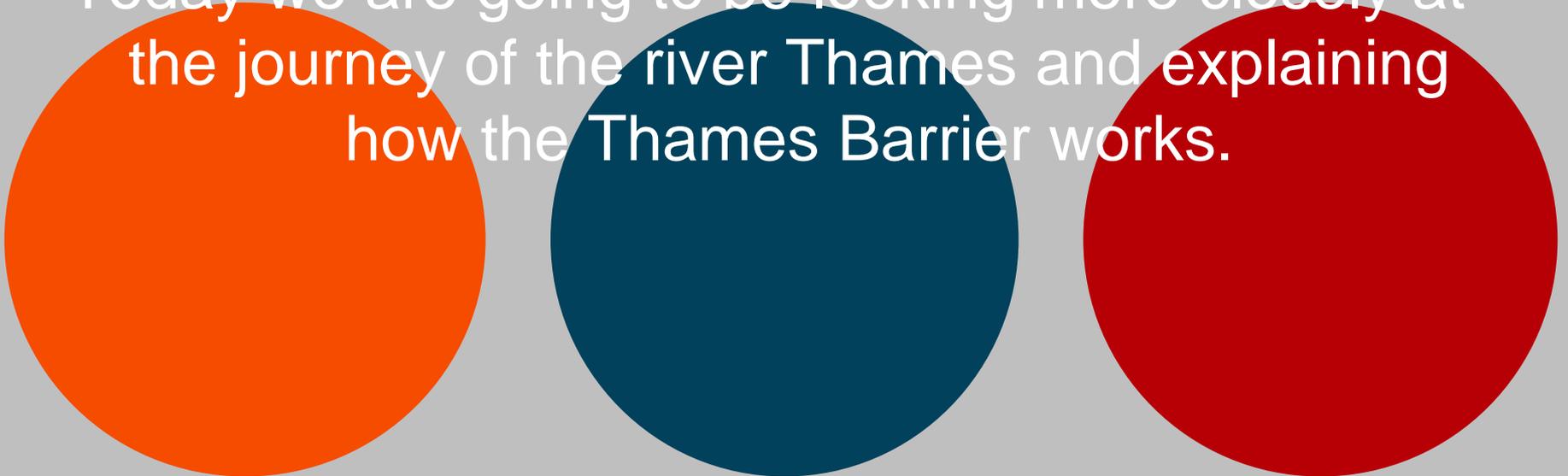


Lesson Two: The River Thames

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Today we are going to be looking more closely at the journey of the river Thames and explaining how the Thames Barrier works.

Location

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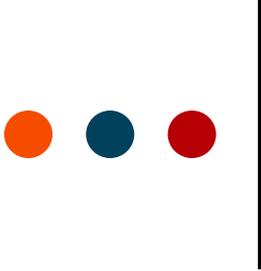
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Thames Map © Wikipedia Commons

This shows the journey of The River Thames from source to sea.



Location

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The next few slides show the journey of The River Thames from source to sea, as you click through think about your vocabulary from the previous lesson and answer the following questions:

1. Where does the river Menander?
2. Are there any Oxbow Lakes?
3. What does navigable mean?
4. Where would the young river be?
5. What does tidal mean?
6. What does the Thames Barrier do? And where is it?

The Source: Thames Head

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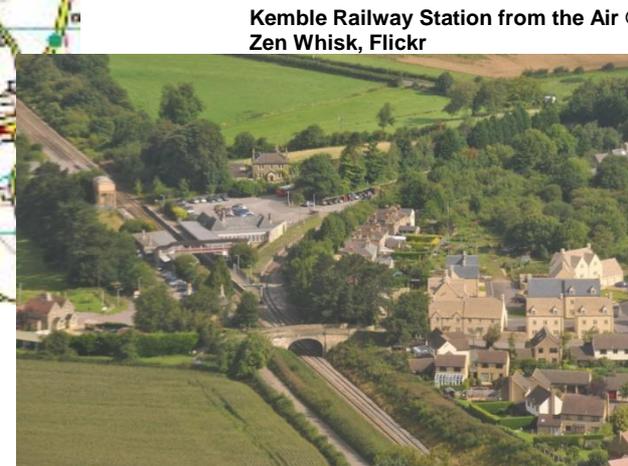
Thames Head pub © Scott
Cawley, Flickr



Source of the River Thames ©
summonedbyfells, Flickr



150244 at Kemble ©
R~P~M, Flickr



Kemble Railway Station from the Air ©
Zen Whisk, Flickr

Before and after Heavy Precipitation

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The Source Stone © Scott Cawley, Flickr



154561 © Robert Read, Flickr

Cricklade: The River Becomes Navigable

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Cricklade to Lechlade ©
Michael O'Donnabhain,
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Jenner Hall,
Cricklade © Elaine-
Louise, Flickr



Cricklade to Lechlade ©
Michael O'Donnabhain

Teddington: The River Becomes Tidal

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IMG_2799.JPG © Matthew Purves, Flickr



Teddington © lindad4a, Flickr



25th August 2013 © Emma Durnford, Flickr



Teddington Lock © Maxwell Hamilton, Flickr

Central London

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Tower Bridge, London © joseph8, Flickr

View from Greenwich Observatory © Ian Roberts, Flickr

Thames Cable Car © SouthEastern Star, Flickr

London City Airport © Tim, Flickr

A2005-05-29 Cutty Sark © Ananabanana, Flickr

Thames barrier annual closure © diamond geezer, Flickr



The O2 Arena © Alexander Baxevanis, Flickr





The Thames Flood Barrier

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The Thames Barrier
© Just1snap, Flickr



Thames Flood
Barrier © Ulleskelf



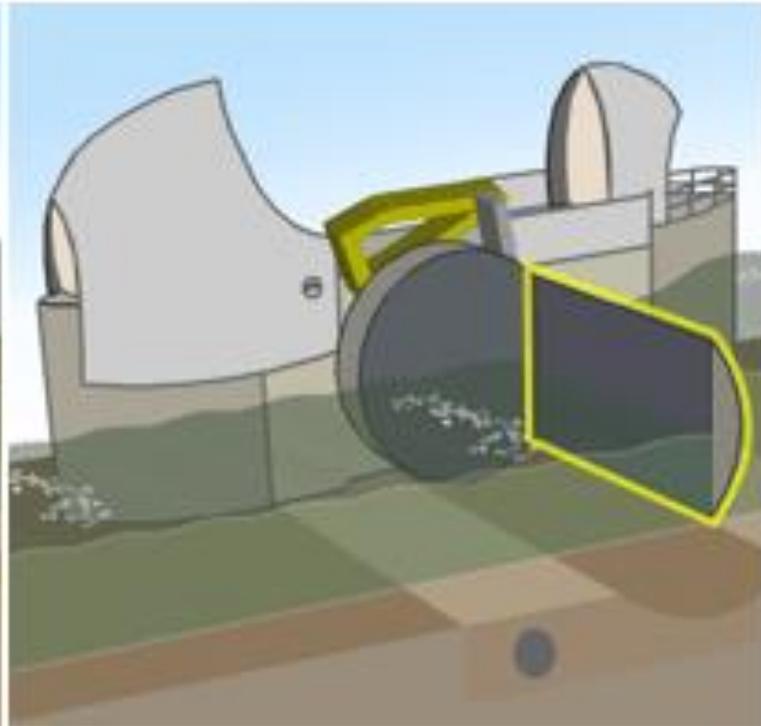
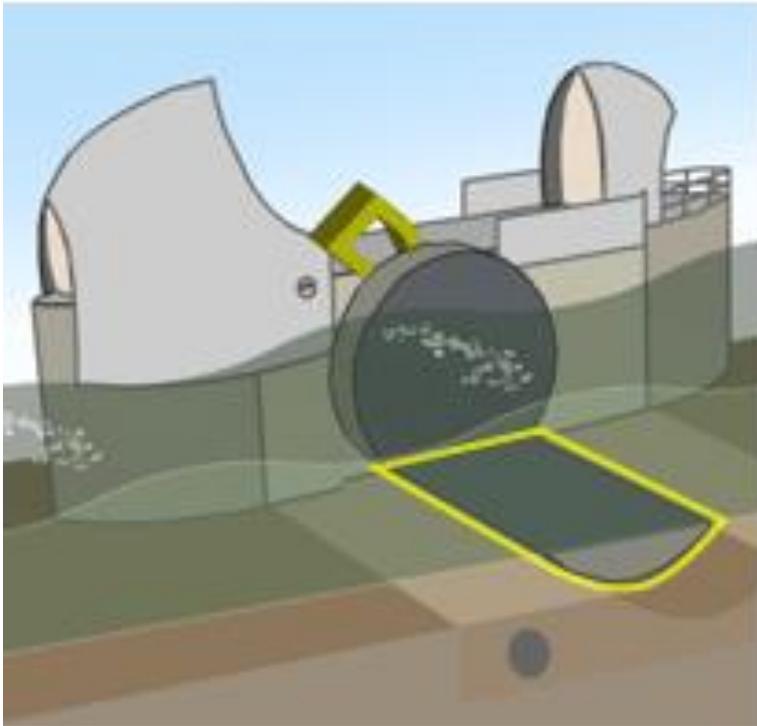
Closing the Barrier

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Open

Closed

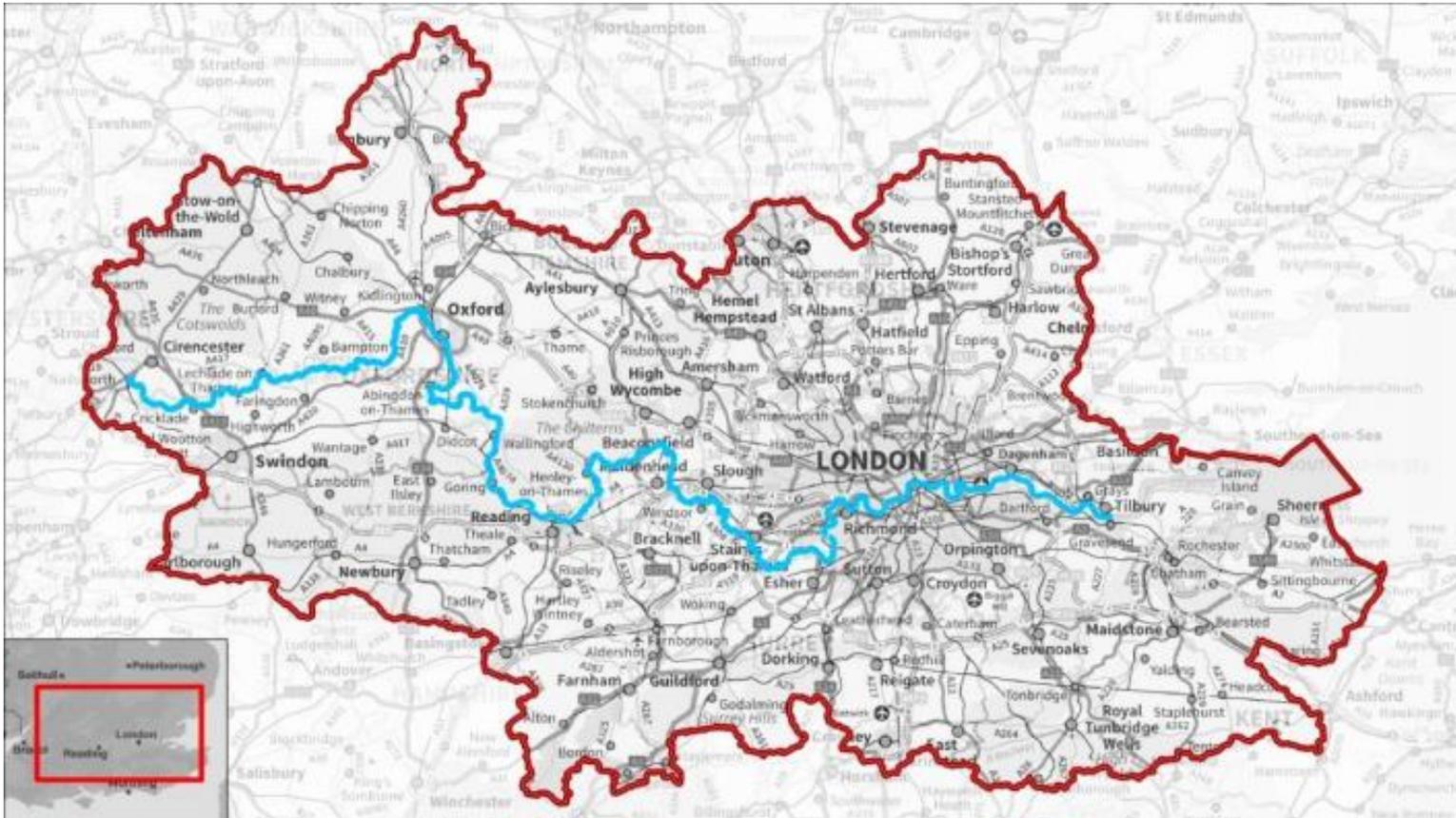


The Drainage Basin

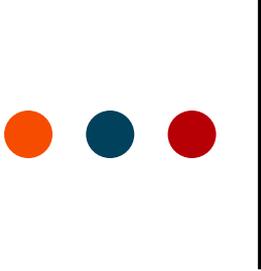
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© Environment Agency



The Drainage Basin

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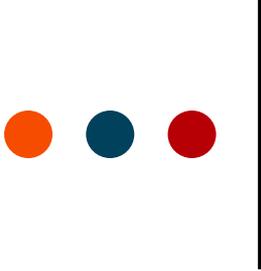
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The Drainage Basin : This is the area of land that drains into one river or its tributaries- either directly from precipitation or from ground water and **aquifers**. The River

Thames drainage basin covers an area of nearly 13,000 km² of South East England. This covers 10% of the land of England and Wales and 25% of the population.

Aquifers: body of permeable rock which can contain or transmit groundwater.



Taking a closer look

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In the next few slides we're going to take a closer look at 2 specific parts of the river.

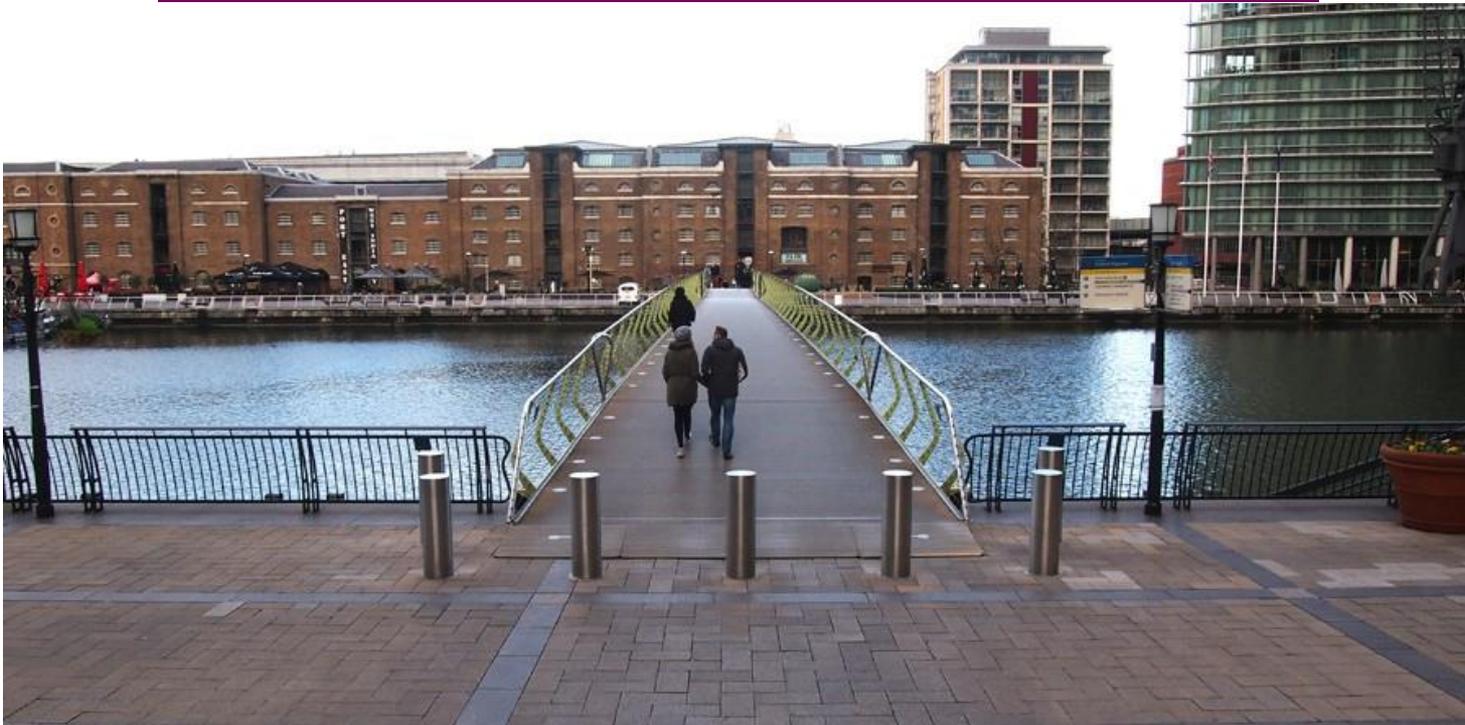
1. London Docklands
2. The Thames Barrier

Read the information and answer the questions.

London Docklands

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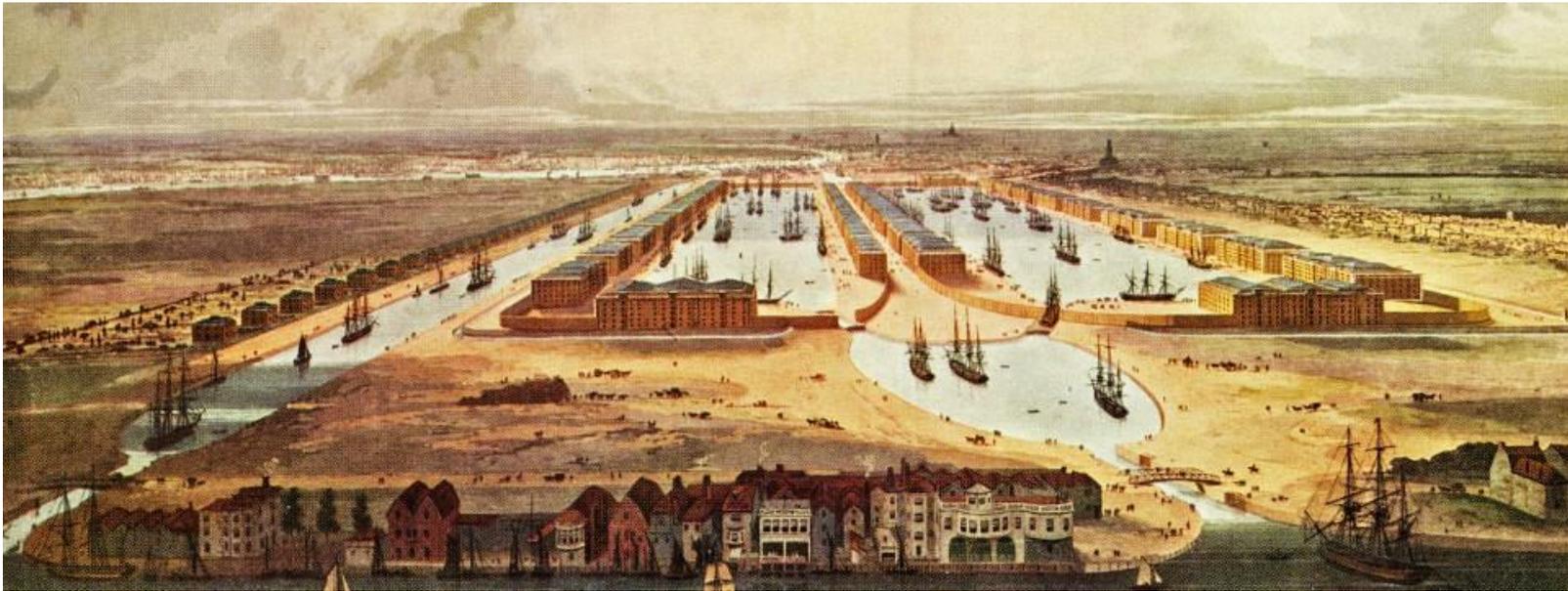


This is West India Dock today, it's a tourist attraction close to Canary Wharf with restaurants and museums to visit.

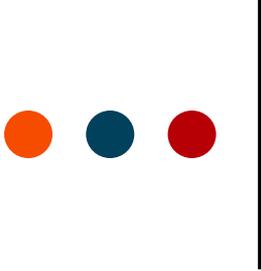
London Docklands

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This is West India Dock in the early 1800s.
What is the same?
What is different?



Thames Barrier

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The Thames Barrier is the second largest flood barrier in the world. The Environment Agency runs the Thames Barrier as well as London's other flood defences. Work began on the barrier in 1972 and it became operational in 1982, at a cost of £535 million

Why was it built?

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The Thames Barrier spans 520 metres across the River Thames near Woolwich, and it protects 125 km² of central London, 1.25 million people and £200 billion of property and infrastructure from flooding caused primarily by tidal surges.

The primary purpose of the barrier is to protect London from flooding from the sea.

Historically the solution to flooding was to build higher and stronger walls or embankments, but these can be unsightly and ineffective. (The Greater London Authority have said that to be effective today the embankments would have to be as high as Victorian street lamps!) 

Tidal surge: An unusual, often destructive rise in sea level above normal high-tide level



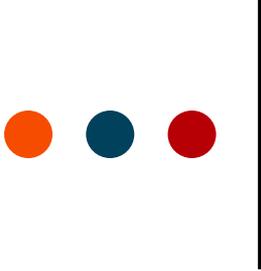
1953 Floods

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RGS
21st century
Challenges



1953 Floods

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In 1953 a severe flood along the east coast and Thames Estuary resulted in 307 deaths and £50million worth of damage. 32,000 people were evacuated and 160,000 acres of land was inundated with sea water and was unusable for many years.

Power stations, gasworks, roads, railways, sewage services and water supplies were affected.

Had the flood waters reached central London the consequences could have been much worse.

It was decided that a barrier would be the best solution because it could be raised quickly and would not interfere with river traffic.



Questions

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In your own words answer the following questions:

Why was the Barrier built?

What caused the city of London to build the Thames Barrier?

Once you've answered the questions watch the following video to show how the Thames Barrier work

<https://www.youtube.com/watch?v=jp4Y1HrRBD0>

In your own words write a short explanation of how the Barrier Works