



The Thames Gateway: planning policy and flood risk scenarios

Jillian Eldridge and Diane Horn

Birkbeck University of London, Geography, London, United Kingdom (d.horn@bbk.ac.uk)

The Thames Gateway, currently Europe's largest regeneration project, presents a valuable case study area in which to examine the interrelated issues of planning policy, flood risk and insurance loss potential. The region is typified by a significant exposure to flooding due to its location, which as developments proceed, could result in increased areas of vulnerability with consequential insurance loss and hotspots of risk. With 160,000 new homes planned by 2016, positive use of planning policy is fundamental in minimising potential flood risk as well as ensuring long term economic and social goals can be met.

This project focuses on several planning scenarios within the Gateway for the areas of Barking and Medway, and models flood risk using a commercial flood model to develop the flood risk under alternative planning policy scenarios. The two areas chosen demonstrate major regeneration and redevelopment sites located on Thames tidal floodplain. The areas are protected by flood defences although are both downstream of the Thames Barrier. However, it is expected that defences will be maintained and upgraded over the next several years, particularly in the Medway, which is currently protected to a lower level than most other areas in the Thames Gateway. The progress of development is more advanced in Barking with the major regeneration site, Barking Riverside, hosting 2000 new homes. The study sites have been chosen based on their location and proximity to the Thames and allow for an analysis of planning policy and its influence in minimising risk into the future. The reflected change in flood risk due to both the planned developments and flood defences will help to understand change in risk over time and the intricacies expected with delivering planning policy in a multi-governed area subject to conflicting objectives.

Flood risk for both sites are modelled using a commercial flood model to estimate flood risk based on several flood scenarios for both current and future developments. Alternative planning approaches are also used to determine the potential risk faced under a range policy conditions, from using fewer brownfield sites to implementing PPS25 (Planning Policy Statement 25: Flood Risk and Development) to varying degrees. Building vulnerability is assessed for all scenarios using vulnerability curves, and insurance loss calculated for each scenario output. The flood model outputs for the study areas gives an initial indication of present flood risk. The results will be of use to planners and insurers in understanding future flood risk scenarios in urban regeneration areas.