

Executive Summary

5. Hampshire has benefitted from a significant investment in Flood and Coastal Erosion Risk Management (FCERM) infrastructure during the previous 6-year capital programme. However, there remains a large number of vulnerable properties, spread across various catchments, and located in small clusters, for which it is unlikely that protection via a strategic capital scheme will ever be economically viable. In this instance, Property Flood Resilience (PFR) is seen as a viable, practical option for reducing the risk of flooding, and the hardship, distress and suffering this causes.
6. Following a small joint scheme that led to the successful implementation of PFR in Hedge End, it is proposed that the County Council and the Environment Agency (EA) work together to extend this way of working across Hampshire, and to deliver a 2 year PFR Pilot Programme in communities at risk from multiple sources of flooding. If the approach proves viable, it is hoped that a further PFR programme can be undertaken in the period 2023/24 – 2026/27, corresponding with the remaining period of the national FCERM capital programme, on a countywide basis with support from all three RFCCs, Southern, Thames and Wessex.
7. Currently, the Wessex Regional Flood and Coastal Committee (RFCC) has a PFR programme, and this covers the western edge of Hampshire. At this stage, the Southern RFCC and Thames RFCC do not have corresponding programmes although there is a strong commitment to develop a similar offer.
8. It is recommended that the County Council confirms a £105,000 annual contribution to the 2-year PFR Pilot Programme covering that part of the county within the Southern RFCC area.
9. This would represent a County Council contribution of £3,500 towards an approximate total cost of £13,000 to install PFR to each property identified as being at risk. This is based on an average cost of £9,500 per property with an allowance of 20% Optimism Bias and costs associated with management of the overall programme. In most cases, the County Council's contribution would assist in leveraging in national, regional and local funding, including from property owners and district councils, sufficient to cover the shortfall.
10. In early 2020, it was calculated by the Association of British Insurers that the average cost of damages to a three-bedroom home caused by internal flooding is £32,000. This does not account for the hidden costs associated with the hardship, mental distress and suffering caused by flooding, clean-up operations, emergency planning response and assisting residents in the recovery phase.

11. The County Council's Local Flood and Water Management Strategy and Climate Change strategy highlight the increased risk of danger to Hampshire residents from all sources of flooding and the need for increased resilience to future severe weather events. All new planning applications require a 40% uplift on calculated drainage capacity to compensate for expected increases in severe weather events and flooding. Existing properties do not have this additional capacity. This programme will provide additional resilience to a number of Hampshire residents who will not be protected by other flood alleviation schemes and demonstrate the County Council's continuing commitment to deliver climate change actions on the ground.

Contextual Information

12. Hampshire has benefitted from a significant investment in FCERM infrastructure during the current 6-year capital programme (which ends in 2020/21) with major flood alleviation schemes being delivered in Winchester, Romsey, Basingstoke and elsewhere. However, this has been a significant challenge with a national funding formula that has not seemed to adequately recognise the impact of groundwater flooding and which lacked flexibility, particularly where small numbers of properties and dispersed rural communities are affected. The process has often been quite complex and demanding in terms of the investment of time and resources required.
13. Changes have recently been made to the national partnership funding process. While this has improved the situation in a number of ways, including updating payment rates, introducing a new risk band to help manage surface water flood risk, and increasing recognition of the impacts on health and wellbeing, and critical infrastructure like highways, the partnership funding process is still largely focused on the number of houses flooded irrespective of the source of flooding. There are a large number of vulnerable properties, spread across various catchments, and located in small clusters, for which it is unlikely that protection via a strategic capital scheme will ever be economically viable. In this instance, and as demonstrated by the Hedge End scheme, PFR is seen as a viable, practical option for reducing the risk of flooding, and the hardship, distress and suffering this causes.
14. The Hedge End PFR scheme was completed in March 2020. Managed directly by the EA, and jointly funded by FCERM Grant in Aid, Southern Regional Flood and Coastal Committee (SRFCC) Local Levy, Hampshire County Council and Eastleigh Borough Council, the scheme succeeded in providing benefits to an area where previous attempts to bring forward a larger strategic scheme had proved uneconomical.
15. A critical factor in the success of the scheme was that it was fully funded and not reliant on householders contributing financially. FCERM GiA is capped at 35% of the cost to design and install measures in a house and is only

available for those properties at very significant risk. SRFCC Local Levy support was therefore key in bridging the funding gap and encouraging contributions from Eastleigh Borough Council.

16. Following the implementation of the scheme at Hedge End, it was agreed that the Environment Agency and the County Council would investigate the possible application of this approach to other locations across Hampshire where securing capital Flood and Coastal Erosion Risk Management (FCERM) and Local Levy funding for other interventions remained challenging.
17. Currently, the Wessex Regional Flood and Coastal Committee (RFCC) has a PFR programme and this covers the western edge of Hampshire. At this stage, the Southern RFCC and Thames RFCC do not have corresponding programmes, although there is a strong commitment to develop a complementary offer. The areas covered by the three RFCCs is shown at Appendix 1.
18. An initial desk top study, based on the County Council's records of historical flooding, the Environment Agency's Flood zone mapping including Risk of Flooding from Surface Water maps (RoFSW), fluvial flood risk and groundwater flood risk maps, has currently identified 308 properties across 35 communities within that part of Hampshire covered by the Southern RFCC which are at risk of flooding from all sources – fluvial, tidal, coastal, surface water, and groundwater – and which could qualify for assistance.
19. Initial analysis has indicated that the delivery of large strategic flood alleviation schemes would be uneconomical and unrealistic at these locations, due in part to the multiple sources of flooding at some of these locations, but that interventions in the form of PFR schemes would be appropriate.
20. Whilst the County Council, as Lead Local Flood Authority for Hampshire, is responsible for the management of surface water and groundwater flooding in the county, the Environment Agency retains responsibility for the management of fluvial and coastal flooding. The Agency also has an overall co-ordination role for all sources of flood management.
21. The Environment Agency will, therefore, act as the lead partner for the proposed 2-year PFR Pilot Programme for the area of Hampshire covered by the Southern RFCC. The County Council will support the Agency in ensuring that there is a coordinated approach and equality of opportunity for homeowners at risk from different sources of flooding.
22. If the approach taken in the Pilot Programme proves viable, it is hoped that a further PFR programme can be undertaken in the period 2023/24 – 2026/27, corresponding with the remaining period of the national FCERM capital programme, on a countywide basis with support from all three RFCCs, Southern, Thames and Wessex.

23. In order to carry out the 2-year Pilot Programme, the Environment Agency will employ a Project Manager. Funded through FCERM GiA, they will:

- work with a PFR Project Board and partners to prioritise communities. The County Council will be a Board member;
- support the coordination of activities;
- confirm the candidate properties in the identified communities;
- engage with the community and partners;
- write the necessary business cases to enable/unlock funding;
- work with PFR Framework Suppliers to organise surveys and fit flood resilience measures; and
- be the single point of contact for local customers, to help ensure a high uptake rate.

24. It is estimated that on average 30 properties which meet the criteria of having been impacted by internal flooding or are otherwise identified as being at very significant risk of flooding, will be fitted with PFR each year. The minimum standard of protection provided by the PFR will be British Standard PAS 1188* (BSI 2009a and 2009b) which has been developed by the British Standards Institution (BSI) in association with the Environment Agency. The County Council's contribution will not normally be available for those properties affected by flooding from the following sources unless the flooding is from multiple sources including Groundwater and Surface Water:

- Coastal;
- Fluvial; and
- Tidal.

25. It is noted that FCERM Grant in Aid (GiA) will only be available for those properties at very significant risk. Given that the County Council's contribution to the PFR Pilot Programme will not normally be available for those properties affected by flooding from coastal, tidal and fluvial sources, unless part of a multiple source, it is proposed that in some areas the County Council extends the offer to properties at a lower level of risk in order to provide greater overall resilience for the community. This would be subject to any funding gap left by the withdrawal of FCERM GiA and Local Levy being filled by partnership contributions.

Finance

26. Based on the above, the following costs and contributions are proposed by the Environment Agency for the 2-year Pilot Programme operated only in the Southern RFCC area of Hampshire.

	Typical Year
Number of properties better protected	30
Costs	
Total cost (Based on average £9,500 per property ¹ + 20% Optimism Bias)	342,000
EA Project Management cost	50,000
TOTAL	392,000

Contributions	
FCERM GiA (Based on £3,500 per property ²)	105,000
Proposed maximum Local Levy contribution (£5,000 per property ³ or £150K per annum)	150,000
Proposed maximum Hampshire County Council Contribution (£3,500 per property or £105k per annum based on 30 properties protected each year)	105,000
Other partnership contribution to be identified	32,000
Total	392,000

1. Average cost of PFR from Hedge End trial scheme including fitting of flood doors (like for like) air bricks and sealing brick work. Cost includes survey, supply and installation.

2. FCERM GiA available for each property from Partnership Funding calculator.

3. Southern RFCC approved this amount per property for similar schemes i.e. Middle Medway PFR scheme.

27. It is recommended that the County Council confirm a £105,000 annual contribution to the 2-year pilot PFR programme covering that part of the county within the SRFCC area.
28. As part of the Pilot Programme, the County Council will explore potential alternative approaches to the delivery of comparable standards of protection for individual properties, including alternative financial models which could include potential contributions from property owners and insurers. The outcome of these investigations will then be reviewed alongside those of the Pilot Programme at the end of the 2 years so that the effectiveness, success in attracting partnership contributions, and value for money of both can be properly assessed. The review will be undertaken in collaboration with the EA and the Southern RFCC, and the results will be subject to a further report.

29. The availability of FCERM GiA and Southern RFCC Local Levy, and therefore the start of the Pilot Programme, is subject to the preparation and submission of a business case by the Environment Agency.

Benefits of Property Flood Resilience

30. In early 2020, it was calculated by the Association of British Insurers that the average cost of damages to a three-bedroom home caused by internal flooding is £32,000. This does not account for the hidden costs of hardship, distress and suffering caused by flooding.
31. Nationally, the average cost of providing a high level of flood resilience to a home has been placed by the *'Know Your Flood Risk'* campaign at between £10,000 and £15,000. This includes passive measures (requiring no human intervention) such as:
- fitting flood proof doors;
 - fitting self-closing air bricks; and
 - fitting one-way valves on toilets.
32. These measures, though more expensive than some other systems, ensure that vulnerable residents are not required to put bulky heavy flood boards into place. These measures also mean that defences will be in place constantly, so short warning timescales of 15-20 minutes for intense weather events will not hamper their effectiveness. For comparison, fluvial flood events can have up to 48-hour warning timescales.
33. The average cost per household of installing PFR under the proposed Pilot Programme outlined above is £9,500 but budgeted at £13,000 to allow for 20% Optimism Bias, the provision of dedicated support, and overall programme management. It is estimated that the investment will save almost £20,000 per property on the first flood event and continue to provide benefit with each recurrence. The PFR programme will also deliver significant savings in the form of reducing demand for clean-up operations, emergency planning response, and assisting residents in the recovery phase.
34. The County Council's maximum contribution of £3,500 per property will leverage in investment of approximately £9,500 from national and regional funding sources.
35. Based on current figures, the proposed 2-year PFR Pilot Programme will significantly improve the flood resilience of 60 Hampshire residents' homes, up to a minimum standard of protection of British standard PAS 1188 (BSI 2009a and 2009b), that would otherwise not qualify for assistance and therefore remain at risk of being unprotected.

Conclusions

36. The County Council's Local Flood and Water Management Strategy and Climate Change strategy highlight the increased risk of danger to Hampshire residents from all sources of flooding and the need for increased resilience

to future severe weather events. This PFR Pilot Programme, which will be reviewed periodically during its roll out to ensure efficacy, should provide that resilience to a significant number of Hampshire residents who will not be protected by other flood alleviation schemes and demonstrate the County Council's continuing commitment to deliver climate change actions on the ground.

REQUIRED CORPORATE AND LEGAL INFORMATION:

Links to the Strategic Plan

Hampshire maintains strong and sustainable economic growth and prosperity:	yes
People in Hampshire live safe, healthy and independent lives:	yes
People in Hampshire enjoy a rich and diverse environment:	no
People in Hampshire enjoy being part of strong, inclusive communities:	yes

Section 100 D - Local Government Act 1972 - background documents

The following documents discuss facts or matters on which this report, or an important part of it, is based and have been relied upon to a material extent in the preparation of this report. (NB: the list excludes published works and any documents which disclose exempt or confidential information as defined in the Act.)

Document

Location

None

EQUALITIES IMPACT ASSESSMENT:

1. Equality Duty

The County Council has a duty under Section 149 of the Equality Act 2010 ('the Act') to have due regard in the exercise of its functions to the need to:

- Eliminate discrimination, harassment and victimisation and any other conduct prohibited by or under the Act with regard to the protected characteristics as set out in section 4 of the Act (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex and sexual orientation);
- Advance equality of opportunity between persons who share a relevant protected characteristic within section 149(7) of the Act (age, disability, gender reassignment, pregnancy and maternity, race, religion or belief, sex and sexual orientation) and those who do not share it;
- Foster good relations between persons who share a relevant protected characteristic within section 149(7) of the Act (see above) and persons who do not share it.

Due regard in this context involves having due regard in particular to:

- The need to remove or minimise disadvantages suffered by persons sharing a relevant characteristic connected to that characteristic;
- Take steps to meet the needs of persons sharing a relevant protected characteristic different from the needs of persons who do not share it;
- Encourage persons sharing a relevant protected characteristic to participate in public life or in any other activity which participation by such persons is disproportionately low.

2. Equalities Impact Assessment:

This decision to approve the Hampshire Property Flood Resilience Pilot Programme aims to provide additional resilience to a number of Hampshire residents who would not be protected by other flood alleviation schemes, and is deemed to have a neutral impact on groups with protected characteristics.