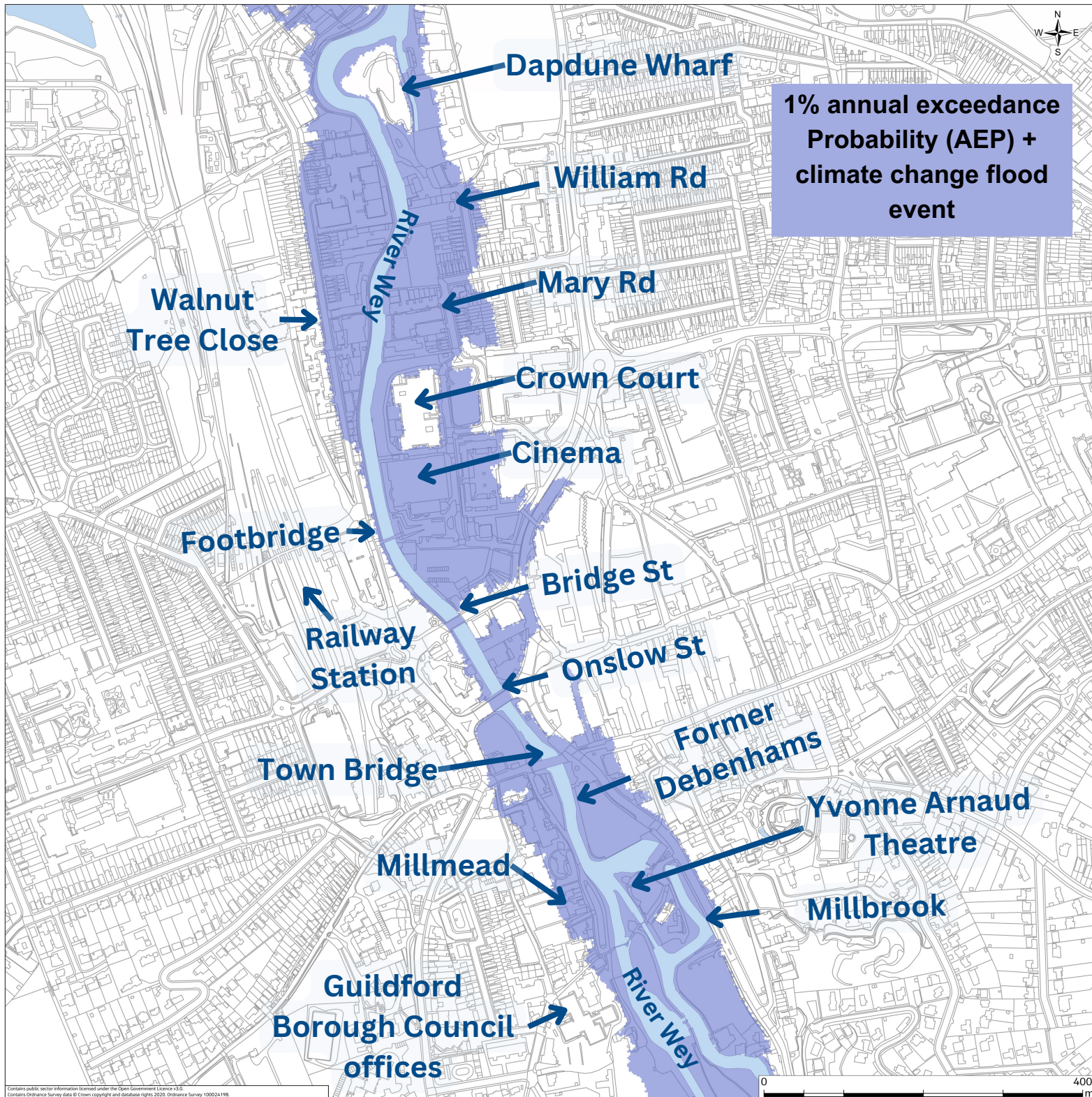


Temporary flood barrier deployment.
Guildford, Mary Road, 2020

Temporary barrier deployments are subject to site safety assessments and the resources and forecast lead time available at the time of flooding.

A permanent scheme will reduce the need for temporary flood barriers to be used each time there is a risk of flooding in Guildford town centre. It will reduce the reliance on human decision-making and availability of resources and staff to deploy barriers. It will give residents peace of mind that a solution is in place whenever flooding may be likely to occur.

Current flood risk



This map shows the extent of land that would be impacted by a significant flood that has a 1% or more chance of happening in any given year. This flood extent also considers climate change predictions.

The last significant flood event in Guildford, classified as having a 1% chance of happening in any given year, was in 1968. Our upcoming appraisal will assess different scale flood events. Our ambition is to design a scheme that will manage a flood event of this size while considering the impacts of climate change. Our formal appraisal process will determine the level of protection that can be provided.

Impacts of flooding



Risk to life due to obscured waters edge and unclear depth of water



Flooding to properties causing stress and financial damage



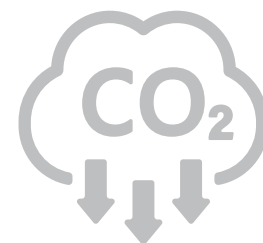
Loss of recreational facilities due to flood damage



Disruption to travel routes including flooded paths, roads and train stations



Loss of earnings for local business impacted by floods due to either flooding on premises or disruption to travel routes



Pollution, both from the floodwater itself and the carbon intensive clean-up required to repair after a flood

So far we have...



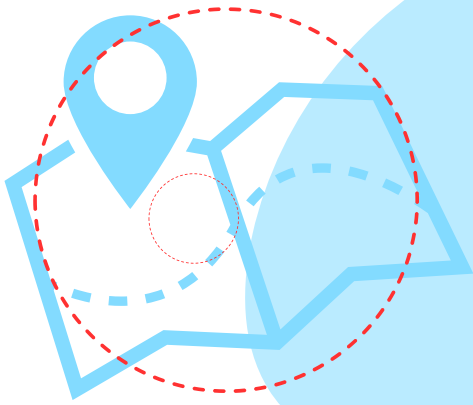
Shared early scheme proposals at our public drop-in event at the Guildford Borough Council Millmead offices in 2018

Used feedback from the public drop-in to inform further scheme design and integration with Guildford Borough Council's regeneration aspirations



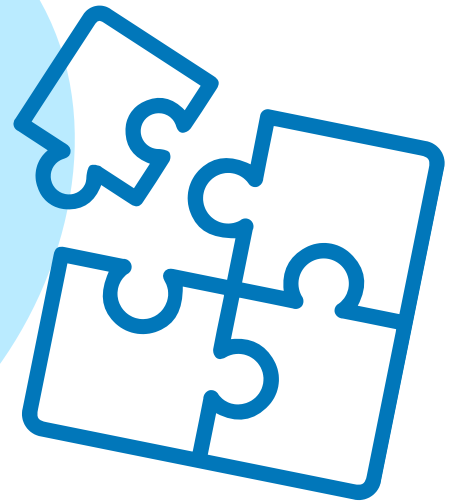
Progressed work to establish a technical solution that meets Guildford Borough Council's requirements and does not transfer risk elsewhere

So far we have...



Identified a larger area which could benefit from flood defences. The design options now include 2.8km of flood defences that will be visually integrated into existing and regenerated areas of the river corridor, reducing flood risk to even more of the town centre

Included our latest proposals in the Guildford Borough Council Town Centre masterplan stage 2 report. You can view this on the Guildford Borough Council Town Centre website



Confirmed the Strategic Outline Case (a document detailing the need for a scheme from a business perspective) meaning we have secured funding to further develop the scheme



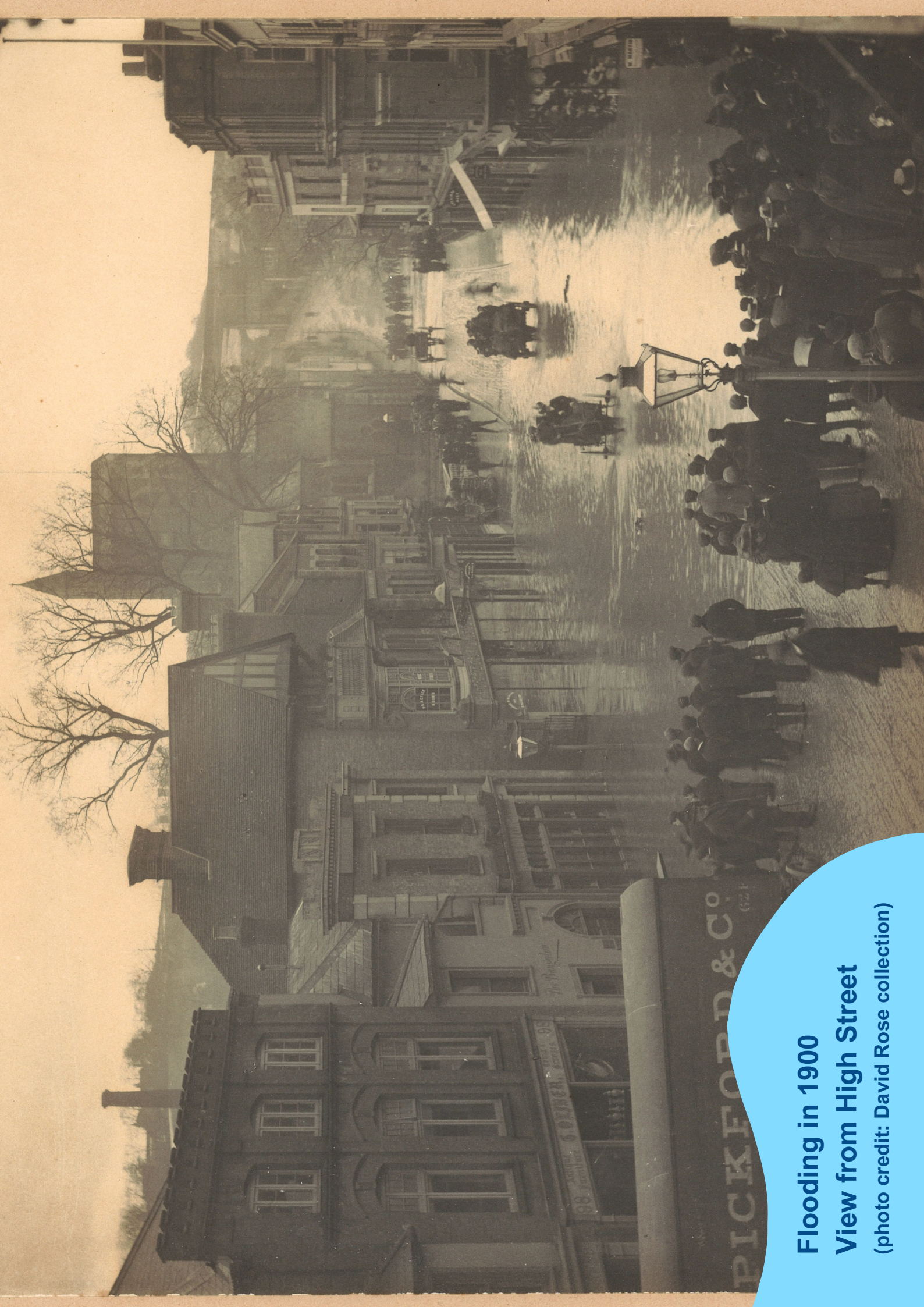
Flooding at Odeon Cinema, 2000
(photo credit: Tony Harrison, 2000)



Flooding in 2020
(photo credit: Dan Hannington, 2020)



Flooding in 2020
(photo credit: Dan Hannington, 2020)



Flooding in 1900
View from High Street
(photo credit: David Rose collection)



Flooding in 1900
Destruction of Town Bridge
(photo credit: David Rose collection)

**The flooding in 1968 was a
'1 in 100 year' flood event,
meaning a flood of this size
has a 1% chance of happening
in any given year.**



**Flood level measuring the peak of the
1968 floods (Colin Smith / Flood Level
Mark, Guildford / CC BY-SA 2.0)**

Aerial view of Guildford



**Aerial view of Guildford -
Upstream**



**Aerial view of Guildford -
Central**



Aerial view of Guildford - Downstream



Areas of investigation



The green line shows the indicative location for the flood defences. The height, type of defence & final location will be established as part of the upcoming appraisal work.

The flood defences could be in different forms and design. Examples of similar projects are at this event. The intention is that the design will be sympathetic to the surrounding environment.

To meet project objectives, we will be considering a variety of proposals, including land lowering, green spaces and other works. Purple shaded areas indicate these areas of investigation.

Potential alignment



The potential alignment has been developed through our initial checks to understand if a flood defence through central Guildford was technically possible.

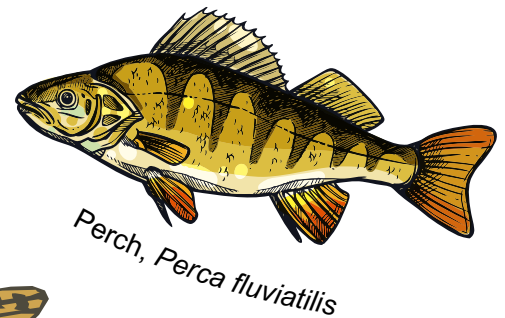
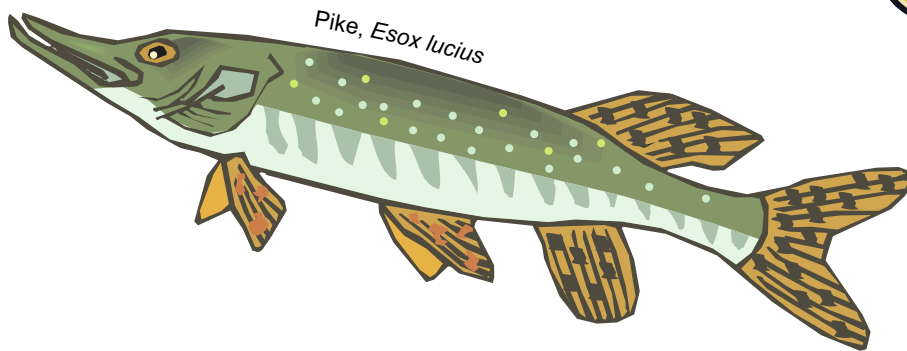
This involved looking at where there are opportunities for the land to be redeveloped replacing the existing buildings or structures with new ones that incorporate flood defences. However, at some locations there is limited space and defences will need to be closer to the river.

Where possible having defences set back from the river allows for space for water to flow on the flood plain during times of high river flow. There are also some areas to the west of the river where there are no proposed defences. This is due to the area having a lower flood risk as the ground is higher.

As part of our appraisal work, the height, size and final location for the defences will be established. We'll be holding further public events where we will share more detail with you and will be asking for feedback and comments on our developing proposals.



Fish passes on the Wey



There are a number of fish species in the River Wey, including chub, trout, roach, perch and pike. They are essential for keeping the ecosystem balanced and maintaining river health.

Numerous weir structures have been built on the River Wey over the centuries. This has created significant obstacles to fish passage.

Guildford Flood Alleviation Scheme is considering 2 new fish passes, upstream of Guildford. Locations are:

- St Catherine's Weir (near Shalford)
- Unstead Weir (near Peasmarsh)

Fish passes allow fish to safely navigate through structures such as weirs, enabling them to move freely throughout the river to breed, feed and find refuge. Naturalistic type fish passes also enhance the river by providing lengths of high-quality habitat.

These 2 fish passes are part of a wider programme of Environment Agency works along the River Wey. The objective is to enable fish to migrate freely between its confluence with the Thames to the junction of the North and South Wey at Tilford, thereby providing access to over 100km of river. The 2 new fish passes would be the final pieces to complete the River Wey fish passage jigsaw.

Fish passes on the Way



Examples of fish passes



Buckfast Abbey fish pass, River Dart, South Devon



Burpham Court Farm fish pass, River Wey



Fish and eel pass on River Wey, Thames confluence

Next steps



We will continue to explore a flood risk solution for Guildford.

We will consider feedback from public events to help inform design as the scheme progresses. We will continue to engage with landowners.

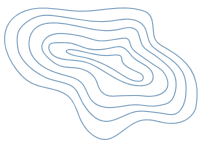


We will look at how to sustainably manage surface water flood risk by working with:

- Guildford Borough Council
- Surrey County Council, the lead local flood authority
- Thames Water



We will carry out activities that will improve our understanding of the area. These activities include:

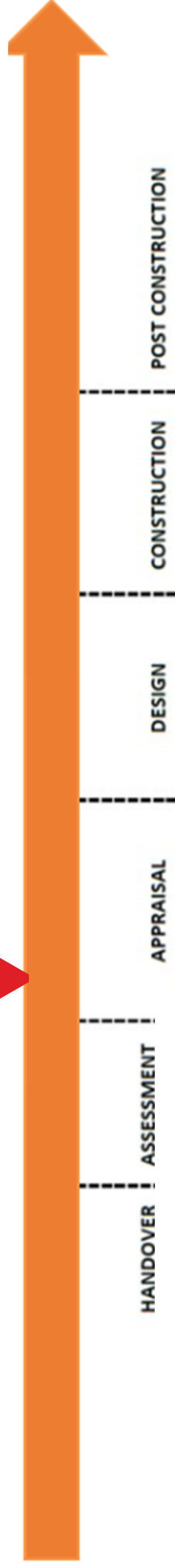


- ground investigation
- topographic surveys
- environmental surveys

We will be holding further public engagement events as we develop the scheme further.



Timeline



We are beginning a detailed appraisal stage to identify a preferred option. We expect this stage to last at least 2 to 3 years.

The type and height of flood defences will be agreed during the appraisal stage, and we will engage with the community once options are available.

The scheme can only be built once a combination of funding has been secured.

Keep in touch



guildfordfloodscheme@environment-agency.gov.uk



[@GuildfordFS](https://twitter.com/GuildfordFS)



www.consult.environment-agency.gov.uk/thames/guildford-flood-alleviation-scheme




Scan for smartphone
access to our website

**Please email us
or speak to a
member of our
team to sign up to
our newsletter**



Examples of other Environment Agency schemes





Shoreham Sea defences has integrated the use of South Downs flint, a local material, into the flood defence wall.

In Kings Lynn, benches form part of the defence itself, and can be folded up to create a flood wall during periods of high rain fall.



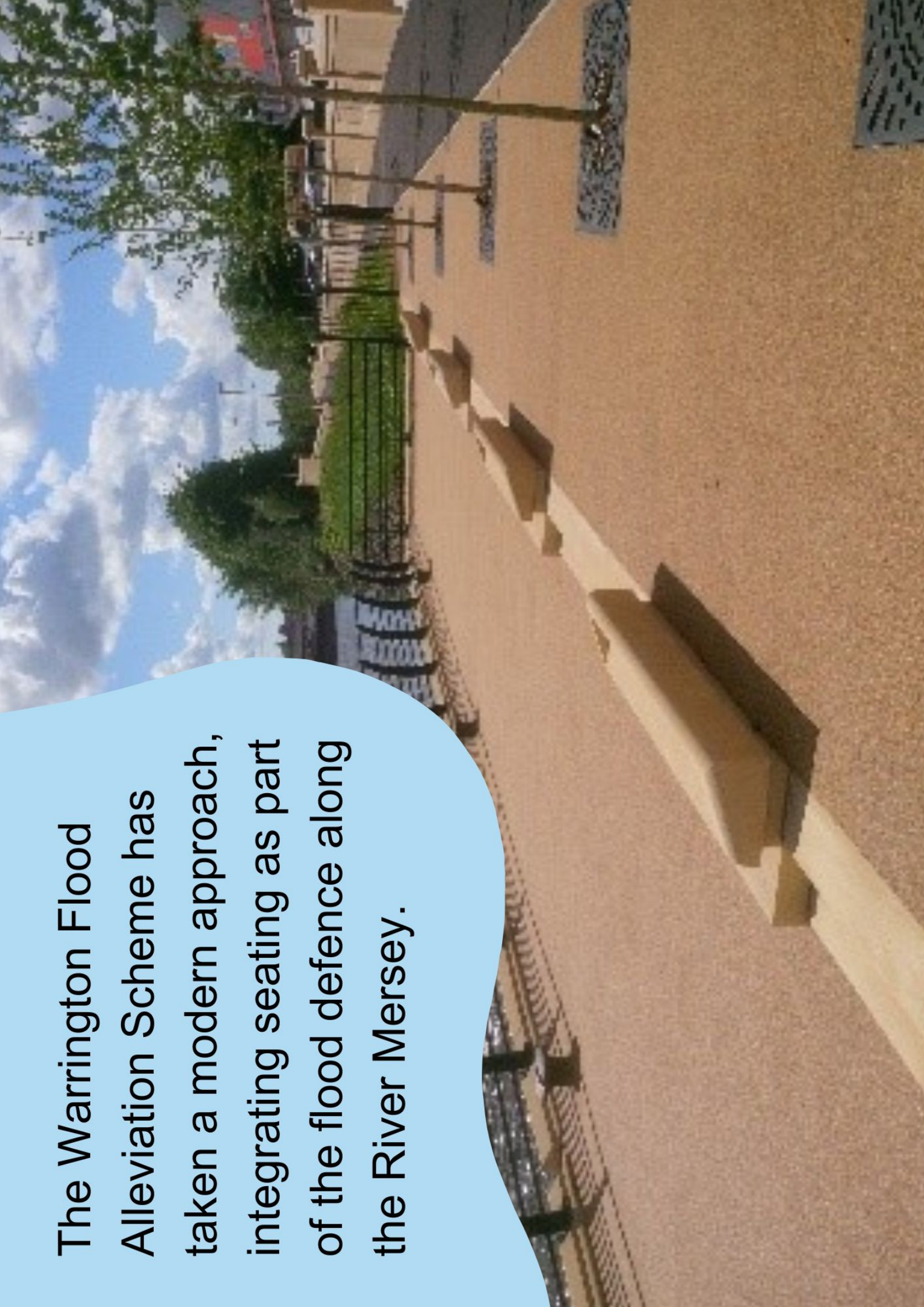


School children were invited to design 'nature art' installations on a flood defence scheme on the River Mersey.



In St Ives, Cambridge, benches have been built into alcoves for the public to use to relax and enjoy the river.

The Warrington Flood Alleviation Scheme has taken a modern approach, integrating seating as part of the flood defence along the River Mersey.



This flood scheme in Sandwich has set back the flood defences, enabling increased access to the riverside

