## Can EIA Policy Alone Prevent Flooding?

Flooding is a natural process that has shaped our environment long before human settlements exploited the fertile land it created. It is only through the encroachment of the built form that flooding started impacting on our way of life and is now an issue that is prevalent across the world today.

Once again, the issue of flood risk and development has come to the fore with recent events around Wainfleet, Lincolnshire where flood defence infrastructure failed, and elsewhere across the County hundreds of reports of localised flooding came after intense rainstorms.

Inevitably, questions arise around why these areas are susceptible to flooding and why so many homes and businesses are at risk. This article looks at flood risk policy in the context of recent events and why it’s important that we as a civilisation adapt for the future. Nature continues to issue its warning which we try and resolve through specialist engineering but inevitably nature has the last word. The human race needs to take heed of these and work with natural forces, not against them.

Specific flood risk policy has been ingrained within planning and development for around 20 years, initially starting with Planning Policy Guidance Note 25. Policy has always been centred around the hierarchy of “Avoid > Mitigate > Compensate” by encouraging new development into areas at the lowest risk of flooding (Flood Zone 1).

Where this is not possible, policy dictates that suitable mitigation is provided to ensure flood risk can be managed in new developments, and if of a certain scale, ensure appropriate compensation is included so there is no cumulative detriment on floodplain storage/conveyance.

Environmental Impact Assessments focus on the impact not only to the proposed development, but also to the local area, including the potential for cumulative impacts. Information now available on flood risk includes Environment Agency mapping, Strategic & Preliminary Flood Risk Assessments and anecdotal evidence of previous flood events. They must consider all reasonable future scenarios too, including climate change, failure of flood defence infrastructure and changes to flood management strategies.

This is highlighted in events such as Wainfleet, where ordinarily the flood defences protect the area from flooding by using engineered, raised defences. When these failed, nearly 600 homes were evacuated with up to 130 properties flooded ([https://www.bbc.co.uk/news/uk-england-lincolnshire-48673100](https://www.bbc.co.uk/news/uk-england-lincolnshire-48673100)). New developments will need to consider such a breach event occurring and make sure the design of mitigation is proportionate to the risk posed. However, as highlighted by Emma Howard Boyd, the Chair of the Environment Agency, in her statement when releasing consultation on their draft flood strategy for the future “we can’t win a war against water by building away climate change with infinitely high flood defences”.

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Managed retreat is one option for dealing with future flood risk, but as the market value of UK real estate represents 21% of the total net wealth and contributes 5.4% of GDP (https://www.bpf.org.uk/about-real-estate), there needs to be consideration of the economic impacts of such a strategy. Restricting building in certain areas needs to be very carefully considered and could ultimately damage the economy and force development to take place in other areas that may also be unsuitable for development.

When you consider the measures other settlements have taken it does not require substantial policy shifts to simply manage water more effectively in the urban environment. Rotterdam for example employs a subsidy for building and retrofitting green roofs whilst making them mandatory on all municipal buildings, and has taken to designing parts of the urban realm as ‘water plazas’ which allows for excessive rainfall to be stored in areas that can ordinarily be used as amenity space. This prevents flooding to the highway network and critical infrastructure.

Rather than tightening flood risk policy, the draft National Flood and Coastal Erosion Risk Management Strategy for England should seek to outline a comprehensive strategy of resilience and adaptability to future flood risk and climate change that can be implemented in part through new development and renovation and retrofit to existing property. If there is clarity on what is necessary, such as ensuring buildings are constructed in a way that they can be adapted to meet future flood risks and including rainwater source control measures on all new buildings, then the property and construction industry can respond and adapt accordingly.

Making new developments resilient includes making them flexible and adaptable to future changes in climate and flood risk. Policy therefore needs to follow suit. Rigid policies, requirements and standards may make developments less adaptable, and therefore at increased vulnerability to the impacts of flooding.

You cannot always prevent flooding, but you can prepare for it.

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