

# Flooding - ready for the apocalypse? Not really.



Given the hot dry weather, one's thoughts inevitably turn to flooding. The picture to the left is from an excellent amateur [flood mapping site](#). Exploiting Google Maps, the application allows the user to display the approximate impact of sea-level rise up to 7 metres ([about what would happen if the Greenland ice shelf melted](#)). The

application designer, Alex Tingle, [explains how it was done and the caveats](#). For a given level of sea-level rise, the impact will be greater than just the new contour of the coastline - [storm surges and high tides doing more damage](#). So what is the investment thinking given this threat?

[Flood expenditure in the UK is about £600 million](#), (coasts and rivers) but there is a case for spending *much more* as the climate changes and the risks increase. The Foresight report, [Future Flooding](#), showed that flood damage could rise from £2.2 billion to over £25 billion by 2080 in the worst case scenario for climate change and unchanged flood defence policies. The report recommended steady increase in funding from current levels to over £1 billion in order to keep the damage at a manageable level - though still double what it is today. This finding was backed by a [2006 parliamentary select committee inquiry](#). Obviously, building defences is only one part of an overall strategy (called [Making Space for Water](#)) that includes warnings, responding quickly when trouble strikes, and reducing risk by avoiding development in the flood plain.

Recent economic appraisal suggests that extra spending would be excellent value for money - new flood schemes are achieving an average benefit-cost ratio of 6:1 and internal rate of return of 27% for the marginal scheme - meaning they prevent far more property damage than they cost to build and maintain. It also means that many schemes that are cost effective are not being done, because of expenditure constraints. And they offer far better value for money than most other government spending - for example [Crossrail has an expected benefit-cost ratio of only 1.99:1](#) and many health and criminal justice expenditures have far

lower returns (if they can be detected at all).

One argument is that even the wisest and best investments cannot be made if there is no money - [and Gordon Brown has signalled that the next three-year spending review will be his tightest yet](#). But the more likely cause of underspending on flooding is that the '[revealed preferences](#)' for government spending are barely related to the cost-benefit analysis (ie. the government isn't all that bothered about loss of property to floods relative to other calls on the budget). Perhaps knowing that insurers will spread the risks, the tendency is to be less concerned about them - a sort of large scale [moral hazard](#) problem.