
The forgotten 500

The implications of the major downgrading of flood defence investment in England: A TCPA briefing

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1	Introduction	2
2	The cancellation of the Lowestoft tidal barrage	4
3	The partnership funding model	5
4	What now for Lowestoft?	6
5	Short term recommendations	7
6	Conclusions	8
7	Annex 1: Summary of the Public Accounts Committee Resilience to Flooding report	9

1 Introduction

In January 2024, the Public Accounts Committee (PAC) revealed a major gap in funding for flood defences in England.¹ The striking conclusion of the PAC report is that of the 2,000 flood defence schemes designed to protect communities at critical risk of flooding, 500 will no longer receive the necessary investment in the current funding programme (which runs from 2021-2027).² A summary of the key points of the PAC report is provided in Annex 1. The current flood defence funding programme ends in 2027, and there has been no commitment to fund these projects after that date.

This briefing sets out the background to the major downgrading of flood defence works in England, and then uses Lowestoft as case study to explore the dramatic implications for those communities where strategic flood defence investment has been withdrawn.

1.1 The causes of the reduction in flood defence investment

The PAC report sets out a number of causes to explain the major reduction in funded flood defence schemes, but the most significant is the impact of construction inflation which ran as high as 28% in 2022. The financial viability of flood defence schemes is judged by appraisal metrics which require a partnership contribution from other private and public sector bodies. These metrics are based on, for example, the number of residential properties which will be protected to provide a cost benefit analysis of any investment. As the PAC report makes clear, this discriminates against smaller communities and does not include farmland. While the metric does include an allowance to reflect social deprivation, this factor does not overcome the funding gap in communities such as Lowestoft.

1.2 The implications of the reduced flood defence investment

The PAC report sets out the dramatic decline in the overall number of homes that will be protected by the current funding programme (200,000 instead of the original 336,000), but to some degree that underplays the wider impacts on the fate of communities whose long-term development prospects are predicated on major flood defence investment. For example, while the majority of homes in Lowestoft are not directly affected by the cancellation of the tidal barrage, the fact that the town's commercial and service heart will now be highly vulnerable to flooding affects the viability of the entire community.

The reduced flood defence programme will decrease the number of homes protected by new investment from 336,00 to 200,000.

Coastal communities are particularly vulnerable to a combination of rapidly rising sea levels and the increasing risk of storm surges driven by severe weather events. The government's own 2023 National Risk Register identifies the potential for major loss of life on the east coast under

¹ The full report is available online here: <https://committees.parliament.uk/committee/127/public-accounts-committee/news/199357/flood-resilience-eroded-by-poorly-maintained-defences-with-government-in-the-dark-on-progress/>

² The figure of 500 comes from evidence given by Phillip Duffy CE EA to the PAC committee: *'although we are modelling that 500 schemes won't go forward in this period—because we are reducing costs more, predominantly because of inflation—that doesn't mean that those schemes are cancelled. Actually, we may find that some schemes move around and some things are delayed, and we will keep checking back with the authorities, asking, "Are you ready to go now? Could you get into our programme?"'*

a reasonable worst-case scenario for major flooding.³ The stark reality is that these risks play out in places such as Lowestoft where the centrepiece of the town's flood defence infrastructure, which was to have been a river barrage capable of providing long-term protection against tidal surges, has now been cancelled for the foreseeable future.

The most immediate impact of these funding shortfalls will be economic and social, because the failure to invest in long-term flood resilience will lead to growing challenges in gaining affordable commercial insurance and dramatically decrease mortgage availability. This has the potential to create a self-reinforcing cycle of economic and social decline which in turn makes finding local contributions to partnership funding even harder to secure.

Given the gravity of what the PAC report has revealed, it is surprising that there has not been a stronger response from those places most affected. One reason for this is that while it is known that 500 schemes will now not go ahead in this spending period, the precise location of these cancelled projects has not been revealed, despite repeated parliamentary questions.⁴ Given the nation's wider vulnerabilities to the climate crisis, four questions require urgent clarification:

1. Can DEFRA and the Environment Agency provide a list of the 500 schemes which will now be removed from the current flood defence funding programme?

Repeated Parliamentary questions to the Department of Environment, Food and Rural Affairs (DEFRA) have failed to gain a direct answer to this question, with the department stating that such a list is still under consideration. Since the EA has made clear that 'modelling' has taken place to produce the figure of 500 schemes, it would seem to be in the public interest to release the result of this modelling and a provisional list of schemes which will not be taken forward.

2. Can DEFRA and the Environment Agency provide the details of the reduced investment in flood maintenance that results from the significant increase in construction inflation?

In an answer to a parliamentary question, DEFRA have confirmed that £20 million has been taken from the capital budget to contribute to shortfalls in the maintenance budget. This will clearly have an impact on the ability to deliver new flood defences.

3. Has DEFRA considered reviewing the flood defence metric to ensure that smaller vulnerable coastal communities will receive the necessary investment for their long-term resilience?

The TCPA understands that an internal review is underway, but we do not know the remit or timescales.

³ The reasonable worst-case scenario in the [National Risk Register](#) is based on coastal flooding across the east coast of England, impacting a very large number of residential properties. Comprehensive warning and information systems would be employed, and a large number of people would require evacuation and shelter, with a significant proportion of these requiring assistance. The number of people affected could be even greater during the holiday season. There would be fatalities and casualties, including those whose death, illness, or injury are an indirect consequence of flooding. Large areas of road and railway could be flooded, with other major infrastructure such as schools, hospitals, care homes, emergency services and agricultural land also affected.

⁴ For example, see [this response](#) to question 20753 by Emma Hardy MP on 15 April 2024.

4. What advice will Government provide to local planning authorities as to how to deal with housing sites allocated in local plans or giving planning consent that were predicated on major flood defence investment which will now not take place?

At the time of writing, no new guidance has been issued by the Department of Levelling Up, Housing and Communities (DLUHC) to deal with this problem.

There is plainly a serious deficit in planned flood defence works in England which will have multiple impacts on the communities affected. Until we know the precise locations, we cannot quantify the associated economic impacts. However, the case of Lowestoft provides an indication of the scale of the consequences.

2 The cancellation of the Lowestoft tidal barrage

The example of the Lowestoft tidal barrage reveals in more detail the practical impact on communities of the cancellation of strategic flood defence schemes. These impacts are manifest both in the immediate flood resilience of the community and in the long-term impact of undermining social and economic development. Lowestoft is one of the UK's most vulnerable communities to tidal flooding, as well as being subject to significant river and surface water flooding issues. Both the 1953 and 2013 tidal surges had a dramatic impact on the central areas of the town. In common with many coastal communities, Lowestoft has very significant challenges around growth and regeneration in the context of increasingly severe climate change impacts.

As with many other communities, the Local Development Plan adopted in 2019 focuses significant housing growth inside the town as means to secure regeneration. This includes provision for 1,400 new homes on a waterfront brownfield site in the centre of the town.⁵ The majority of this regeneration site is in a category 3 floodplain and passed the exception test by arguing that housing growth was critical to the town's regeneration, and that flood mitigation and evacuation measures could be secured to make the development safe over its lifetime. The plan also recognises the ongoing work to develop strategic flood defences for the town which were being developed from 2018.⁶

These new defences consisted of new flood walls on the north and south riverbanks, to be connected by a river barrage which would protect the Lake Lothing area from storm surges. As recognised in the flood risk assessment which accompanied this scheme, the development of the flood walls only makes sense in the context of the final development of the barrage. Without the barrage they have a marginally beneficial effect on the town's flood resilience.⁷

⁵ The adopted Waveney Local Plan is available [here](#).

⁶ Para 8.137 of the Waveney Local plan states: *'The Strategic Flood Risk Assessment has been used in assessing potential sites for allocation in this Local Plan. The only sites at risk from flooding which have been allocated are those within Central Lowestoft where the regeneration needs of that area necessitate development within a flood zone. The policies allocating these sites require that they are safe from flooding. Furthermore, plans are in place for a strategic flood risk defence for Central Lowestoft which will significantly reduce the risk in these locations.'*

⁷ The [FRA for the Lowestoft tidal wall and Barriers](#) states that: *'flood extents are very similar to the do nothing/ minimum but with a slight decrease in flood extent in the harbourside area and with significant reduction in flooding in the area north of Hamilton Road (as expected).'*



Aerial view of Lowestoft harbour. Source: East Suffolk Council

The flood defence walls were completed in 2023, and planning for the barrage was at an advanced stage when the scheme was effectively cancelled at the beginning of 2024. East Suffolk Council withdrew the application but only because it was clear that the proposal would fail the partnership agreement funding model which requires a proportion of the costs of flood defences to be met by local authorities, the private sector or other flood risk management authorities. Part of the reason for the funding shortfall

was the significant increase in construction costs highlighted by the Public Accounts Committee. In Lowestoft this left a funding gap of £124 million.

One added complication is that the barrage construction requires the closure of the harbour. As the harbour is required for the construction of the Sizewell C Nuclear power station, the window for the construction of the barrage was critically small. This could mean a worryingly long delay before the construction of a barrage is possible again, even if funds were made available.

3 The partnership funding model

It is worth briefly reflecting on how the partnership funding formula operates for major new strategic flood defence works.⁸ Any flood risk management authority can bid for Grant in Aid (GIA) for a Flood and Coastal Erosion Risk Management (FCERM) project, but it has to pass two tests. First it must meet the criteria set out by the Environment Agency in the partnership funding calculator. There are four main outcome measures (OM's) which in summary relate to:

- OM1a: FCERM economic benefits to existing business.
- OM1b: People benefits in terms health and wellbeing, including a factor for deprivation.
- OM2: Better protecting existing homes at risk from flooding and securing existing homes which may become at risk in the future.
- OM3: Protecting existing homes against coastal erosion.
- OM4: The delivery of associated environmental outcomes.

As the Public Accounts Committee report found, because the cost-benefit analysis is based on the number of homes protected, the formula is skewed to larger urban areas. It does not fully reflect the costs and benefits to the wider community beyond those properties directly impacted by flood defences, nor does it fully reflect the costs of managing decline if schemes do not go forward. Perhaps most strikingly for Lowestoft, the formula does not recognise the potential economic benefits of new development which might be facilitated by new flood defence schemes. The guidance makes clear that:

⁸ For a full explanation of flood defence funding see the House of Commons research briefing: [Flood risk management and funding](#), Feb24.

'Non-damage related benefits that enhance or enable wider, non-FCERM benefits to be achieved often for, or led by, other authorities and businesses, will typically not qualify for FCERM GiA. For example, these benefits would include additional economic growth made possible after the flooding and coastal erosion risks are reduced, the benefits from future developments, and the local benefits that would otherwise transfer elsewhere in the United Kingdom'.⁹

The second test for Grant in Aid is the ability of the applicant to fill the funding gap between GiA and the cost of the scheme. Put simply, central government expects an element of match funding and in the case Lowestoft that figure was £124 million for the Barrage. In 2022, East Suffolk Council allocated £96 million to support flood defence schemes in Lowestoft, including supporting the cost of the now completed flood walls. As a district council, East Suffolk is in a better financial position than many unitary authorities because it does not have to meet the expanding needs of social care expenditure. Yet even without this pressure it is plainly unrealistic to assume local councils or local business can find match funding to cover the rapidly growing costs of flood defences.

In this context, there is no prospect of the Lowestoft scheme passing the funding partnership formula in the current funding round that ends in 2027. The future of the barrage and, by implication, the future of Lowestoft depends on changing the funding formula.

4 What now for Lowestoft?

With no prospect of the tidal barrier, Lowestoft now faces dual existential threats of direct flood risks and longer-term economic stagnation. In the short-term, East Suffolk Council has stated that it has purchased 1,400 metres of demountable flood defences which could work in conjunction with the completed flood walls. However, these will not provide the level of protection afforded by the barrage and demountable defences are inherently riskier both in terms of capability and their reliance on successful deployment.

In terms of the future development of Lowestoft, an outline application for 500 homes on the allocated regeneration site on the South side of the river is expected this summer. In pre-application consultations the developer has stated that the scheme can go ahead despite the barrier not being completed. That position will be extremely difficult to justify given the national policy test to ensure development is safe from flooding over its whole lifetime (100 years for residential development) and that new development should not increase flooding elsewhere (hard to achieve for a scheme reliant on land raising on category 3 floodplain).

The local plan explicitly identified strategic flood risk investment in Lowestoft as being an important contributing factor to the town's resilience. It is concerning therefore that the five-year review of the plan conducted in March of this year concluded there was no need to review local plan policy despite the cancellation of the barrage, significant changes to national flood risk policy and updates to the climate change flood risk allowances.

⁹ [Calculate GiA funding for FCERM projects](#). Environment Agency, October 2023.

5 Short-term recommendations

The Lowestoft case study illustrates some well understood and systemic problems in how we plan for climate resilience. It is now clear that the framework put in place after the Pitt Review is not fit for purpose and further comprehensive review is now urgent. In the short-term, five actions are necessary to address the issues raised by the downgrading of flood defence spending and the impact on communities such as Lowestoft:

1. DEFRA and the EA must conduct the current review of those places not to receive flood defence investment in open and transparent way. This means publicising the current modelling and actively supporting those affected communities to understand the economic and social implications for their development.
2. An urgent review by DEFRA and the Treasury of how partnership funding arrangements operate is now required. The flood defence funding metric creates perverse outcomes such as, in the case of Lowestoft, leaving a community with a half-completed flood defence scheme which offers the majority of the town no better level of protection. The partnership funding model is no longer fit for purpose in an era of local government austerity, sharply rising inflationary pressures on construction and ever-growing risks and impacts from climate change. In particular, the metric must consider the future economic benefits of growth secured by investment in flood defences. The system must also consider a much wider set of economic impacts on communities of not securing a resilient future, including the cost of emergency recovery and long-term relocation.
3. DLUHC must provide urgent advice on how local plan allocations and planning applications are to be handled in areas where strategic flood defence schemes have been cancelled or delayed. It will be important to understand how this will impact in meeting the Government's housing targets. Planning policy should make clear that housing growth should be contingent on an infrastructure first approach to flood resilience.
4. East Suffolk Council (and other similarly affected planning authorities) must fully review the Local Plan to test the implications of the delay/cancellation of the barrage on the safety and viability of allocated housing sites. If necessary, the local planning authority should produce new advice (for example through a supplementary planning document) to manage the future development of Lowestoft.
5. In considering the need to keep the harbour at Lowestoft open during the construction phase of Sizewell C, priority should be given to the future safety and resilience of people of Lowestoft. That means that should funding become available the tidal barrage should not be delayed by the needs of the Sizewell project.

The case study also highlights a real issue about how communities struggle to understand the weight of technical assessments and strategies and multiple players who are involved in securing flood resilience. This institutional and policy complexity can often obscure clear lines of responsibility, leaving communities disempowered in terms of actions they might take to

secure their future. The way risk is described is one powerful example - where complex probabilities are expressed as percentage, risk of return flood events become unintelligible to the vast majority of people. There is an urgent need to move towards expressing flood risk in terms of reasonable worst-case scenarios for communities, which would allow a clear sense of a shared target for future resilience.

6 Conclusions

The implications of the delay/cancellation of 500 flood defence projects will remain opaque until DEFRA and the EA publish their modelling and show which communities will be affected. We can, however, extrapolate from the one place we do understand that the impacts will have an existential impact on the social and economic future of these communities. Faced with the ever-growing risk of a North Sea storm surge, rising sea levels, and with no realistic prospect of a funding solution for the barrage, the future of the town of Lowestoft is frankly bleak. It is clear that the social, economic and cultural prospects of whole communities cannot rest on a simplistic funding formula. The fate of communities should rest on strategic decisions based on transparent conversations about which communities national government intends to defend, and which will have to be relocated.

7 Annex 1: Summary of the Resilience to Flooding report¹⁰

There are **5.7 million properties in England at risk of flooding**. Despite the government's ambition to create a nation more resilient to flooding, it has not defined what this means: it has no measure of resilience to measure progress against, but in 2020, the government announced a new six-year capital investment programme (capital programme) for flood and coastal defence for the period April 2021 to March 2027. It committed to better protect **336,000 properties and help avoid £32 billion of wider economic damage by investing a total of £5.2 billion in around 2,000 new flood defence projects**. On top of that, the Environment Agency (EA) estimated an additional £2.3 billion partnership funding would be required. However, the capital programme got off to a slow start and the EA underspent by £310 million in the first two years of the programme, notably because of inflation, Covid-19, and bureaucracy issues. The consequence of this slow start is that the EA will now fund only 1,500 of the 2,000 flood defence projects originally planned in this investment period. It implies **a reduction of 40% in the number of properties that are expected to be protected by these projects, i.e., 200,000 instead of the original 336,000**. In addition, **around 203,000 properties are at increased risk of flooding** due to the deterioration of existing flood defences.

In this context, the EA is responsible for maintaining existing flood defence assets that it owns. Its modelling specifically showed that it is **best value for money to have 98% of its high consequence assets at required condition**, which necessitates a funding of £235 million a year. However, **DEFRA has set the Agency's maintenance funding at £201 million** which should allow it to maintain 94.5% of these assets at required condition.

Additionally, while DEFRA and the Agency have developed a set of 18 metrics, with the primary focus on the 'headline' metric of the number of properties better protected, the measure is a poor indication of overall progress. Indeed, it **does not take account of properties that have become less well protected due to factors such as housing development, climate change or any deterioration in the condition of flood defence assets**. Moreover, DEFRA does not have a sufficient understanding of the impact of its capital investment decisions on geographical distribution, as the current method for prioritising projects favours the more population-dense urban locations. As a result, there is a lack of provision for smaller communities of fewer than 100 houses that can nevertheless be devastated by the impact of flooding. DEFRA is also not providing the necessary leadership and support for local authorities on the increasing risks from surface water flooding. While under Schedule 3 to the Floods and Water Management Act 2010, any construction work that has drainage implications requires approval before it starts, it has yet to be implemented in England, which is expected by the end of 2024.

Finally, there is a concern that **Flood Re is not providing the protection that was envisaged and that 2039 will likely be too soon to close down the Flood Re scheme, given the increasing risk from flooding and slower progress on protecting properties**. It is also unclear what number of the 265,000 policies ceded to Flood Re in 2023 were from the top 2% of at-risk properties nationally.

¹⁰ Full report available from: <https://committees.parliament.uk/committee/127/public-accounts-committee/news/199357/flood-resilience-eroded-by-poorly-maintained-defences-with-government-in-the-dark-on-progress/>
