Thames Estuary 2100
Managing tidal flood risk through the 21st century

Environment Agency

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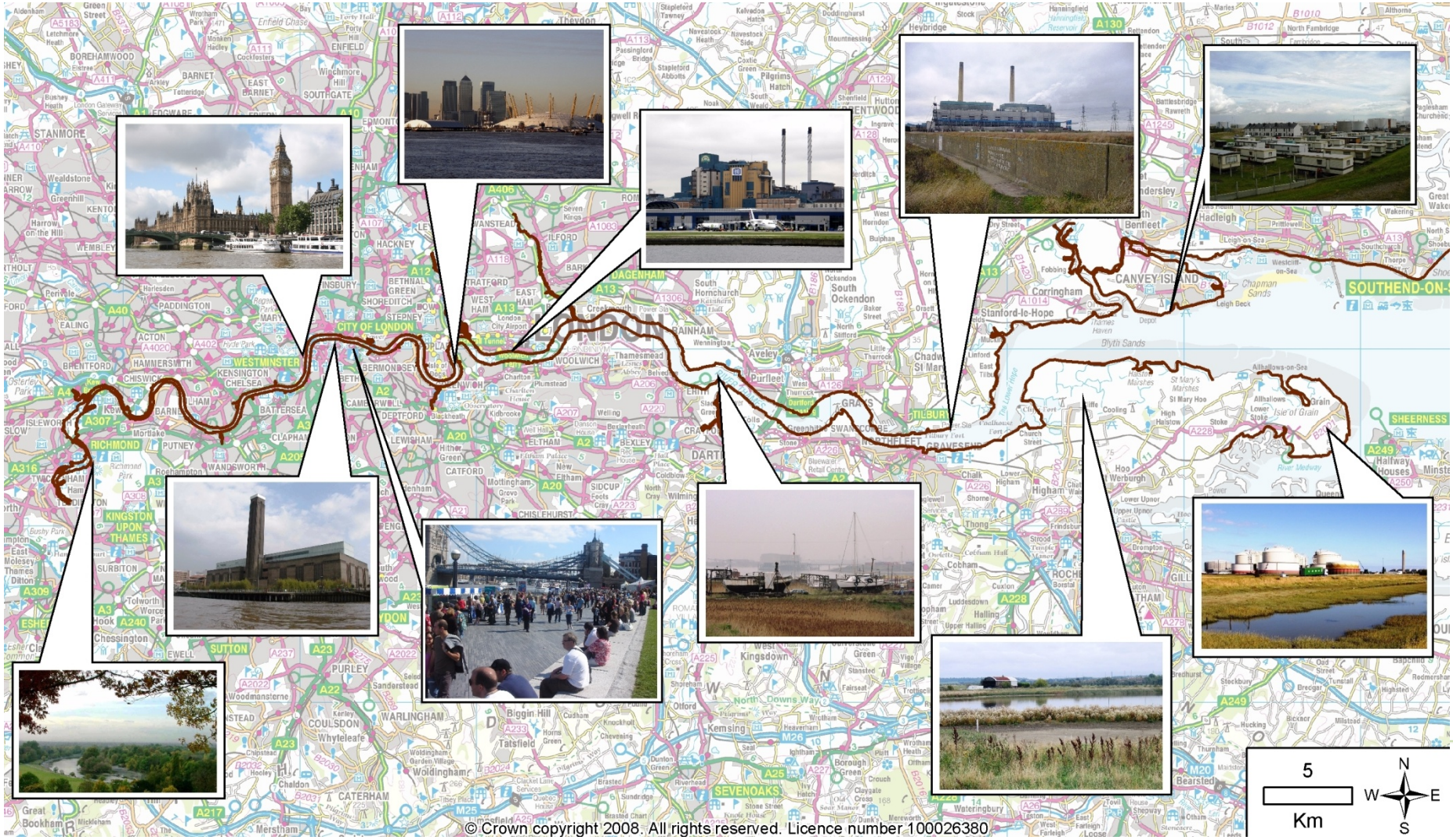
Head of Strategy and Engagement

Planning early

Managing flood risk in a diverse estuary



Adapting to climate change

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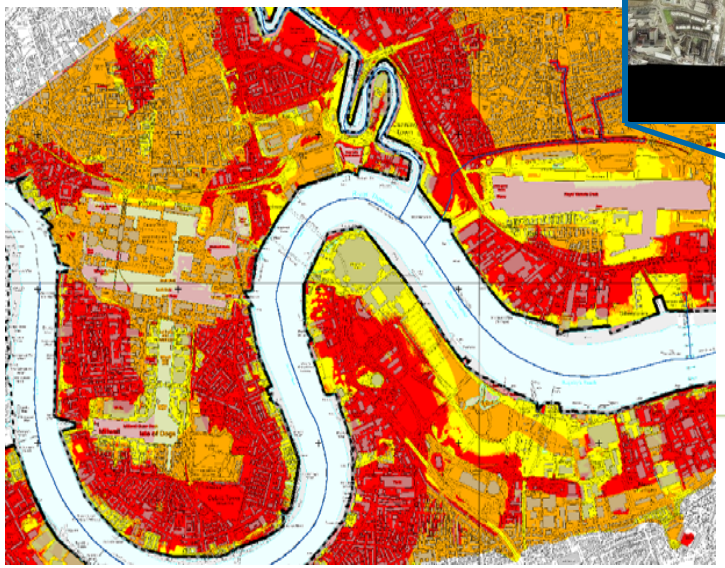
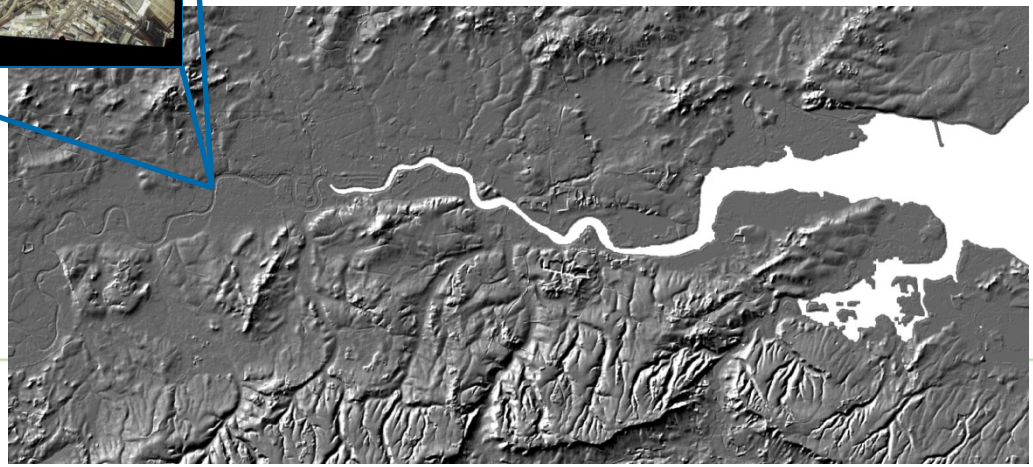
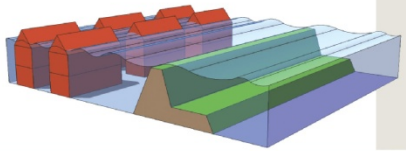
Evidence based decision making





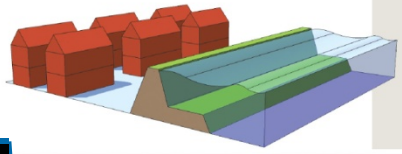
P1 No active intervention - flood risk increases



policy option screened out

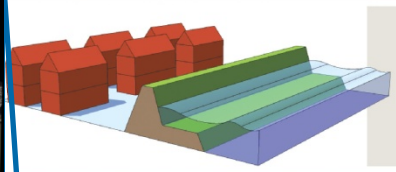
The potential increase in flood risk over time would result in many assets in the unit being lost (including 200 non-residential properties, plus key transport links such as the A4, A315, A316, two road bridges, one rail bridge, two mainline railways and two stations (Twickenham, St Margaret's), with damages of around £160 million

P2 Reduce existing flood risk management actions - flood risk increases

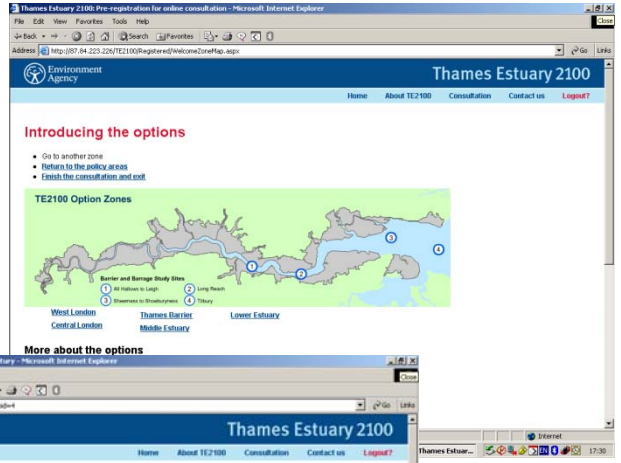


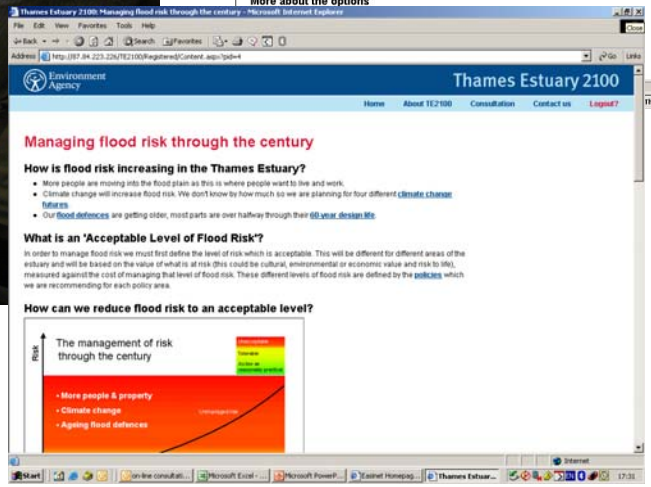
policy option screened out

P2 would result in significant impacts on all of the assets described in P1 and is expected to result in damages of a similar order to those under P1.
In fact, many of the properties may be flooded so frequently that they become uninhabital.



Involving others





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Today's Thames Tidal Defences….

- Protect London and the Thames Estuary corridor where a significant proportion of the nation's wealth is produced (1.25 million people live and work in the flood risk area);

- Provide 1:1000 protection (to 2030)

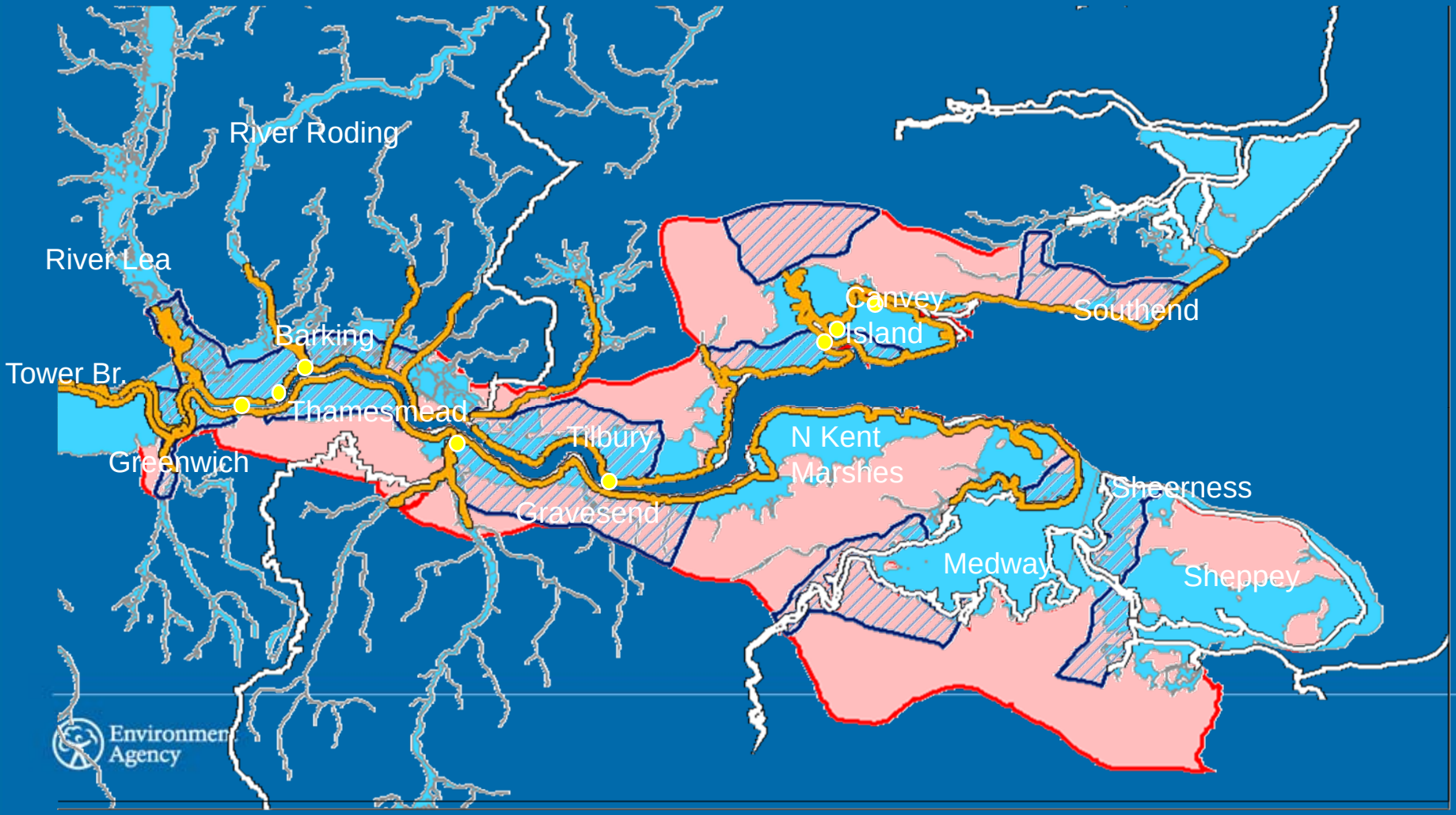
- Allow for a combination of risks (high tide/ surge/freshwater)

- Comprise 36 major barriers (9 of which including the Thames Barrier are owned and operated by the Agency), 400 minor barriers and over 300 km of tidal walls and embankments

The TE2100 Plan

Thames Estuary and Flood Risk Management

- Area at risk of flooding (primarily tidal flood risk)
  - 8 major Barriers and over 340km of defences
    - Thames Gateway .....Growth Points



Improve existing defences

Flood Storage

New barrier

Barrier with locks

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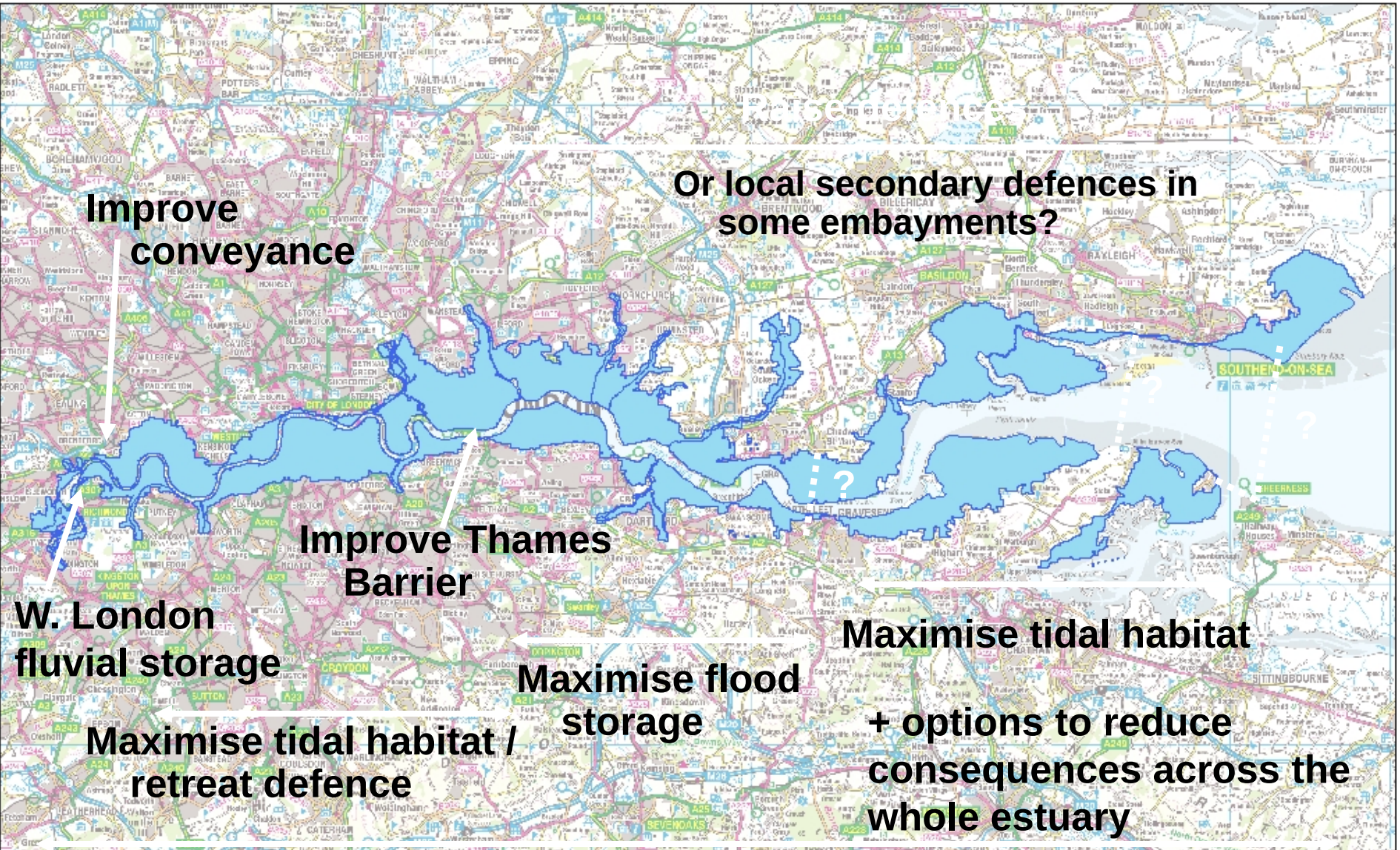
Change ahead? Our estuary-wide options



Notes

1. British National Grid Coordinate System

2. This map is reproduced from the OS map by the Environment Agency with the permission of the Controller of Her Majesty's Stationery Office, Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Licence Number GD 03177G.

Legend

A portfolio of flood risk management options

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HR Wallingford

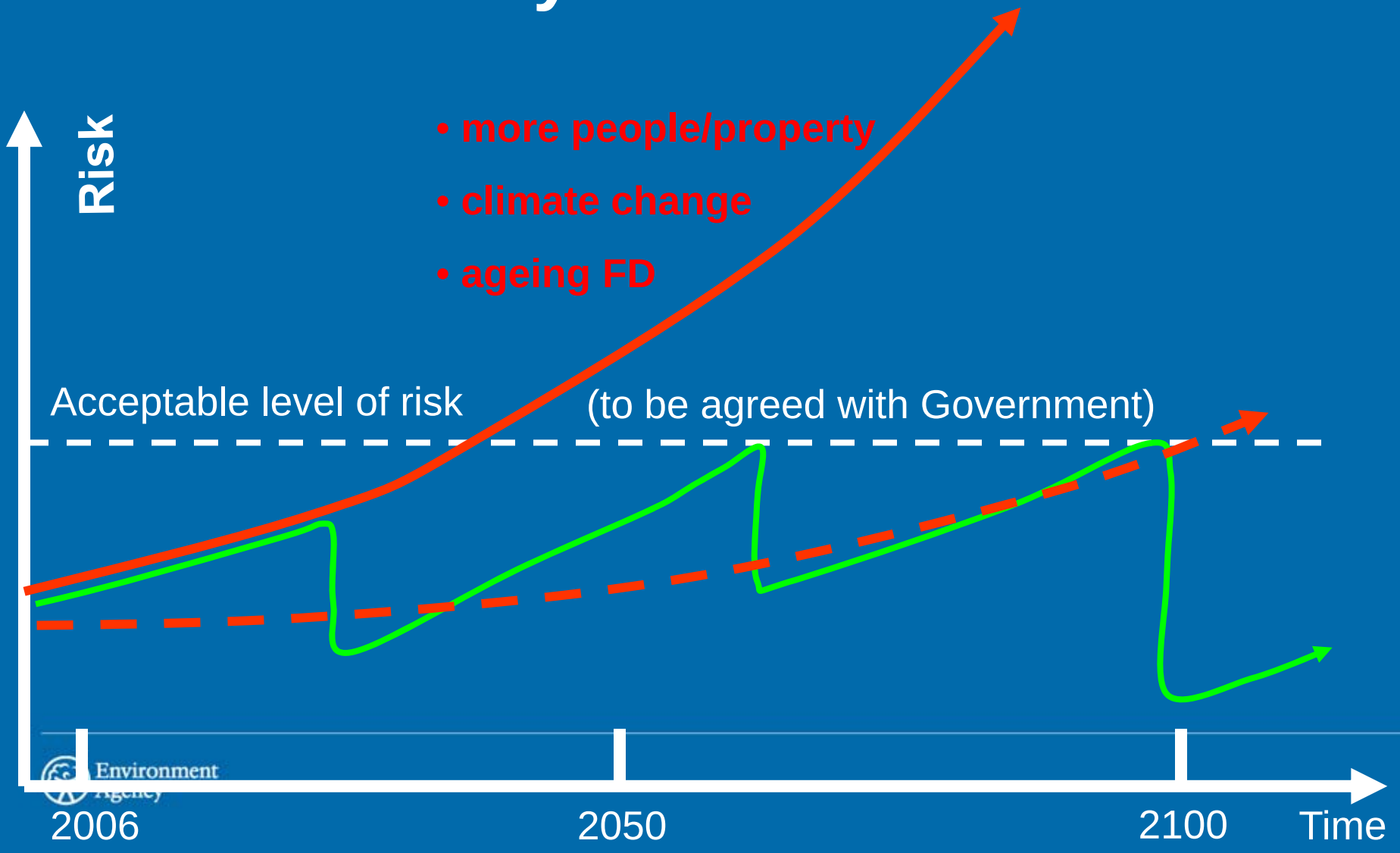
Title: TE2100 Version 2 Model Domain

Scenario Description: N/A
Climate Scenario: N/A
Epoch: N/A

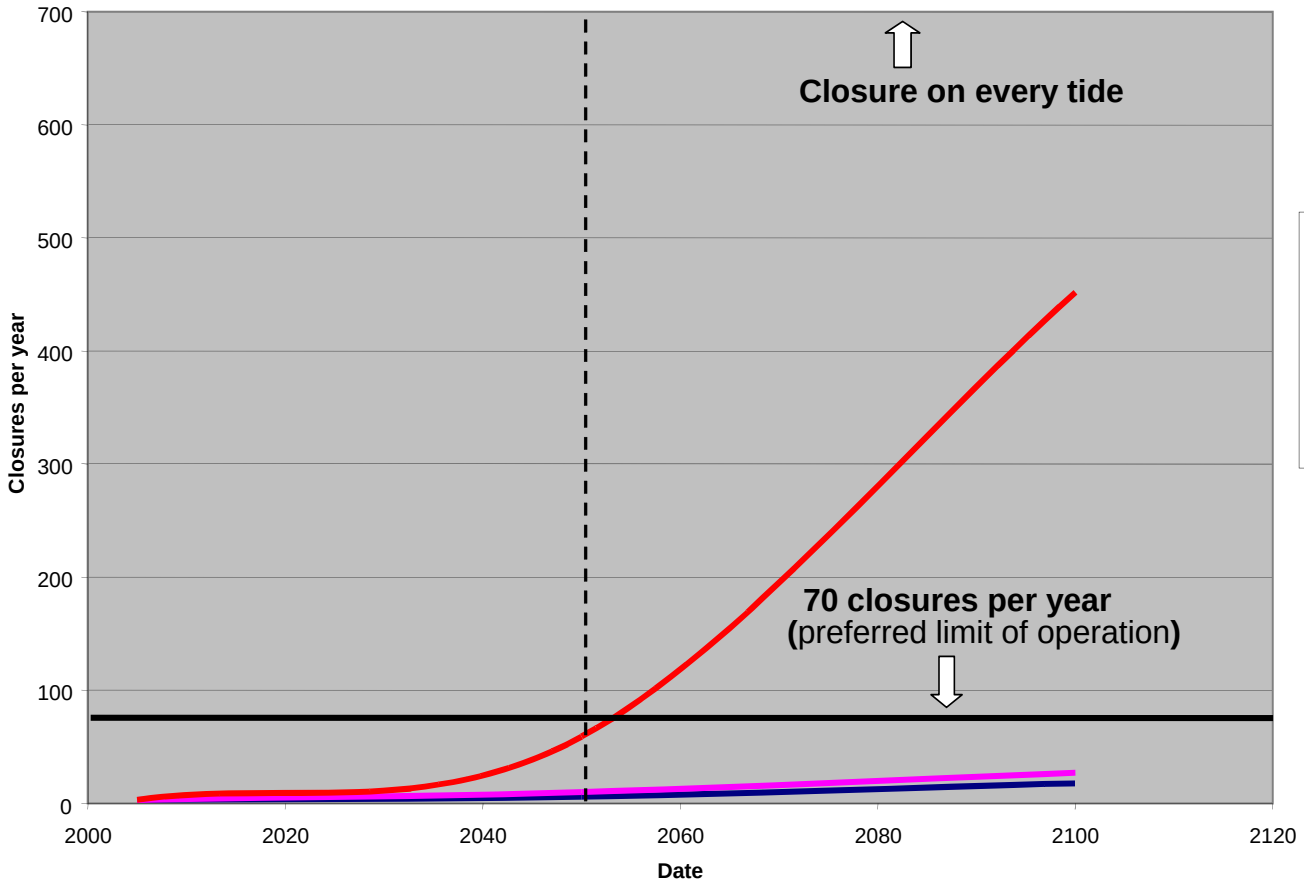
Date: 07 December 2005 | Revision Number: 00

Job Number: DTR3778 | Drawing Number: DTR3778/v2.01

Managing Flood Risk through Thames Estuary 2100

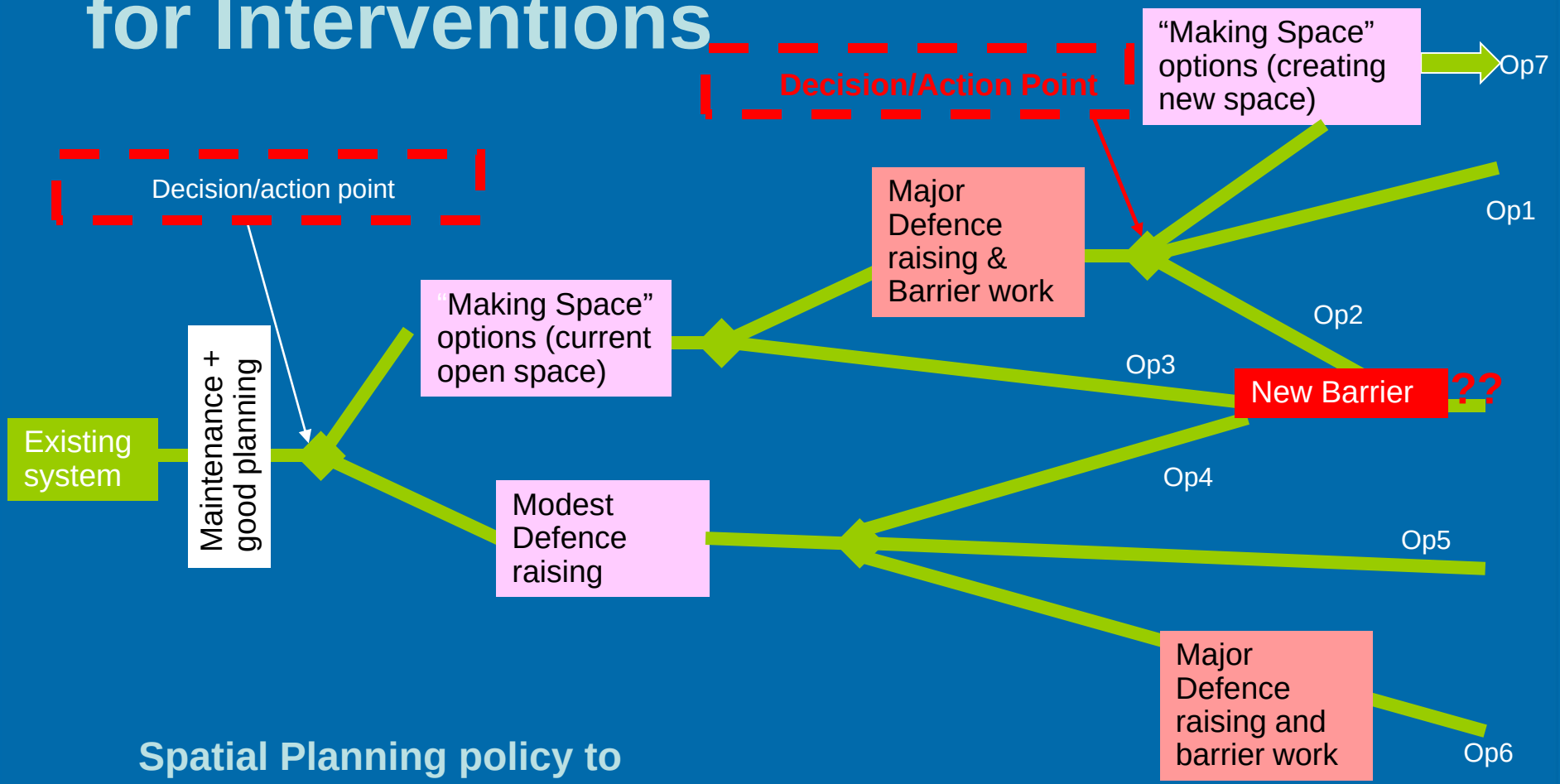


Estimated number of closures per year of the Thames Barrier under different climate change scenarios



estimate, 2006)

Planning the Timetable for Interventions



TE2100 the first 25 Years

- Continue to maintain the current flood defence system including planned improvements
- Ensuring that floodplain management is in place across the estuary
- Safeguard areas that may be required for future changes to flood defences
- Commencing work to create new habitats

N
W E
S
0 5 10
Kilometres

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From 2070, moving into the 22nd century

Replacing and upgrading defences upstream and downstream of the barrier

Working with regional and local planning authorities

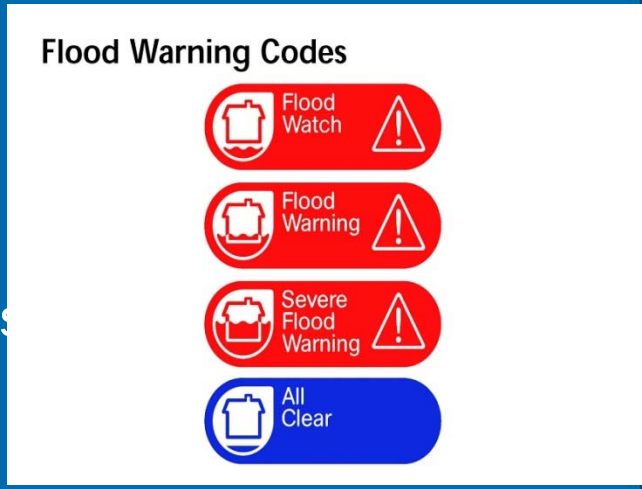
Take informed decision on building a new barrier at Long Reach or other end of the century option

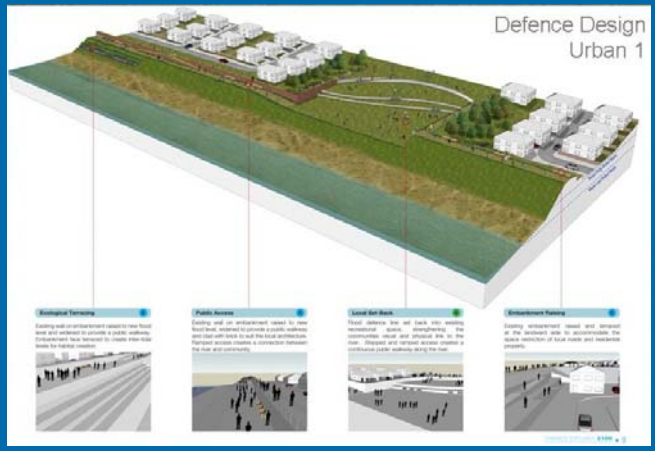
Construct new barrier ~ 2070

N
W E
S
0 5 10
Kilometres

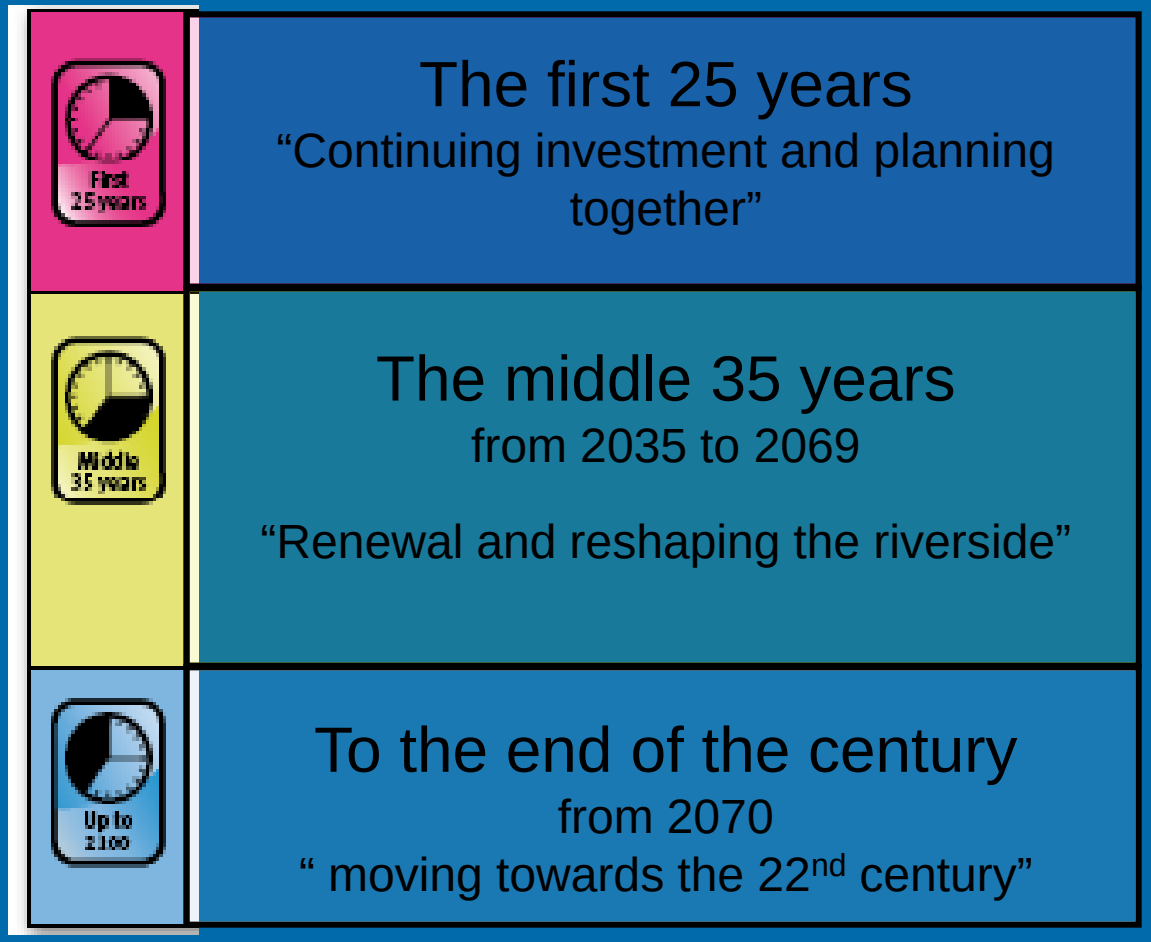
Working together

- working with local and regional emergency planners and resilience fora
- working with local and regional spatial planners to plan for a new riverside landscape
- working with local and regional spatial planners to safeguard areas that may be needed for future flood management
- developing an effective monitoring system





Investment over the century



- ~ £1.4 bn.
- ~ £3.1 bn.
- ~ £4.2 bn.

Summary

- Risk-based approach over 100 years
- Rigorous implementation of development planning policy is essential to reduce risk in terms of both likelihood and consequence of flooding
- Monitor climate change and invest when justified
- Ensure that opportunities to manage future flood risk are not lost: sustainable drainage systems, potential flood storage areas, land adjacent to defences for future bank raising.