



Environment  
Agency

# Flooding in England & Long-term Investment Strategy

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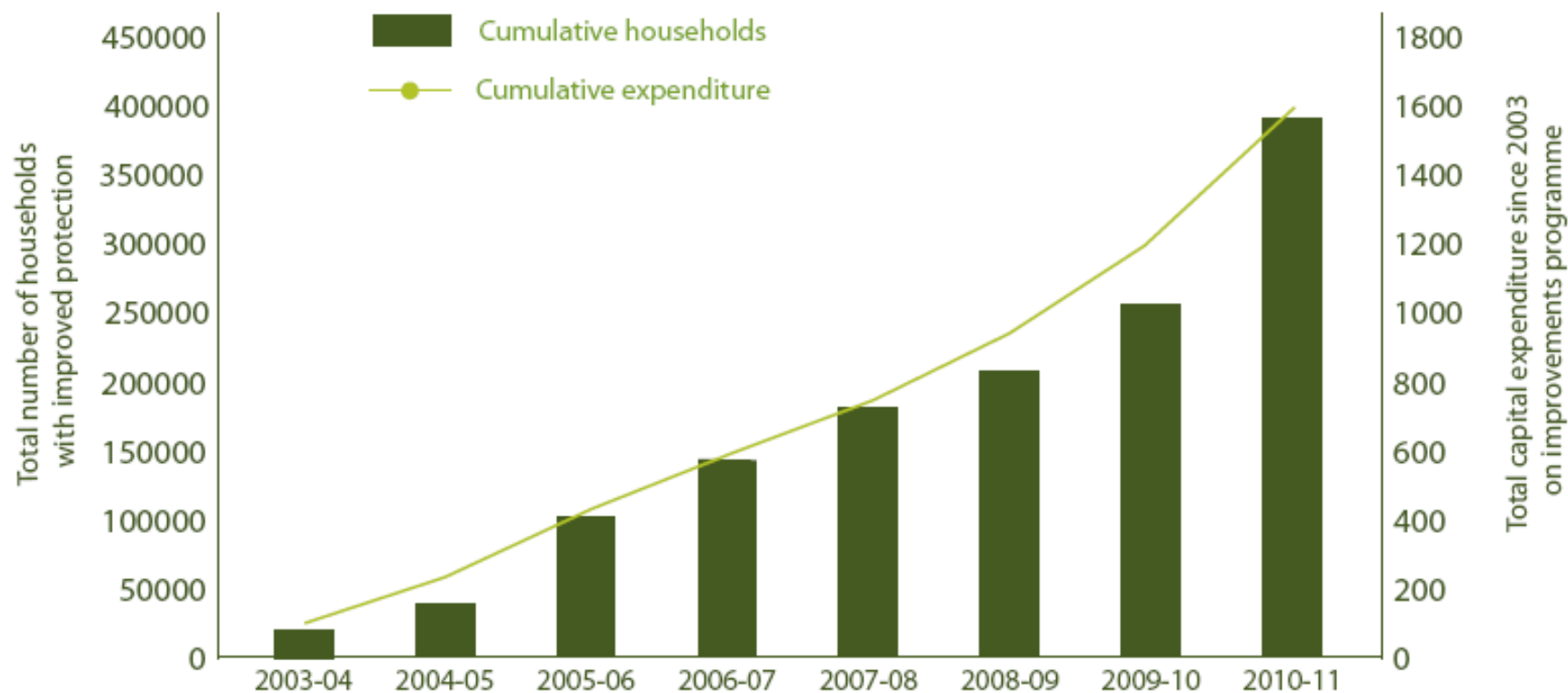
# Flooding in England:

A National Assessment of Flood Risk



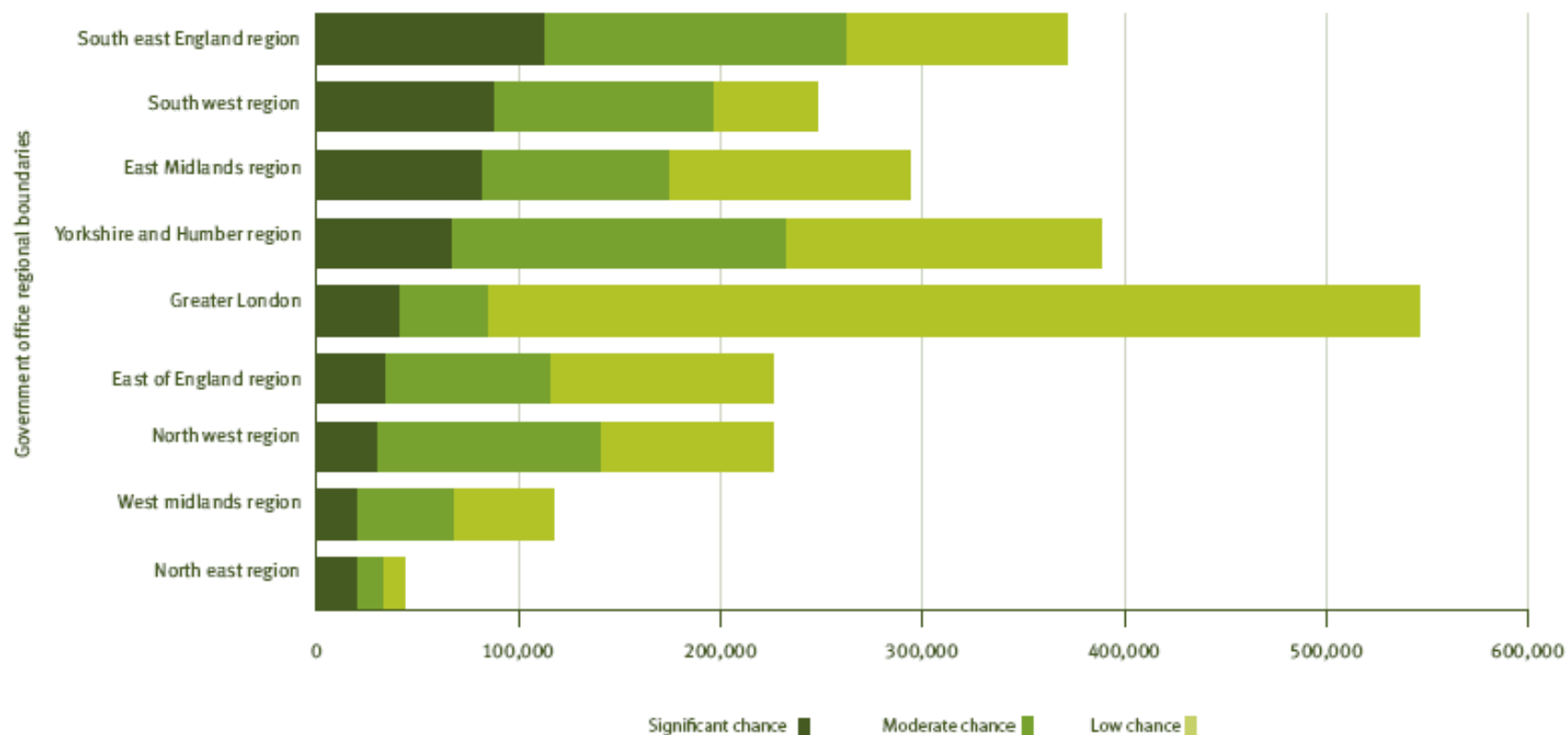
# Protecting Communities – Flood Defences

Figure four: Cumulative number of households benefiting from reduced likelihood of flooding since 2003-2004 (England)



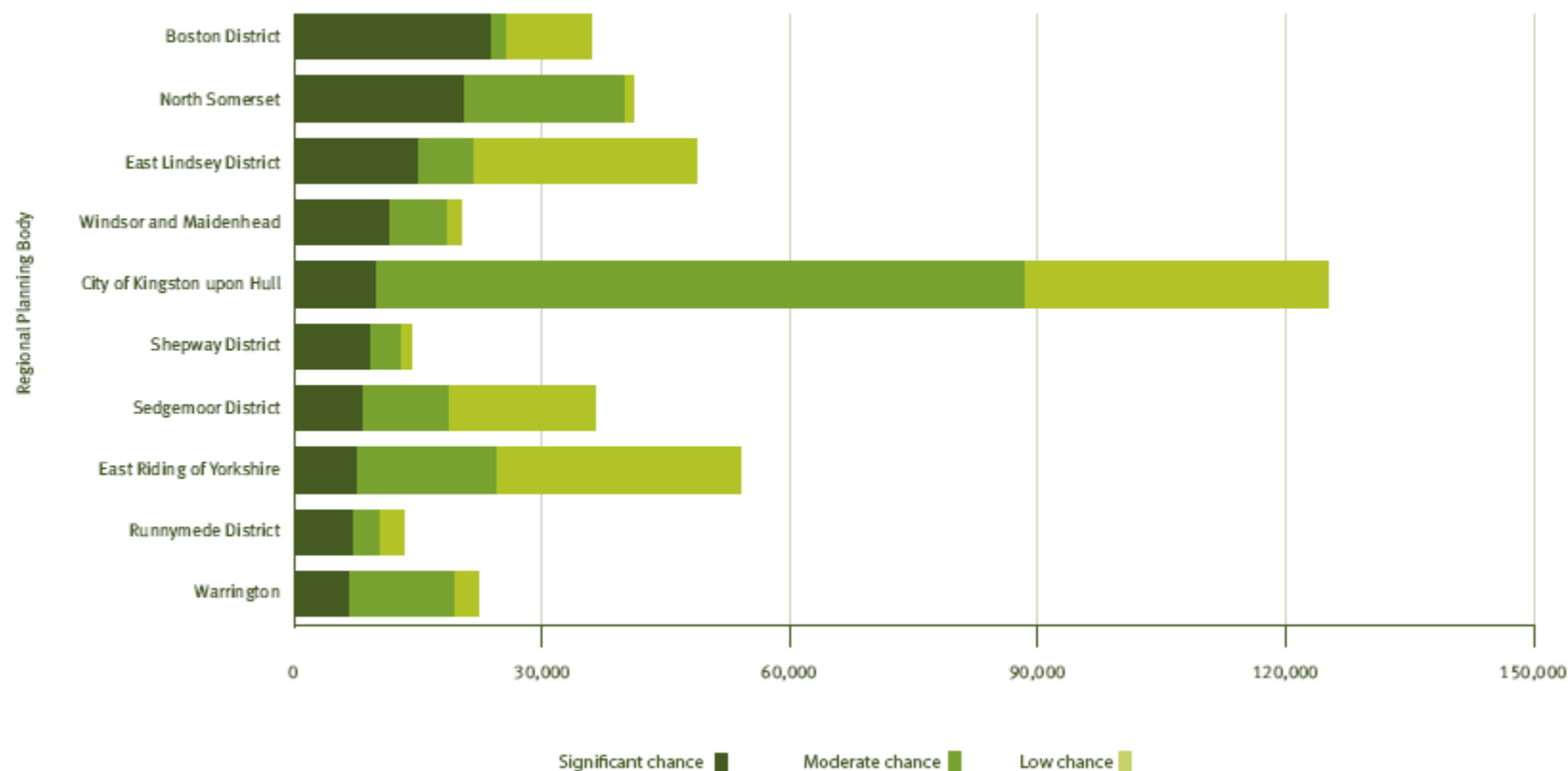
# Properties at flood risk across regions

Figure fourteen: Regions ranked by the number of properties at significant risk of flooding



# Local Authorities

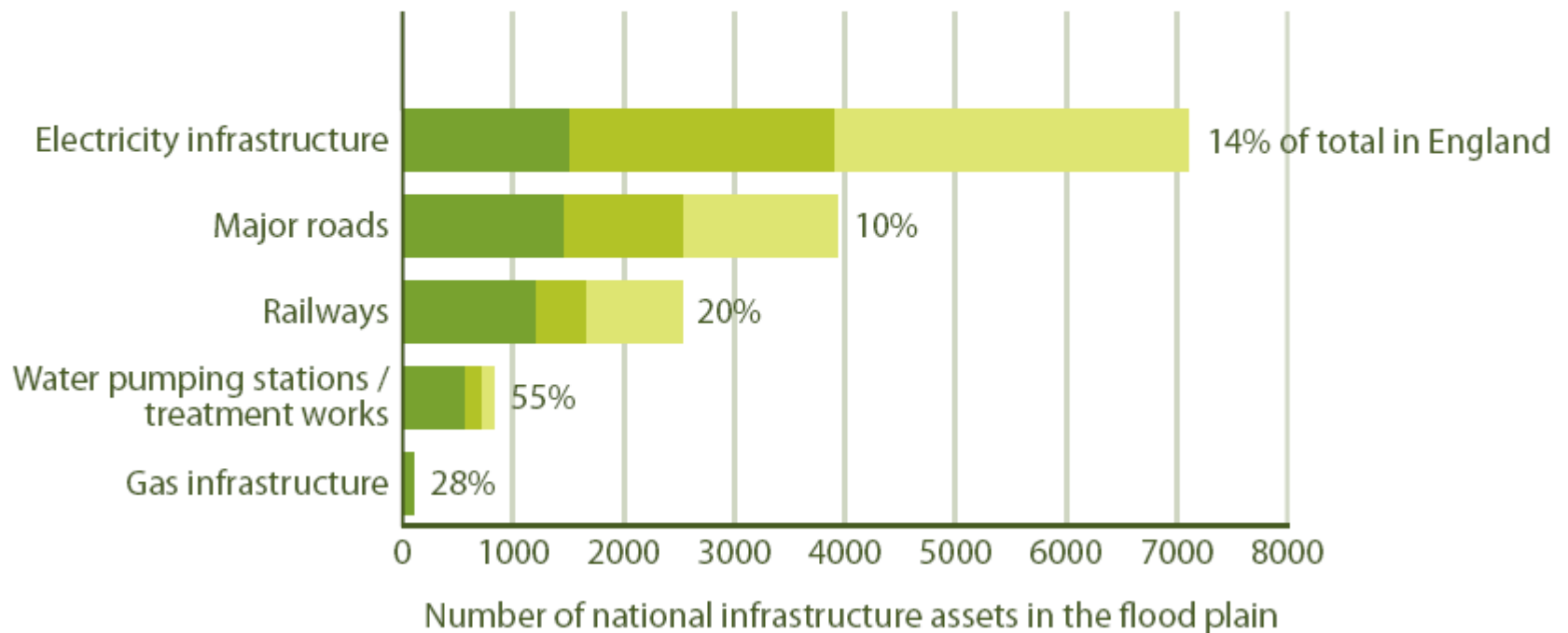
Figure fifteen: The ten local authorities with the highest number of properties in areas with a significant chance of flooding



# Keeping essential services running

Figure six: National infrastructure assets in flood risk areas.

Transport and utilities infrastructure



# investing for the future

## Flood and coastal risk management in England

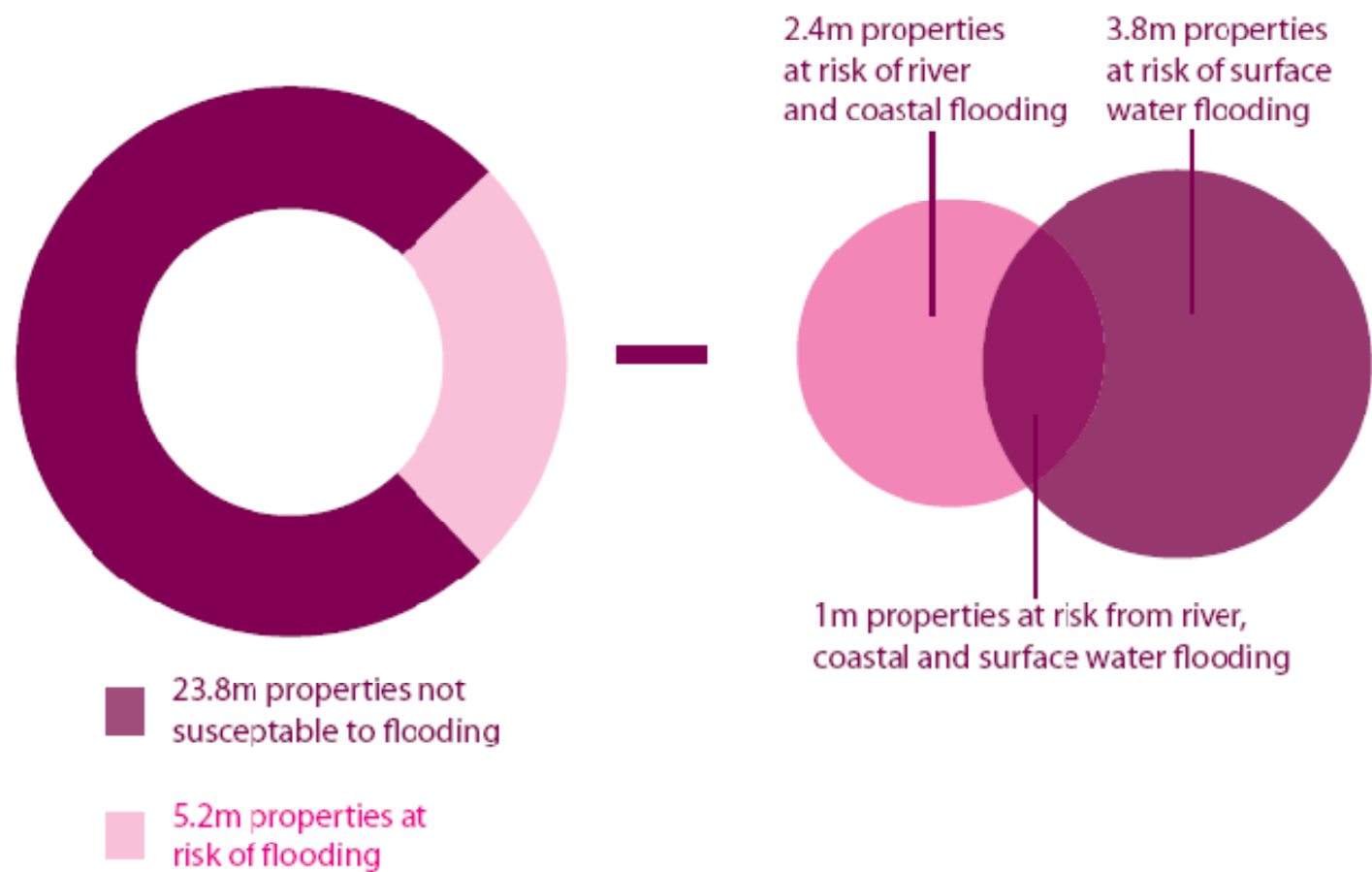
A long-term investment strategy



homes that are at threat from damage. Critical infrastructure such as water treatment works and power stations are often close to the coast. It is neither technically feasible nor economically affordable to prevent all properties from flooding. We therefore take a risk-based approach to new building or development in flood and coastal risk areas. Our interventions help control development and prevent the impact of flooding can reduce if we continue to invest in flood warnings and public information campaigns. They help householders



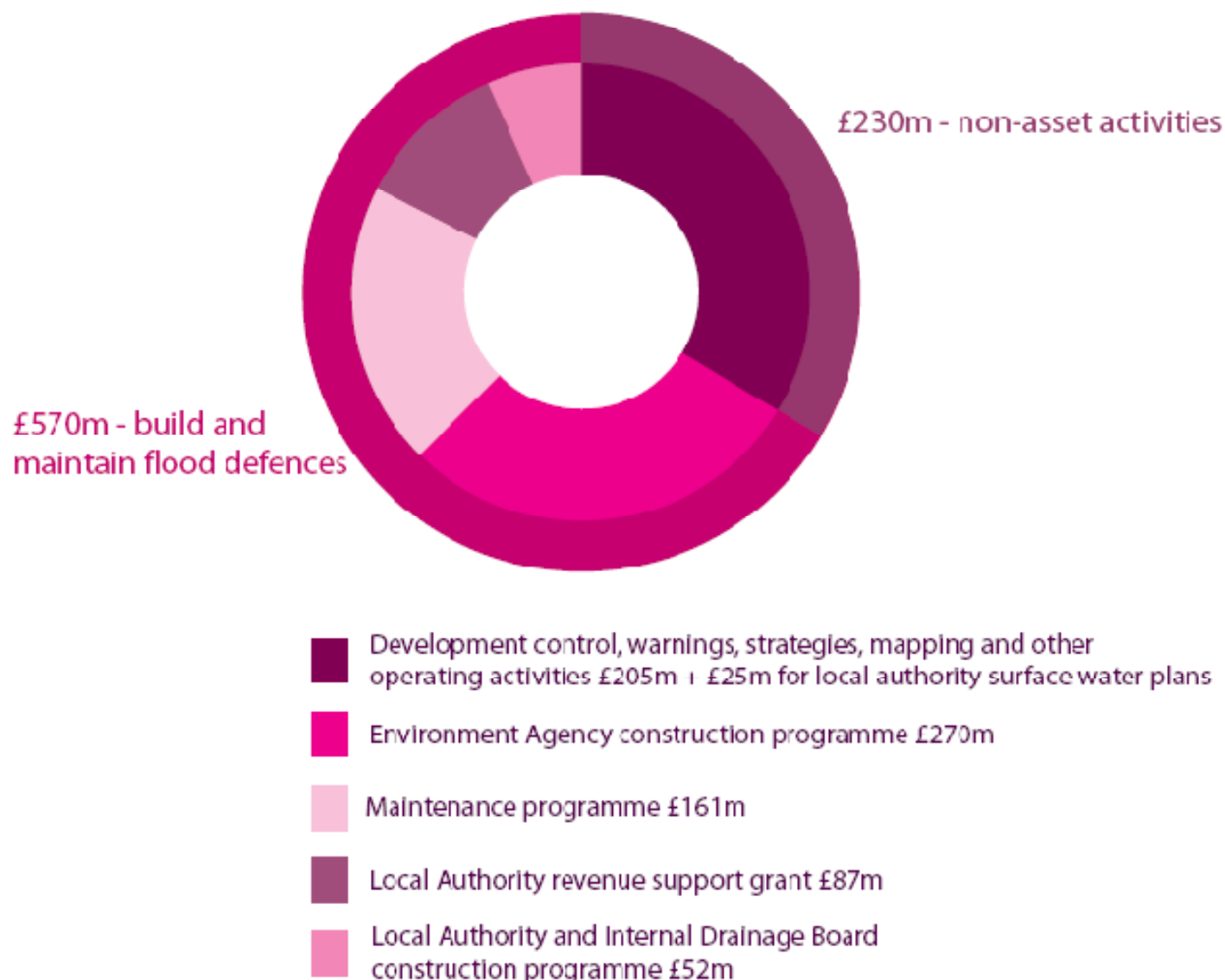
Figure one: Properties at risk of flooding in England



# Climate Change and Other Pressures



Figure five: Flood and coastal risk expenditure of £800m in 2010-2011



# Scenarios

- ➔ Flat cash over next 25 years – no inflation
- ➔ Current level of investment keeps pace with inflation
- ➔ Government report 2004 ( *Foresight Future Flooding*) - year on year increases to allow for climate change plus inflation
- ➔ Scenario 3 plus target properties at significant risk where b/c ratio two or more
- ➔ Target properties with significant risk where b/c ratio two or more and maintain current level of risk for all other properties

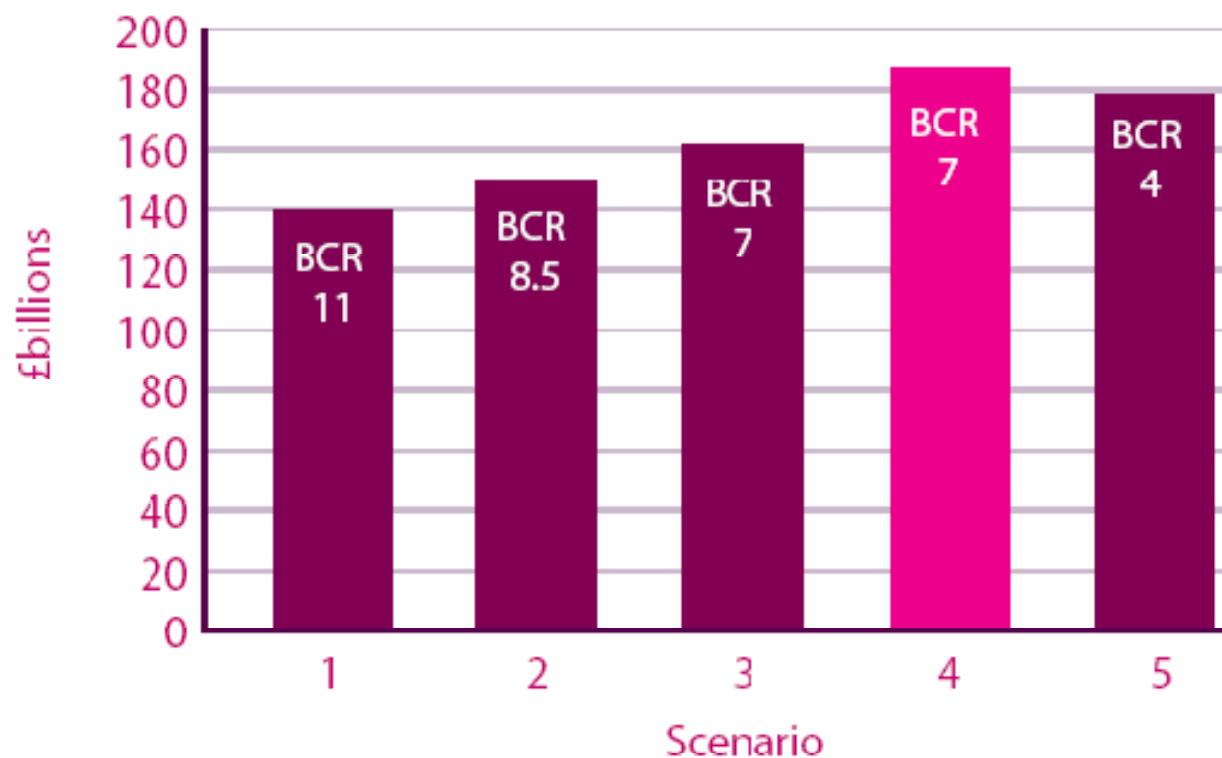
# Assumptions

- ➔ Inflation is 2.7% pa until 2015 and 2% thereafter
- ➔ Efficiency savings of 2% pa to 2015
- ➔ Protecting future new development is paid for by developers
- ➔ Surface water and groundwater flooding excluded
- ➔ Only includes asset management
- ➔ Mid-range climate change projections (UKCP09)

# The net benefit of Investment

(£billions based on 100 year costs and benefits)

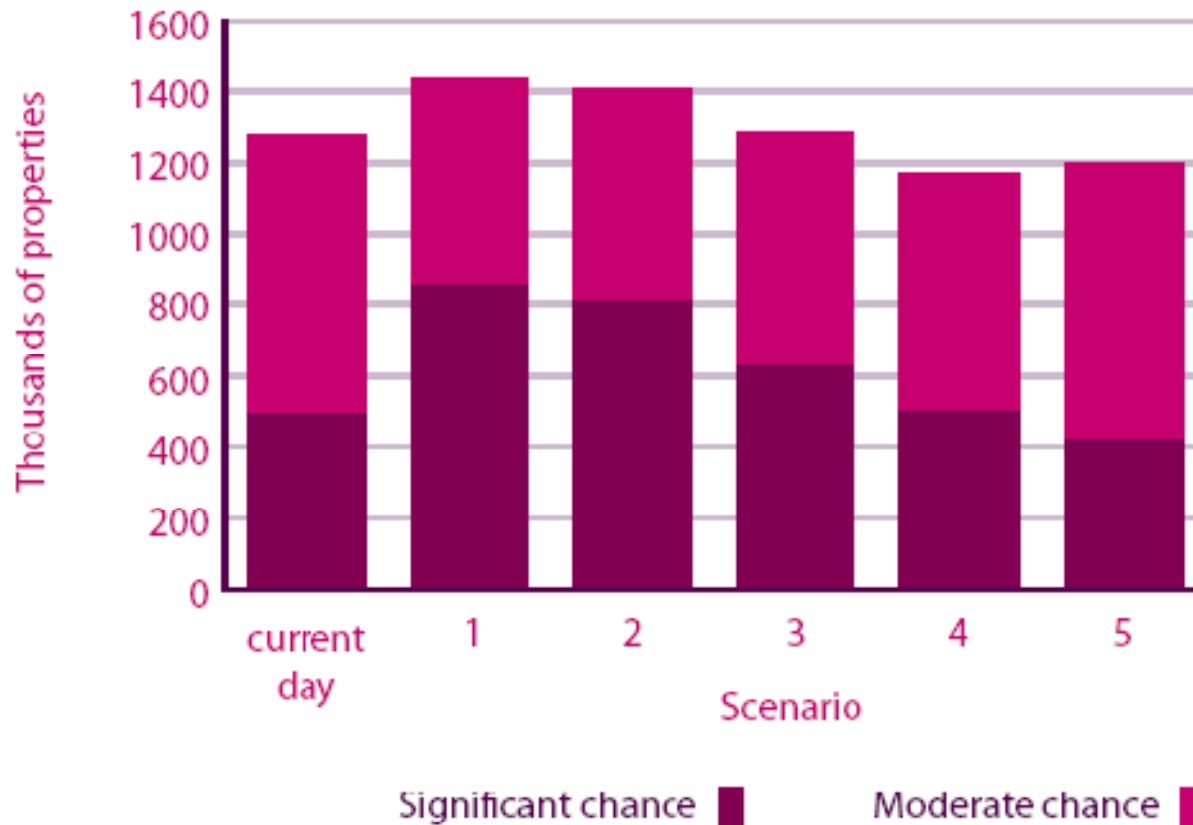
■ Most favourable scenario



BCR = benefit-to-cost ratio

# Properties at risk of flooding in 2035

Most favourable scenario is 4



For clarity, properties with a low chance of flooding are not shown

# Where's the funding coming from?

- ➔ Local Contributions
- ➔ Developers
- ➔ Insurance Companies





# External Contributions Policy

- ➔ Contributions from private, public or voluntary organisations or communities who will benefit the most from our work
- ➔ Reduce our costs for creating, extending and maintaining planned assets and services
- ➔ Obtain contributions where new housing or commercial development or regeneration requires changes to our existing FCRM assets or service arrangements
- ➔ Contributions from major existing beneficiaries where our plans will further reduce the risk of flooding or coastal erosion
- ➔ Do more work in partnership with others

# Conclusions

- ➔ Current investment on assets of £570m pa
- ➔ Scenario 4 proposes £1040m by 2035 (+80%)
- ➔ 490,000 properties at significant risk today
- ➔ Flat cash option increases properties at significant risk by 350,000 in 2035
- ➔ Scenario 4 keeps same number of properties protected in 2035 as today.

# Summary

- ➔ National assessment – top down
- ➔ Evidence-based – bottom up
- ➔ Presents policy options with estimates of funding and residual risks
- ➔ Long-term needs addressed – financial planning
- ➔ Sources of funding
- ➔ Allows for climate change