

Enabling a thriving economy

The Oxford Flood Alleviation Scheme will reduce flooding to local businesses



“Oxford is one of the fastest-growing economies of all UK cities and is home to around 5,300 businesses and provides 133,000 jobs. This scheme will help to safeguard Oxford’s reputation as a dynamic and diverse economy. The scheme will help to keep Oxford ‘operating’ during times of flood and will allow this successful economy to continue to thrive.”

Nigel Tipple — Chief Executive
Oxfordshire Local Enterprise Partnership

Flooding is the most common and widespread natural disaster in the UK. Since 1998 there has been at least one serious flood every year in the UK.

Businesses in the UK are more likely to be flooded than destroyed by fire. As our climate changes, we can expect to see more extreme weather and more floods.

Oxford is particularly vulnerable to flooding. Several floods in recent years have closed the railway line and roads in the city, causing travel disruption and impacting the city’s economy.



Helen Road and the railway tracks during the 2007 floods.

Oxford has a long history of flooding. With climate change, floods are expected to become more frequent and more severe. The Environment Agency is leading a major partnership project to bring a new long term flood alleviation scheme to the city. The Oxford Flood Alleviation Scheme will benefit a large number of people who live, work in and visit the area.

The scheme will reduce flood risk to homes, businesses and vital transport links in Oxford and the surrounding area.

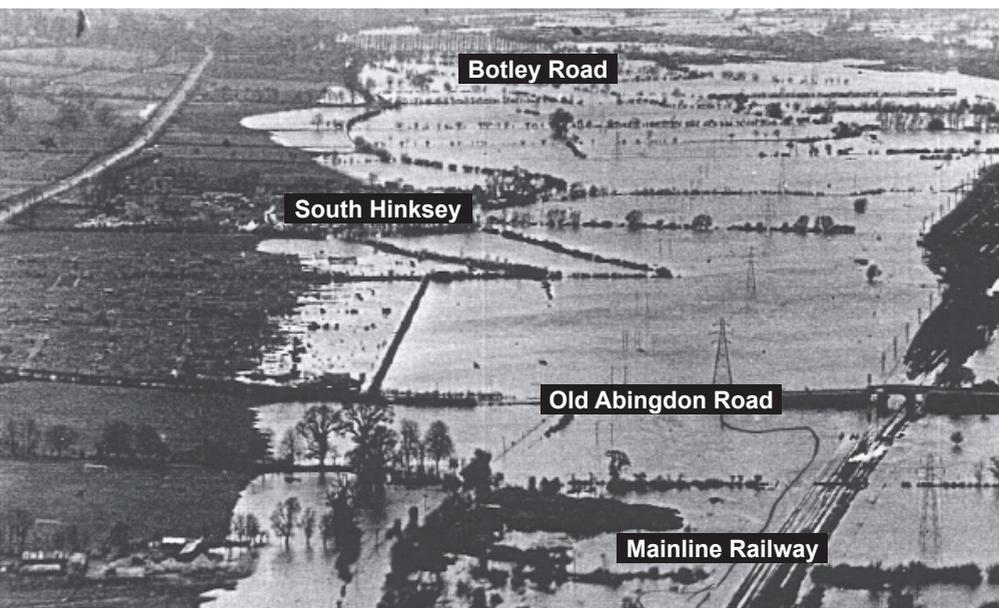
The scheme will help keep the city open for business in times of flood, helping to safeguard Oxford's world class reputation and thriving economy. Oxford has over 5,000 businesses, with almost 50,000 people commuting into Oxford for work. Reducing the long term impacts of flooding on this workforce will be a major benefit of the scheme.

10 scheme partners

- Environment Agency
- Oxfordshire County Council
- Oxford City Council
- Vale of White Horse District Council
- Thames Water
- Thames Regional Flood and Coastal Committee
- Oxford Flood Alliance
- Oxfordshire Local Enterprise Partnership
- University of Oxford
- Highways England

“This is a major scheme. When complete it will reduce flood risk to homes and businesses across Oxford, and protect vital infrastructure. Along the floodplain, we will create a new wetland wildlife corridor to the west of Oxford, leaving local communities with a cherished asset, which benefits people and wildlife for generations to come.”

Joanne Emberson Wines — Project Director
Oxford Flood Alleviation Scheme



Oxford 1947 flood, picture taken 6 days after the flood peaked.

Why Oxford needs a flood alleviation scheme

Several recent floods have caused property damage to homes and businesses and closed the railway and major roads, bringing the city to a standstill. Properties were flooded in 7 of the years between 2000 and 2014. These floods have not been anywhere near the size and impact that we expect to see in coming decades due to climate change. This means we have designed the scheme to cope with floods of a major scale, of a size last seen in Oxford in 1947.



Botley Road and Abingdon Road are closed and under water during the Oxford 2014 flood.

A history of flooding in Oxford

1947

Catastrophic floods engulfed Oxford, affecting over 3,000 properties. Aerial photographs a few days after the flood peak show the west of Oxford appearing like a giant lake.

The 1947 flood gives a sense of what a major flood looks like.



2014

Businesses on Abingdon and Botley Roads were flooded. These roads were closed for 11 and 5 days respectively. The railway line through Oxford flooded and was disrupted for 11 days.

The indirect impacts on employment, retail and leisure caused by the disruption during this period has been calculated to be £45 million.



2007

The Botley and Abingdon Roads and the railway were flooded and closed for more than 5 days, bringing wide travel disruption to the city.

Businesses on Botley and Abingdon Roads were flooded.



The future

It's only a matter of time before Oxford is once again inundated by flood water.

A flood on the scale of 1947 would be catastrophic for Oxford today and would have a devastating impact on businesses and commerce in the city.

Climate change means that floods on the scale of 1947 are predicted to become more frequent.

PARK & RIDE



TRAFFIC DIVERTED



ROADS CLOSED

BOTLEY ROAD



TOURISTS PUT OFF



CITY CENTRE



NORMAL LIFE AFFECTED



BUSINESSES CLOSED

RAILWAY LINE

TRAINS STOPPED

JOURNEY TIMES INCREASED



A34



HOMES FLOODED



ABINGDON ROAD



PARK & RIDE

SHOPS CLOSED

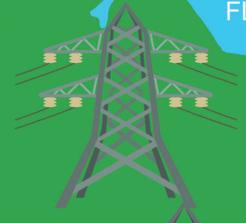


PATHS CLOSED



A423

UTILITIES AFFECTED



When Oxford floods, Oxford and Oxfordshire suffer

Businesses and homes flood

Businesses and homes in Oxford are at risk of flooding. Abingdon Road, Botley Road and the Osney Mead Industrial Estate are the main areas at risk for businesses.

City wide disruption

Flooding impacts the electricity, water and telecommunications systems, vital for keeping businesses operating. Abingdon and Botley Roads, as well as the railway line, have been closed in recent floods. Local traffic is disrupted and diverted onto other routes, causing transport disruption elsewhere. Customers and employees struggle to get where they need to be.

Commuters and tourism impacted

7 million people visit Oxford every year. Tourism brings a total turnover of £782 million per year to the city's economy. Over half the workforce in Oxford commutes from outside the city, so closure of major transport routes can have a major impact on business as employees struggle to get to work.

People affected

Flooding has a major impact on people's long term mental health. The trauma of having to leave your home for many months, damage to property, loss of treasured possessions and the stress of rebuilding lives are all part of the devastating effects of flooding. Other causes of anxiety can be from media attention during the flood, school closures and difficulty accessing medical services.



Regional and national impacts

The economic impact of flooding spans wider than Oxford itself. Disruption in the city has a considerable effect across the county. Around a third of Oxfordshire's jobs are in Oxford. Congestion in the city diverts additional traffic onto the A34 and A40. The railway line through Oxford is a strategic freight route from the Midlands to the Port of Southampton.



Allotments under water during the 2014 flood.

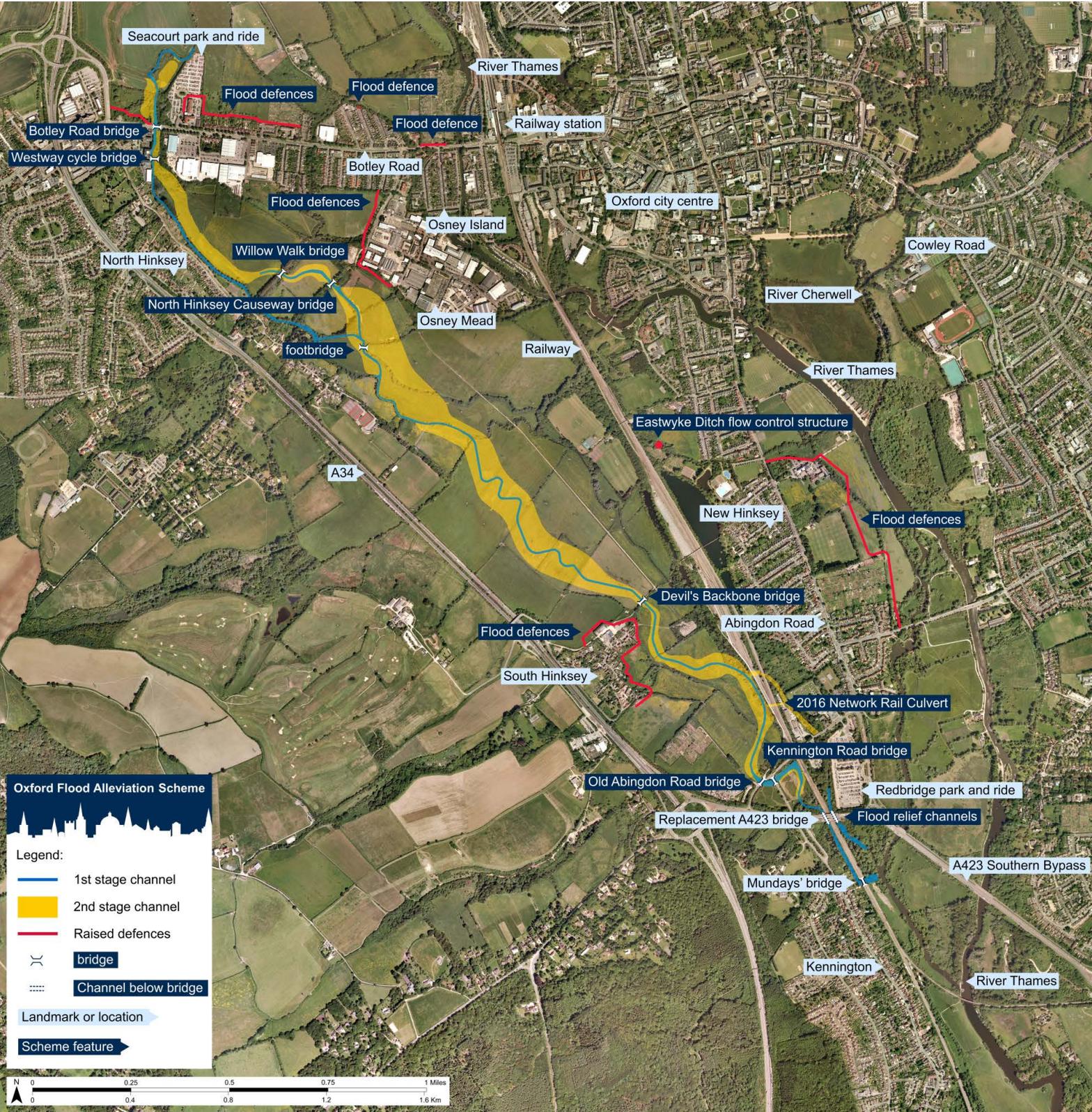


Vicarage Lane during the 2007 flood.

The Oxford Flood Alleviation Scheme

Approximately 5km long, the scheme will run to the west of the city. It has been sensitively designed to work with the existing floodplain and natural environment.

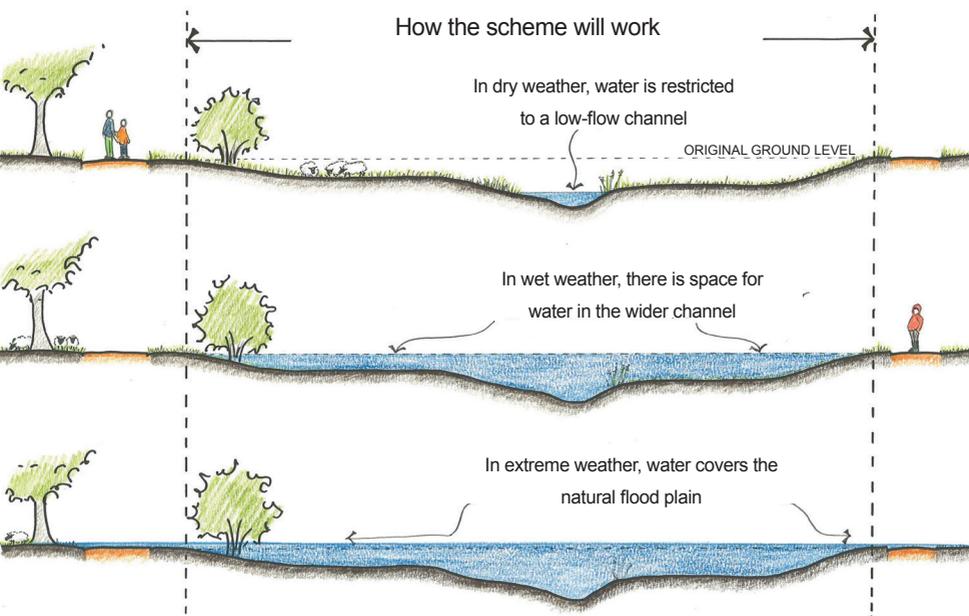
The scheme will run from just north of Botley Road, down to south of the A423 near Kennington, where it joins the River Thames. Most of this area is farmland and flood meadow. We will lower part of the existing floodplain here to create more space for floodwater away from built-up areas.



Map showing proposed scheme area, which may be subject to change.

How the Oxford Flood Alleviation Scheme will work

Some existing rivers and streams will be widened and we will create a new stream together with a wider, shallower area alongside it that will be dry most of the time. This will be seeded to create floodplain grazing marsh. In this way the scheme will look and behave like a natural river, with vegetation established on its banks and wetland habitat alongside it. The scheme will blend into the surrounding fields and landscape features such as pools and backwaters will further help increase biodiversity.



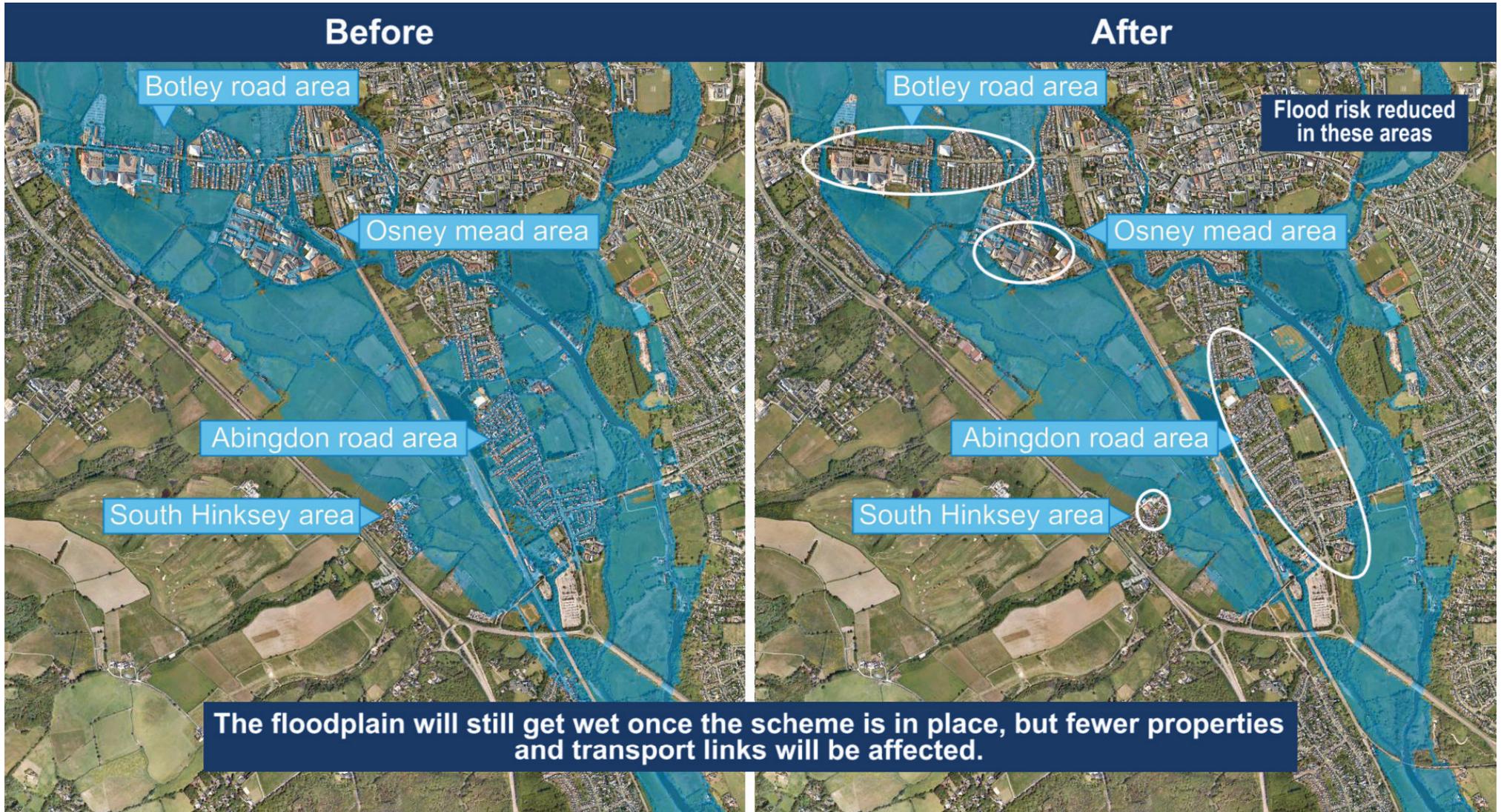
When water levels in the River Thames are high, the new stream and lowered ground create more space for floodwater away from the city, reducing flood risk in built up areas.

In some areas, new structures are needed to complement the new channel.

- New and replacement bridges will be built where footpaths and bridleways need to cross the new channel.
- Culverts will be needed in the south of the scheme to allow water to pass under main roads and the railway line.
- In some places permanent defences are needed to reduce risk to properties which would otherwise still flood. These will be a combination of earth embankments and flood walls.



Visualisation of the view across Hinksey Meadow towards Willow Walk before and 3 years after the Oxford Flood Alleviation Scheme is completed.



Flood outlines before and after the scheme is in place during a severe flood.

What can the Oxford Flood Alleviation Scheme do for me?



BUSINESS OWNER

I don't have to worry about reduced productivity in times of flood as I can rely on deliveries still having access along the road and rail routes.

I know my staff won't have to suffer the mental health impacts of being flooded again.

I don't have to go through the stress of assessing flood damage to my business.

I can easily work from home now my electricity, water and internet still work during a flood.

My home is at reduced risk of flooding. It's less likely that I will need time off work to deal with the impact of flooding.

I won't have to take time off work because my children can't get to school.



EMPLOYEE



CUSTOMER

I can place important orders with businesses in Oxford and be sure they won't be delayed due to flooding.

Now I don't have to worry about transport being disrupted, I can enjoy shopping locally.

In a flood I can carry on using local services.

I no longer worry about reduced footfall to my shop during floods.

I'm not worried that my customers will go elsewhere to shop during a flood.

I'm happy that my staff can safely get to work during a flood.



SHOPKEEPER

How the Oxford Flood Alleviation Scheme benefits your business

Reduced flood risk

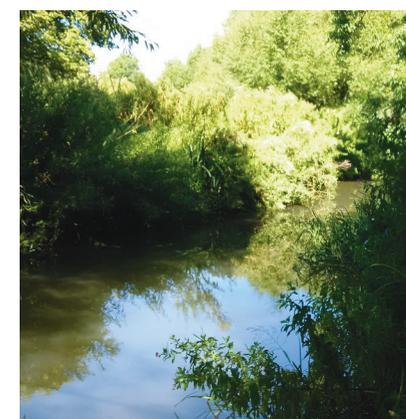
- Businesses in Oxford currently at risk from flooding from the River Thames will see their flood risk reduced once the scheme is in place.
- Reduced flood risk could result in lower insurance premiums for business.
- Staff living in flood risk areas will benefit from improved peace of mind and are far less likely to need time off work during flooding.

Safeguarded infrastructure and services

- Key transport routes will remain open during flooding allowing staff, deliveries and customers to reach businesses.
- The city's tourism sector will be safeguarded as visitors can still get into the city.
- Vital utilities such as water, electricity, telephone and internet, critical to the operation of businesses, will be at reduced risk during flooding.

Improved environment

- The scheme will create over 20 hectares of new wildlife habitat.
- The scheme will improve footpaths and create opportunities for everybody to enjoy the unique local environment and improve their overall health and wellbeing.
- A long term Environmental Vision for the scheme involves creating a wetland wildlife corridor to the west of Oxford. This will leave local communities with a cherished asset, which benefits people and wildlife for generations to come.



Constructing the Oxford Flood Alleviation Scheme

The construction of the scheme will involve building bridges, culverts and removing material from the floodplain.

Highways England and Oxfordshire County Council, the local Highway Authority, are partners on the scheme. They are making sure any temporary impacts on roads during construction are kept to a minimum. A haul road connecting different areas of the construction site will be built within the scheme area to reduce the need for lorries to drive on local roads. There will be some additional lorries using Botley Road for a short period. Botley and Abingdon Roads will not be closed and businesses will remain open as usual.



Artist impression of Willow Walk Bridge 15 years after the Oxford Flood Alleviation Scheme is complete.

“The Oxford Flood Alleviation Scheme will bring huge benefit to everyone who lives in, works in or visits Oxford. As well as reducing the flood risk to homes in west and south Oxford, the scheme will also protect the railway line and Botley and Abingdon Roads – keeping Oxford open for business during times of flooding. A project of this scale and scope would not be possible without effective partnership working, and all the partners have now been working together on this scheme for many years to help reduce the risk of devastating flooding for Oxford residents and businesses.”

Cllr Hollingsworth — Oxford City Councillor

What can you do now?

Check your flood risk and resilience

- Check your flood risk online at www.gov.uk/check-flood-risk or phone the Environment Agency's Floodline on **0345 988 1188**.
- Sign up to receive flood warnings by phone, email or text message.
- Assess how prepared your business is for flooding. Consider writing a flood plan for your business to outline what you would do in the event of a flood. You can obtain guidance from the Environment Agency on producing a flood plan online.
- Ask your employees to be ready for a flood. Encourage them to consider how they would work in a flood, and how they would protect their homes and families.

Share your experience

- We would like to hear from you if you have ever been flooded. Let us know how it affected you, or how you prepared. Please email your flood experiences to OxfordScheme@environment-agency.gov.uk

Support the Scheme

We greatly appreciate your support for the scheme. Here's how you can help us:

- Follow us on Social Media. We're on Facebook, Twitter & Instagram.
- We are very grateful to the local businesses that have contributed to the scheme. If you would like to make a financial contribution or find out more about how your business can get involved please speak to us or get in touch at OxfordScheme@environment-agency.gov.uk. Your company could claim tax relief on the contribution you make.

“I own a property on the Osney Mead Industrial Estate which flooded in the 2007 summer floods. I wanted to make a contribution towards the Oxford Flood Alleviation Scheme as I see it as a protection of my investment.”

Mr Denton — Owner
Denton Holdings

“We're delighted to have played our part in helping to secure the funding for this essential project. Being flooded is a truly horrific experience and through this excellent partnership, we can now reduce that risk for thousands of homes and businesses.”

Yvette de Garis — Head of Environmental Regulation
Thames Water

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Oxford Flood Alleviation Scheme



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