



A case for investment





The River Thames from Datchet to Teddington charts a course through a regional economic powerhouse which is also the largest undefended floodplain in England. The River Thames Scheme is a major programme of flood defences and projects which promises stability and security for the area for generations to come and has already secured more than £250 million in funding. As a local MP and the Prime Minister's Flood Envoy for the Thames Valley, I'm delighted the Government has committed significant funding but further investment is needed.

This booklet highlights the devastating impact of flooding on communities and spells out the ways the scheme will help - making people and their homes safer, keeping businesses, motorways and airports running and protecting our water, electricity and telecommunications supply. I urge you to get behind this vital project to guarantee the future success of our region.

A handwritten signature in blue ink, appearing to read 'Philip Hammond'.

Rt Hon Philip Hammond MP
Member of Parliament for Runnymede and Weybridge
Secretary of State for Foreign and Commonwealth Affairs

To reduce flood risk to people living and working near the Thames, enhance the resilience of nationally important infrastructure, contribute to a vibrant local economy and maximise the social and environmental value of the river.

Benefits of the River Thames Scheme

The River Thames Scheme will:

- reduce flood risk to up to 15,000 residential properties;
- protect 100,000m² of commercial floor space;
- reduce flood risk to 50km of local and arterial road network and local railway lines and reduce the risk of disruption to nationally significant transport routes including M3, M4 and M25;
- enhance the resilience of the public sewer network, electricity sub-stations and local schools, and;
- offer a unique opportunity to enhance the landscape along the Thames corridor, and unlock recreation, tourism, leisure and environmental value along this iconic river.

We have secured more than £250 million in funding, but further investment is required from beneficiaries and partners for the scheme to proceed. This document sets out the case for investment in the River Thames Scheme as a key enabling project for the continued growth of this vital economic region.

economic powerhouse

The River Thames corridor has a vibrant economy and is part of a wider regional economic powerhouse for the United Kingdom. The economy of the Thames Valley is one of the highest performing in the country, producing a significant share of the UK's wealth. The area is a vital transportation corridor, including the M3, M4, M25, and Heathrow Airport, which provides a gateway to the world.

The boroughs and districts impacted by flooding are characterised by high levels of employment and a highly skilled workforce, with a particular focus on knowledge and technology-based industries.

This area is also home to major global businesses including BP, Samsung, British Gas, Shepperton Studios and BUPA, generating thousands of jobs for local residents.

Heathrow Airport had 471,000 flights serving 73.5 million passengers in 2014. Heathrow employs 76,000, and 15% of its total workforce live in the local authorities which are part of the River Thames Scheme. The airport creates £3.3 billion of Gross Value Added per annum, demonstrating the value of the airport to the economy, and the importance of the local workforce in ensuring business continuity at the airport.

The economic outlook for this area is strong. There is significant inward investment and infrastructure planned for the area over the coming decade. The River Thames is an iconic river and a focal point for tourism and recreation activities with a strong visitor economy, which also brings inward investment.

Natural landscape and heritage

The River Thames corridor is a busy and environmentally valuable landscape which is rich in heritage. It has many nationally important heritage assets such as Windsor, the Magna Carta at Runnymede and Hampton Court. The river is an important ecological corridor and is flanked by green space for those living and working in the south west of London and beyond. A number of lakes in the area have been designated as Special Protection Areas and there are also a number of Sites of Special Scientific Interest, including Thorpe Hay Meadow.



flood risk in the Thames Valley

Flooding is the primary source of natural disasters in the United Kingdom and the alarming regularity of flooding in recent years is consistent with climate change predictions. Flooding is devastating for individuals, communities, businesses and the local and national economy. It damages homes and businesses, endangers life and affects physical and psychological health. It reduces economic output and causes disruption to commerce, road, rail and other critical infrastructure.

The River Thames Scheme covers one of the largest and most at risk developed but undefended flood plains in England. There have been serious floods in this area over the past 100 years, with a notable extreme flood in 1947. Further large floods occurred in 1968 and in 2003. In January and February 2014 there was prolonged and widespread flooding with approximately 1,000 homes and many businesses affected. Much larger and more frequent floods will be experienced in the future and this will have an

“Our estimates indicate that the 2013/14 flooding in Surrey cost the local economy in excess of £100 million”
Leader of Surrey County Council

even greater impact on communities, infrastructure and the economy. The estimated economic impact of a major flood in this location is currently around £1 billion but damage could be twice as great by 2055 because of the impact of climate change.

A major flood in the area would put almost 15,000 homes and 1,300 commercial properties at risk across six districts and boroughs, with 11,000 employed people potentially affected. There would be widespread disruption on arterial, secondary and local roads, with motorway traffic affected on the M3, M4 and at intersections on the M25. Flooding would disrupt key rail routes and block access to nationally important infrastructure such as Heathrow Airport for employees and passengers. There could be a UK-wide impact because of disruption to motorways and Heathrow. 15 to 20 electricity sub-stations would be affected and there are risks of flooding to the public sewer network including disruption to households who may have toilet use restricted during a flood. The River Thames is slow to rise and fall and it takes weeks for flood water in this area to dissipate, prolonging the devastation to local communities.



the scheme



the scheme

The River Thames Scheme (Datchet to Teddington) is a programme of projects and investment to reduce flood risk in communities near Heathrow, including: Datchet, Wraysbury, Egham, Staines-upon-Thames, Chertsey, Shepperton, Sunbury, Kingston and Teddington. It is being developed and promoted by eight risk management authorities working in partnership, with the Environment Agency acting as the lead authority. The partners are Environment Agency, Elmbridge Borough Council, Royal Borough of Kingston upon Thames, London Borough of Richmond upon Thames, Runnymede Borough Council, Spelthorne Borough Council, Surrey County Council, Royal Borough of Windsor and Maidenhead, Enterprise M3 Local Enterprise Partnership, Thames Valley Berkshire Local Enterprise Partnership, Thames Regional Flood and Coastal Committee and Thames Water.

The vision for the River Thames Scheme has been developed to deliver flood alleviation in order to create safe and sustainable communities that can live with the river, whilst growing the local economy, and continuing to make a significant contribution to the national economy.

The scheme consists of a combination of measures to reduce both the probability and consequences of flooding. Elements of the scheme are listed below:

- large scale engineering work to construct a new flood channel between 30 to 60 metres wide and 17 kilometres long, built in three sections;
- improvements to three of the existing weirs on the River Thames;
- installation of property level products to hundreds of homes to make them more resistant to flooding;
- improved flood incident response plans, and;
- working with communities to raise flood awareness and support them in flood preparedness, response and recovery.

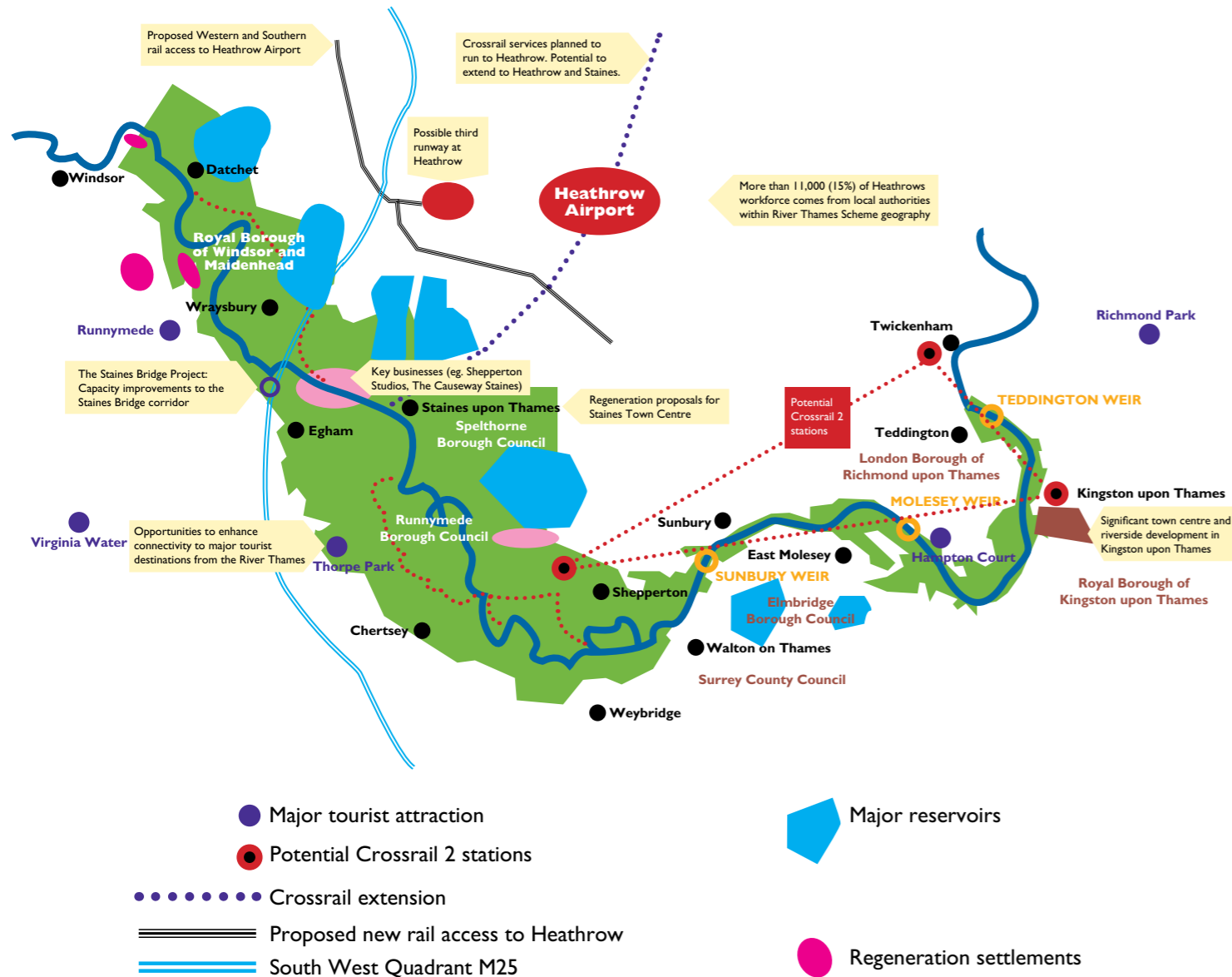
Scheme costs

The River Thames Scheme is expected to cost in the region of £475 million to construct. Currently, more than £250 million has been secured towards the construction, and we are seeking investment partners to provide funding contributions to realise the scheme and unlock the social, economic and environmental benefits.



- Protecting our communities**
 - Reducing flood risk and insurance costs
 - Making people and their homes safe
 - Protecting our water, electricity and telecommunications supply
- Securing our economy**
 - Keeping businesses running
 - Keeping motorways and airports running
 - Communities thriving
 - Encouraging new investment
 - Reducing potential severance of access to Heathrow
 - Encouraging new businesses
- Enhancing our Thames**
 - New opportunities for tourism, recreation, leisure and sport
 - Improving access to the river
 - Improving landscape and habitats

economic opportunities



This map considers the River Thames Scheme in light of the wider economic opportunities. The scheme forms part of the required inward investment in infrastructure to maximise economic growth. There are economic opportunities directly linked to the scheme and others which tap into wider infrastructure projects planned for the area. These include significant investment in road infrastructure by Surrey County Council and Highways England as well as the proposed southern and western rail access to Heathrow Airport and Crossrail 2.

There is regeneration planned for towns including Staines-upon-Thames, Kingston upon Thames, Windsor, Wraysbury and Old Windsor. They will all benefit from the reduction in flood risk as a result of the River Thames Scheme, which will further add to the attractiveness of the River Thames corridor for inward investment and economic growth.

The scheme will offer enhanced recreation opportunities along the River Thames and could improve visitor access to tourist attractions such as Windsor Castle, Hampton Court, Thorpe Park, Legoland, and Virginia Water.

the case for investment

The River Thames Scheme will reduce flood risk to thousands of people living and working in the River Thames corridor from Datchet to Teddington. Nearly 15,000 properties will experience a reduction in their current level of flood risk. In addition, the River Thames Scheme will reduce the risks to life posed by major flooding, reduce anxiety, stress and health impacts caused by flooding, and, reduce the costs for organisations in responding to, and recovering from, a flood incident.

The scheme will also protect nearly 100,000m² of commercial floor space which is at risk during a major flood incident. Flooding can lead to cessation of business operations, resulting in loss of income to inundated businesses and associated impacts on their supply chains. Business downtime due to flooding has a significant impact on local economies. The scheme will result in more than £100 million benefit to the local economy in Gross Valued Added terms, as documented in the River Thames Scheme funding strategy.

The resilience of critical infrastructure will be enhanced.

The road network in the River Thames corridor is heavily congested, which has been identified as a threat to economic growth. The River Thames Scheme will reduce flood risk to more than 50km of the local and arterial road network which will significantly reduce the repair costs associated with flooding and the major disruption it causes. The scheme will also reduce the risk of delays on the M3, M4 and M25 due to flooding, and reduce the risk of access to Heathrow Airport being affected.

Furthermore, the scheme will protect more than 1.75km of the railway line from Windsor to Staines-upon-Thames, which was flooded in 2013/14 causing significant disruption. The scheme will also enhance the resilience of the public sewer network, electricity sub-stations and local schools.

The scheme will be an enabler for sustainable development and economic growth. Since flooding from the River Thames impacts the local economy the scheme has been identified as strategic cross-Local Enterprise Partnership infrastructure. Delivering this scheme is therefore important for the continued growth of the local and regional economy.

The scheme offers an opportunity to enhance the landscape around the River Thames and unlock recreation and amenity benefits. The scheme can deliver hundreds of hectares of new and restored habitats, deliver new and restored recreational opportunities, re-shape the River Thames landscape and deliver heritage improvements in this nationally important location.

The flood channel will provide opportunities for new footpaths, cycle/bridleways and other leisure facilities. There will be other opportunities for commercial operators to create new recreational activities. There could be new habitats such as reed beds and wet woodlands, improving the connectivity of habitats, improving fisheries, and enhancing some of the lakes along the River Thames corridor.



case studies

Impact of 2013/14 flooding on businesses

The winter flooding of 2013/14 from the Rivers Thames, Wey and Blackwater had a significant impact on businesses in Surrey, in particular. Surrey County Council have estimated that in Elmbridge, Runnymede and Spelthorne more than 120 businesses were directly flooded and suffered direct damage and loss to premises, equipment and/or stock and were unable to trade normally as a result of flooding. At least a further 150 were indirectly affected due to limited access to their premises or restricted access to customers or suppliers, incurring a significant loss of trade. Across the whole of Surrey it was estimated that the winter flooding of 2013/14 had a financial impact on businesses of £15 to £24 million.



Staines-upon-Thames

Staines-upon-Thames is a good illustration of the synergies between the River Thames Scheme and economic development opportunities. The Enterprise M3 LEP economic plan recognises the town as having “latent economic potential, which currently experiences barriers to growth that impacts on the overall performance of the Enterprise M3 area”. The Strategic Economic Plan recognises the need to invest in transport infrastructure in Staines-upon-Thames, and the key role of regenerating the town centre. Spelthorne Borough Council has identified opportunities to improve the commercial and retail floorspace in Staines-upon-Thames, focusing on the town centre and the Elmsleigh retail centre. The River Thames Scheme will reduce flood risk to Staines-upon-Thames, including access to the town, which will further add to the attractiveness of Staines-upon-Thames for development and economic growth.

New habitats such as reed beds and wet woodlands, improving the connectivity of habitats, improving fisheries, and enhancing some of the lakes along the River Thames corridor.

This booklet has been produced by the following partners:

- The Environment Agency
- Surrey County Council
- Enterprise M3 Local Enterprise Partnership
- Thames Valley Berkshire Local Enterprise Partnership
- Royal Borough of Windsor and Maidenhead
- Elmbridge Borough Council
- Spelthorne Borough Council
- Runnymede Borough Council
- Thames Water Utilities Limited
- Royal Borough of Kingston upon Thames
- London Borough of Richmond upon Thames
- Thames Regional Flood and Coastal Committee

For further information on the River Thames Scheme contact the Environment Agency:

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@ThamesScheme



River Thames Scheme

www.gov.uk/riverthamesscheme