

To: Kent Flood Risk Management Committee – 18 November 2013

From: David Brazier, Cabinet Member, Transport and Environment
Stuart Beaumont, Head of Community Safety and Emergency Planning

Subject: East Kent Flooding Update

Classification: Unrestricted

Summary: To update the Kent Flood Risk Management Committee on the national, sub-national and county preparedness for an East Coast tidal flood inundation.

1. Background

1.1 The Kent coastline is approximately 525 km in length. Tidal and coastal flooding is a key risk for the Kent region. Flooding from the coast is a natural event and may occur as a result from overtopping of coastal defences by waves, increased tidal levels or storm surges (or a combination of all three).

1.2 January 2013 saw the 60th anniversary of the 1953 East Coast Flood (ECF) which killed 307 people in the UK with 24,000 homes affected and 32,000 people evacuated. Some 46,000 animals died, and a month after the flooding, the estimated cost was £40–50 million (damages would be approximately £5 billion if the scale of flooding was repeated today). Over 1000 deaths also occurred in Holland.

1.3 As a ‘tier one risk’ to UK national security, coastal flooding presents a compelling challenge to co-ordinating resilience responses (and recovery) at the national, sub-national and local levels. This uniquely predictable, wide-area threat requires a coherent and co-ordinated response across a large number of Local Resilience Fora (LRF). The prioritisation of national objectives and the deployment of national specialist assets (e.g. flood rescue, the organisation of mutual aid to affected coastal communities) will require responders, including KCC and District councils at all levels to work together, both prior to and during the event to deliver a national joint response.

1.4 The successful response to major coastal flooding relies upon accurate and timely weather predictions by the Met Office and Flood Forecasting Centre; intelligence from the Environment Agency’s flood forecasting teams; a well-rehearsed decision making process to consider pre-determined critical decision points; the ability to coordinate national resources to be swiftly mobilised to the most appropriate locations; and local response plans and mutual aid arrangements to minimise the risk to life, property, infrastructure and essential services such as utilities. As well as local planning and an intimate knowledge of the local geography, the response also relies on members of the general public receiving and understanding the warnings and knowing what to do themselves, including preparation for evacuation.

2. The National Threat

2.1 An ECF event is most likely to occur between September and April, and has no more than a 0.5% chance of occurring in any year but could, nationally, lead to:

- Up to 400 fatalities and 11,000 injured.
- Up to 297,000 residents affected – with 80% in the reach from the Humber to North Norfolk, with some 20% likely to require assistance with evacuation.
- 357,000 buildings affected, including 224,000 residential properties.
- Over £23 billion of damage to property (with activation of flood warning).
- 4,806 km of roads directly affected, as well as 423 bridges and fords.
- People stranded over a large area with 11,000 people in need of rescue or assistance in-situ over a 36 hour period.
- 107,000 people in caravan and camping sites affected during high season.

Areas affected by these figures are all coastal locations from Northumbria to **Kent**, though the likely impacts to different areas will vary. London and the Thames estuary should not be affected severely due to the high standard of flood protection offered by the Thames Barrier and associated defences.

2.2 There are likely to be **five broad phases** in the management of a major coastal flooding event, though this will depend on how the event develops:

1. Early Warning: over 5 days out, Central Government is likely to be alerted that an exceptional storm is heading towards the UK, but that there is low confidence in its precise track and potential impact.
2. Assessment phase: 3-5 days out, understanding and confidence in the characteristics of the weather pattern will increase; the first flood guidance statements and severe weather warnings are likely to be issued and Government likely to commission an assessment of demand on resources.
3. Preparedness phase: 3 days to a few hours out, key decisions taken on how best to mitigate the risk including prioritisation and deployment of national assets and local decisions on evacuation and sheltering.
4. Impact: from a few hours before impact until flood waters have receded and immediate threat to life and community wellbeing has passed. This could last from a few days to several weeks depending on the impact in an area.
5. Recovery: the process of rebuilding lives and communities affected by the storm and is likely to last years for an event on this scale.

3. Kent's Preparedness

3.1 The Kent Resilience Forum, East Coast Flooding Workshop was held at the Ashford International Hotel on Tuesday 30 April 2013 with some 200 attendees including KCC Emergency Planning Officers and District Council representatives. The Environment Agency in Kent and South London has invested in time and resources, (£120,000 in the development of the 'North Kent Coast Modelling Project'), to develop flood data and mapping to support the effective planning for evacuation and critical infrastructure resilience in the county during an East Coast flood event.

3.2 Such an event would see some 12,500 properties in Kent and Medway at risk. Specific areas at risk include:

- Dartford / Erith / Slade Green, Dartford River Crossing,
- Swanscombe peninsula to Cliffe,
- Ebbsfleet International Railway hub, Medway estuary,
- HM Prison Services in Sheppey, Graveney Marshes / Seasalter / Swalecliffe
- St. Nicholas at Wade / Marshside / Chislet
- Sandwich / Deal, Romney Marsh
- Power Station at Dungeness, Dover Port

The good news for Kent is that it will have more time to respond to the warnings as its relevant areas would be the last to be affected because the tidal surge would emanate in Scotland and work its way down the East Coast of England concluding its path in Kent's tidal waters.

3.3 Extensive preparatory work has already been undertaken in Kent and Medway for ECF and the general flood threats to each district. As well as linking in to the national and sub national fora, (Kent is represented by Mark Salisbury from KCC), KCC, the district authorities and Medway all have existing and extensive flood plans that are up to date and have been tested and exercised. There is also a Kent Resilience Forum (KRF) Pan Kent Flood plan which is maintained by the Environment Agency (EA).

4. Next Steps

4.1 Kent (KRF) will be involved in a joint exercise with Essex Resilience Forum partners to test our respective ECF preparedness in January 2014 as part of the sub national ECF steering group exercise agenda. The KRF is also hosting a bespoke Dft / Defra ECF workshop in Dover to explore the specific preparedness of the Dover Harbour ports community and assets. The KRF Public Warning and Informing group have produced a public facing booklet entitled 'Are you Ready' which includes extensive details on how to prepare and what to do in a flood situation. This will be published in January 2014.

4.2 KCC Emergency Planning and the EA intend to formulate a Pan Kent multi agency ECF group before 2014, to ensure that all existing plans, testing, exercising and public messaging highlights the specific risks of a tidal inundation and that additional planning regarding issues such as identifying evacuation routes and key trigger points is agreed and embedded.

4.3 Whilst the likelihood of an ECF remains very low, the potential impact cannot be underestimated. It is clear that there is a central government 'push' from Dft and Defra, with strong influences from the Minister for Government Policy in the Cabinet Office, Oliver Letwin MP, to ensure that the affected communities and their assets along the national East Coast are as prepared as they can be for such an event. As such, Kent's multi agency partners are well placed to respond now and in the future.

5. Recommendations

5.1 That Members:

- Note the potential level of the threat that an East Coast tidal surge could pose to the communities, infrastructure, the environment and economy of Kent;
- Endorse the KCC, and wider-partnership, approach outlined within this report; and
- Contribute any additional matters arising from debate by the Committee.

Mark Salisbury, Emergency Planning Team Manager, Customer & Communities
01622 221379 / mark.salisbury@kent.gov.uk

Background documents: None