

East Midlands State of the Environment

Flood and coastal risk management

Flooding happens when excessive rain or melting snow overwhelms the drainage capacity of the land causing river levels to rise and breach their banks. Flooding from rivers and coastal waters is a process that has played an important role in shaping the landscape over millennia. However, human development has influenced this process by modifying natural rivers, adding artificial drainage systems and building many homes and infrastructure sites (such as roads and power sub-stations) on what are natural flood plains.

Regardless of the cause of river and tidal flooding, the impact of flooding on people and property from flooding can be devastating, with lasting effects on both property and human health. In July 2007 although Gloucestershire and South Yorkshire were worst hit, approximately 4,900 homes and businesses were also flooded in the East Midlands.

Minimising the risk from flooding is expected to become more challenging in the future due to increased pressure to build more new homes and infrastructure but also because climate change is expected to increase the likelihood of flooding and coastal erosion across the UK.

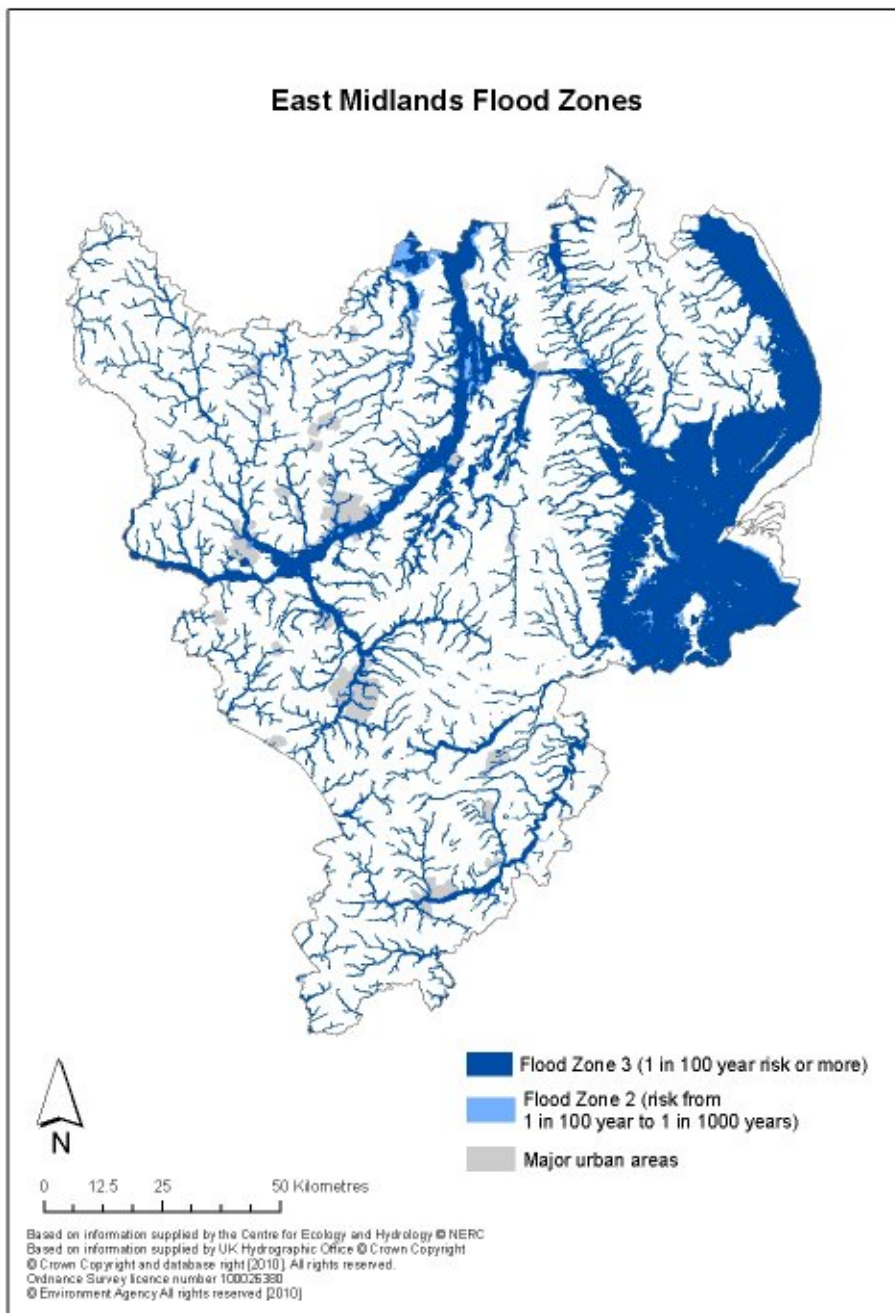
At a glance

- Around 17.5 per cent of land in the East Midlands has a 1 per cent chance of flooding in any one year.
- According to the 2008 National Flood Risk Assessment, around 295,000 properties in the region are at risk (significant, moderate or low) from flooding from rivers the sea or a combination of both. This is around 12 per cent of properties in the region.
- The majority (around 200,000) of the properties at risk are residential.
- Around 75,000 properties are in highest risk band 'significant'. This means they have a greater than 1 in 75 year chance of flooding.
- According to the UK Climate Projections 2009 (UKCP09) average winter precipitation may increase by 14 per cent in the East Midlands by the 2050s. This is the central estimate for a medium emissions scenario.
- UKCP09 data predicts that under a medium emissions scenario the sea level along the East coast of the UK may rise between 14cm and 22cm.
- In 2007/08 we sustained 110 objections to planning applications on flood risk grounds. Nine of these applications were eventually approved against our advice.

- Under our flood risk management duties, we have responsibility for 3,600 km of main rivers in the East Midlands.

Data and trends

The following map shows the flood zones in the East Midlands. Flood zone 3 is where there is a 1 in 100 year risk or greater of flooding and flood zone 2 is where the risk is between 1 in 100 years to 1 in 1000 years. The National Flood Risk Assessment (NaFRA) dataset is calculated using these zones but also factors in the effect of flood defences.



customer service line

08708 506 506

www.environment-agency.gov.uk

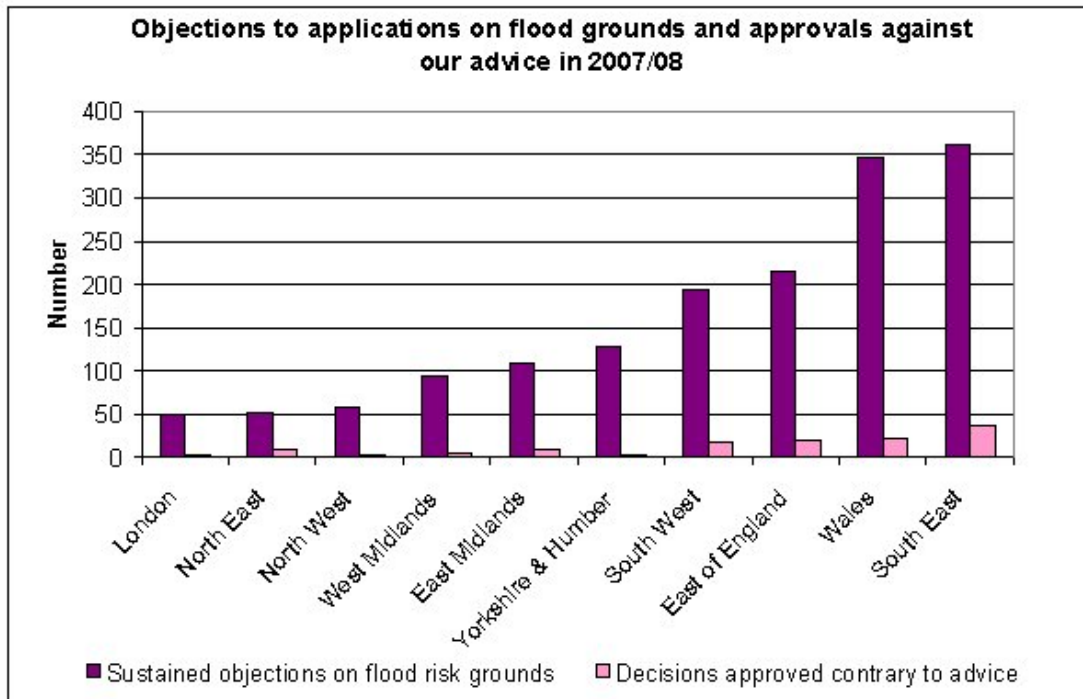
incident hotline

0800 80 70 60

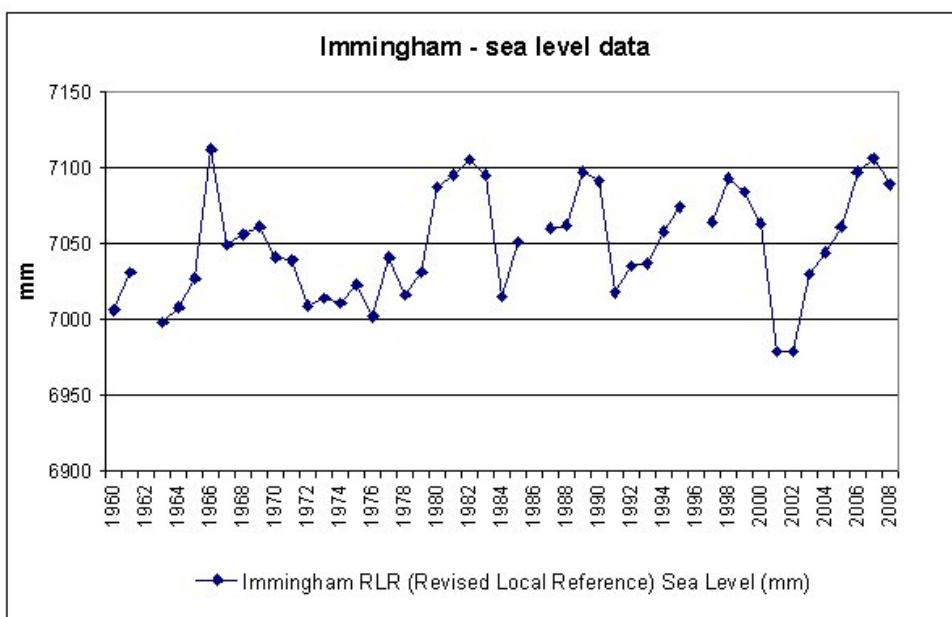
floodline

0845 988 1188

As a statutory consultee, we advise on planning applications where flood risk may be a concern. Often conditions can be included in developments which mitigate the risk satisfactorily. However, where this isn't possible objections are sustained. The number of applications which are eventually approved against our advice is just a small percentage of the total.



The East Midlands has just under 100 km of coastline in Lincolnshire. Sea level rises would increase the risk of coastal flooding. Long term sea level data is held by the Proudman Oceanographic Laboratory in Liverpool. The chart below shows annual data for a site at Immingham over the last 50 years.



Our role

Raising the awareness of flooding for those at risk, managing flood risk for people and homes and responding to flood events are some of our key roles. In the coming years we will ensure that:

- All those responsible for watercourses manage their land and watercourses to reduce flood risk and improve ecological value.
- Inappropriate development is directed away from areas at high risk of flooding.
- We will protect more people, property and the natural environment from significant flood risk.
- We are valued for providing a professional and effective incident management service; with people taking ownership of their flood risk, preparing for flooding and knowing what they need to do if flooding occurs.
- We will have robust and sustainable flood defences that are economically and effectively managed.
- Riparian owners on urban main rivers understand and fulfil their responsibilities.
- The policies in the East Midlands regional and local plans reflect our priorities for the environment.

customer service line

08708 506 506

www.environment-agency.gov.uk

incident hotline

0800 80 70 60

floodline

0845 988 1188