

Coastal Change Pathfinder Review

Final Report

January 2012

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Executive summary

Introduction

1. The In House Policy Resource (IHPR)¹ was commissioned in May 2011 to carry out a high level evaluation of Defra's Coastal Change Pathfinder Programme, which aimed to road test new and innovative approaches to planning for and managing coastal change. Fifteen local authorities received nearly £11m under the programme which ran between December 2009 and March 2011 (though most Pathfinders have continued beyond this).
2. The key objectives of the evaluation were to:
 - capture the main lessons and outcomes of the programme
 - assess success against the original aims of the programme
 - evaluate the value for money and additionality achieved by individual schemes and by the programme as a whole
 - identify best practice and lessons learned that could be shared with other local authorities
 - inform future policy of central government and local authorities
3. The evaluation has been informed by an in-depth assessment² of the five largest Pathfinder projects³ (East Riding County Council (£1.2m); North Norfolk District Council (£3m); Scarborough Borough Council (£1m); Tendring District Council (£1m); and Waveney District Council (£1.53m)) which included a detailed consideration of the performance and potential development of 'rollback' and 'buy and lease back' schemes which were trialled by some of these projects. 'Rollback' is the physical movement of assets inland away from the threat posed by coastal change. 'Buy and lease back' is the purchase of a property at risk due to coastal change by a local authority. The property is then either rented by the previous owner or an unrelated tenant or used as a holiday let.

Evaluation of the Pathfinder programme

Programme delivery and achievements

Delivery of activity

4. Of the **10 smaller projects**, most **remained reasonably faithful to their original project plans**, although for many the work continued into the current financial year due to a combination of the short programme period (18 months) and a longer lead-in time than anticipated. The main exceptions to this were Sefton, Hampshire and Scratby, which did not spend all of the Defra funding on Pathfinder activity as, in line with Government policy on grants to local authorities, there was no ring-fencing within the programme. While Hampshire and Scratby were able to deliver most or all their planned activity, in the case of Sefton, which lost 56% of its budget due to financial pressures within the Council, this resulted in several activities being cancelled or cut back.

¹ An in house consultancy unit based in Defra.

² Regeneris Consulting (2011). *Coastal Pathfinder Evaluation: An Assessment of the Five Largest Pathfinder Projects*. Final Report by Regeneris Consulting. <http://www.defra.gov.uk/publications/>

³ The ten smaller Pathfinder projects were: Chichester; Cuckmere (East Sussex); Hampshire; Hastings; Jurassic Coast (Dorset); Lincolnshire; Scratby (Great Yarmouth); Sefton; Slapton Line; and Somerset.

5. In the case of the **five larger Pathfinders**, it is a **more variable picture**, with some having spent only a small proportion of the funding allocated and, in total, only 36% of the original budget having been used to-date. This is discussed further in para. 13.

Benefits to individuals and the community

6. **The programme has delivered a wide range of benefits**, which have been felt by individuals and the wider communities, as well as by local authorities and partner organisations, including:
- **Identification and delivery of adaptive solutions**
 - *Rollback/removal of properties/assets at risk* – carried out in East Riding, North Norfolk and Tendring, with plans to in Scarborough and Waveney.
 - *Delivery of other adaptive solutions* – e.g. reinstatement of Selsey beach ramp (Chichester); and construction of boardwalk over sand dunes (Sefton).
 - *Adaptation planning* – e.g. adaptation plan for Bealieu to Calshot (Hampshire); and improved plans for implementation of targeted evacuation in the event of coastal inundation (Lincolnshire).
 - **Lessons in adaptation that can inform future policy** – e.g. rollback and buy and lease back (East Riding and North Norfolk); role of the planning system (North Norfolk and Scratby); and community engagement.
 - **Increased knowledge and understanding of coastal change** – e.g. by local communities and local authorities.
 - **Development of tools and techniques for raising awareness of coastal change** – e.g. scenario planning; visualisation; and historical timelines.
 - **Other benefits**, e.g. in relation to local amenities, future tourism and the wider economy.

Additionality

7. Among the **five larger Pathfinders**, it appears that **some of these benefits would have been achieved** in any case. For example, in Jaywick it is likely that other funding (potentially through Essex County Council) would have been used to trial a buy to demolish scheme since this was linked to regeneration objectives which were considered to be a high priority for the area. In Scarborough, some of the residents may be able to use their insurance payments from the loss of their homes to fund a development elsewhere (funding the land costs themselves rather than through the Pathfinder). However, it is unlikely that East Riding and North Norfolk would have been able to carry out work on this scale without Pathfinder funding.
8. Among the **ten smaller Pathfinders**, **it is unlikely that most of these benefits would have been possible without some programme funding**. While it is likely that some community engagement would have been carried out by a number of local authorities, this is likely to have been at a much lower level. In some Pathfinder projects (e.g. Lincolnshire), the funding also unlocked the potential for a range of initiatives to deliver more than they could have done on their own. While it is possible that some community groups may have taken action anyway, these groups usually only form where there is a specific 'cause' and there are individuals prepared to take the lead. Awareness of coastal change issues is also important and, as shown by some of the projects, this is still rather low.

Less successful elements of the Pathfinder programme

9. Inevitably, in an innovative programme of this type, not everything went well. One of the less successful elements of several Pathfinders (e.g. Scratby and Waveney) was the ***lack of engagement from business***. Many companies considered that the risk of coastal change was too far away to be of concern and some had already achieved a return on their investment and were not too concerned if they were to lose their assets. Many Pathfinders felt that the ***18 month programme period was too short***, while several underestimated the ***time required to start up their projects*** and the ***resources required*** to deliver the activities, particularly in relation to community engagement. Both Somerset and the Jurassic Coast felt that, with hindsight, their bids should have included a provision for funding to deliver specific adaptation actions.
10. Several of the ***five larger Pathfinder projects*** (East Riding, North Norfolk and Tendring) aimed to test ***buy and lease back***. However, it did not work for a number of reasons, largely due to the cost of bringing properties up to a suitable standard to enable them to be leased out and a lack of interest from Registered Social Landlords or other suitable organisations. However, work carried out exploring buy and lease back will provide valuable lessons for any authority considering it in the future.
11. There also appear to have been several cases where ***compensation*** has been provided. Government policy is not to compensate individuals for the loss of their property due to coastal erosion. Compensation might mean situations where households receive financial support which is above the 'at risk' value of their property. For example, in North Norfolk a 'supplementary payment' (to assist with removal costs and disturbance as per the compulsory purchase rules) has been awarded to these households. However, the Pathfinder Team has argued that it wants the households to move quickly and is therefore in a weak bargaining position. A programme operating over longer timescales might be able to avoid paying compensation to the same extent. In East Riding, individuals are being offered an assistance package that is more generous than that given to people who become homeless for other reasons and in this way it could be argued as being unfair. However, the counter-argument is that this could be justified if it assists with relocation away from the coast in a more planned and orderly manner.
12. Other less successful elements of the programme included the lack of a rigorous monitoring and evaluation framework, lack of clarity over aims and objectives, lack of a clear market failure rationale for some activities and difficulties in identifying suitable sites for rollback.

Costs

13. Of the original budget of around £3.1m for the ***ten smaller Pathfinder projects***, about £2.8m has been spent on Pathfinder-related activity, with around £300k (11%) being lost to the programme due to the lack of ring-fencing. In contrast, only 36% of the total budget for the ***five larger Pathfinder projects*** has so far been spent, with three (East Riding, North Norfolk and Waveney) having committed their remaining budgets to Pathfinder-related activity. It is still uncertain whether Scarborough will complete its proposed rollback scheme, but even if it does, it envisages only spending around £772k on this work, with a potential loss of £250k to the programme. It is not yet clear how Tendring will spend its remaining funds (£258k), but they are likely to be used for regeneration projects which may be outside the scope of the Pathfinder programme. Thus, there is a risk that a total of ***£821k (7.5%) could be lost from the programme***. If Scarborough is unable to complete its rollback scheme, this could potentially rise to around £1.6m (14.5%). On the other hand, most

Pathfinders have been able to secure additional funds and in-kind contributions, resulting in estimated additional funding of at least £1.2m (11%) to the programme.

Focus on adaptation compared to other priorities

14. Most of the activity within the Pathfinder programme has been ***directed towards adapting to coastal change***. In the case of the ***ten smaller Pathfinders***, most of the adaptation activity has been geared towards ***engagement (47%) and planning (21%)***, with around 13% on delivering adaptive solutions. Activity related to flood risk has only occurred in Lincolnshire and Somerset, while coastal protection activity has only occurred in Chichester and wider economic development activity has occurred only in Chichester, Lincolnshire and Slapton.
15. There is a more ***variable picture with the five larger Pathfinders***. Whereas delivery of adaptive solutions is projected to comprise over half of the budget (59%), at £4.3m, most of this activity has occurred/will occur in East Riding, North Norfolk and Scarborough (assuming the rollback scheme goes to plan). In Tendring and Waveney, wider economic development and coastal protection have also featured strongly. Indeed, in both Pathfinders, the proportions of their budgets devoted to delivering adaptive solutions are less than 20% (17% at Tendring and 10% at Waveney).

Value for money

16. In terms of the ***ten smaller Pathfinders***, the value for money of individual activities was assessed using a subset of the criteria given in Section 3. Using these criteria, it was concluded that ***the majority of the activities undertaken represented good value for money***. At a ***project level***, it was also concluded that ***the majority had demonstrated good value for money***. Projects representing particularly good value for money included: the Jurassic Coast Pathfinder, which successfully engaged with six communities, provided significant learning on effective methods of engagement and commissioned spatial planning research that has national applicability; and the Lincolnshire Coastal Pathfinder, which added value to existing activities, made a measurable difference on emergency preparedness and delivered a range of useful outputs that have a wider applicability.
17. Of the three projects which lost a proportion of their funding (Hampshire, Scratby and Sefton), only Sefton did not appear to deliver value for money. In the case of Cuckmere, while the individual elements appeared to represent good value for money, in terms of the project as a whole, this is less clear and will depend on whether or not the community can find ways to fund their chosen option.
18. In terms of the five larger Pathfinder projects, value for money assessments were carried out on the rollback schemes using the methodology set out in Section 3. Further details are given in the in-depth evaluation. The key points to note are:
- The rollback project at ***Waveney is anticipated to perform better than all other projects in value for money terms***. This reflects the fact that the public sector cost of the intervention is relatively low, largely due to the fact the Council does not need to purchase the existing properties to facilitate rollback. The scheme has not yet been implemented but, if successful, could be replicated at other locations.
 - It has been estimated that the costs exceed the benefits for the rollback schemes in ***East Riding and Tendring***. This reflects the fact that both schemes involve removing properties and not replacing them. However, it is important to note that the cost benefit

analyses for these schemes only tell part of the story. The aim of both interventions is to remove property and individuals from the risk of coastal erosion (rather than to replace property). As such, the nature and rationale of the intervention demand that greater emphasis should be placed on more qualitative forms of analysis than is the case for other Pathfinders.

- In the case of **Scarborough**, it is expected that benefits of the planned rollback project will be slightly greater than costs. However, it is important to bear in mind the points above regarding the additionality of the project. This suggests that the property owners may have used their insurance money from the loss of property to rebuild a house elsewhere in any case.
 - **The costs of the Happisburgh removal and replacement scheme in North Norfolk exceed the benefits.** However, it is recognised that there are some strengths to this approach and it may be possible to reduce the cost of purchasing properties at risk (e.g. not offering the supplementary payment) or increasing the return to the Council which would count as an additional benefit.
19. There are a number of difficulties associated with assessing the value for money of these schemes, particularly in relation to predicting the 'Do Nothing' scenario and attributing values to community cohesion and regeneration impacts. It is also important to note that these projects are only partially complete, and therefore the value of the eventual benefits cannot be fully quantified at this stage.
20. At a **programme level**, while there is a risk that around £820k (7.5%) could be spent on activities unrelated to coastal change adaptation, this amount is relatively low considering the flexibility given to local authorities. Most of the ten smaller Pathfinder projects have demonstrated good value for money and, while the costs of some of the rollback schemes have exceeded the benefits, the projects themselves have provided a wide range of benefits for individuals and local communities, as well as for local and central Government. Overall, therefore, assuming that the remaining unspent funds are directed towards coastal change adaptation as planned, it can be concluded that the **programme has demonstrated good value for money**.

Promising ideas

21. **All of the smaller Pathfinders have come up with promising ideas (mostly related to community engagement) that could be replicated elsewhere.** These include a community-led approach in which the community is placed at the heart of the decision-making and community workshops. A wide range of tools have also been used successfully such as scenario planning, visualisations of coastal change and timelines or stories of change. Other work that could be replicated elsewhere includes research into spatial planning and coastal change and the Selsey Coastal Trust model which provides a means of raising local contributions to defence schemes. The Lincolnshire Pathfinder has also produced a number of outputs that can be used in other flood risk areas at no additional cost.
22. There have also been promising ideas arising from the **five larger Pathfinder projects**, particularly in relation to **rollback**. Highlights include:
- **Consistent definition of 'imminent risk'** – developed as part of the Enhanced Assistance Package in East Riding, it has allowed the most vulnerable residents to be prioritised. This approach could easily be repeated on other stretches of coastline where a coastal monitoring programme is in place.

- **Methodology for valuing and purchasing properties in Happisburgh** – by using the planning framework, some of the funds used initially could be recycled for use elsewhere. As noted above (para. 18), although the costs outweigh the benefits of this scheme, there are some strengths to this approach. Although not yet implemented, if successful, **the Waveney (Easton Bavents) rollback scheme could also be replicated** at other locations.
- **Special rights to build** – the loss of property and planning rights as a result of coastal erosion was a key issue for the residents and property owners at Easton Bavents in Waveney. Waveney District Council has formulated and adopted planning policies to allow for the replacement and relocation of properties at risk from erosion to land safe from erosion. This approach could be replicated elsewhere.

23. There is potential for some rollback schemes to be self-funding, or at least partially so in the future. For example a re-sited car park (or any other infrastructure) could be funded by takings from the car park (or other facility), although the initial capital cost might need seed funding. Housing rollback could generate a return if a higher value re-development site is chosen, but this might be at the expense of community cohesion if the new site is well away from the site being lost. However, this has not been a major factor for most communities.

Summary and conclusions on programme delivery

24. Despite the lack of ring-fencing, the absence of a clear monitoring and evaluation framework and a lack of clarity over aims and objectives (the first two being in line with Government policy regarding grants to local authorities), and provided that the remaining unspent funds are directed towards coastal change adaptation as planned, it can be concluded that **the programme has delivered a significant number of benefits and has represented good value for money overall**. Both individual projects and the programme as a whole have **achieved the two high level programme aims**. Most projects and the programme as a whole have **also met the four initial criteria**, set out in the Coastal Change consultation, against which bids were assessed, including the key criterion that the focus should be on **adapting to coastal change** (although approaches that additionally support adaptation to coastal flooding risk could also be explored).

Lessons arising from the Pathfinder Programme

Ability of the community to adapt to coastal change

25. **Most Pathfinders have demonstrated an increased ability by communities to adapt.** Clearly, the ten smaller Pathfinders have generally only been able to tackle awareness raising and adaptation planning due to the limited funds available, while the larger five have been able to help individuals to implement solutions through rollback and other assistance. Despite this, proposals for coastal defences have also come forward in a few Pathfinder areas, while in Selsey the principle behind the coastal trust is to create funds for coastal defence measures through various regeneration projects. This perhaps suggests that statutory bodies and local authorities need to engage early with communities facing change before they convince themselves that defence is the only option. It may also demonstrate that some communities need time to accept adaptation as an alternative and that, at the outset, there may have been unrealistic expectations about what could be achieved by such a short programme.

Community funding expectations revealed by Pathfinder

26. In several Pathfinders, notably North Norfolk, Scratby and Waveney, the ***expectations of the local communities were strongly that the Government should provide support whether it was for defence or for adaptation.*** Expectations of continued Government support were also high among the communities in Chichester, Cuckmere, East Riding, Jurassic Coast and Lincolnshire. In some Pathfinders, where the projects allowed a more concerted engagement with communities, it was possible to manage these expectations to a more realistic level.

Specific lessons for the planning system in terms of adaptation

27. Planning policy has been important in supporting rollback in East Riding, North Norfolk and Waveney. As noted previously, in the case of North Norfolk, spatial planning is being used to facilitate rollback, while in Waveney work has been carried out to clarify planning rights. East Riding has also considered how to use planning policy to support coastal change adaptation, such as removing the residential status of the property at risk in order to operate a buy and lease back scheme for commercial use only (hence avoiding some of the difficulties associated with residential buy and lease back). In the Jurassic Coast Pathfinder, consultants were commissioned to consider the role of the planning system in supporting coastal change adaptation, resulting in a set of recommendations for local planning authorities on the Jurassic Coast and central Government (see Section 4).

Lessons for future policy on coastal change adaptation

Rollback and buy and lease back

28. Rollback has been shown to work well for businesses where they can either fund the relocation themselves or obtain a loan. In terms of residential properties, whilst none of the Pathfinder areas has fully implemented a rollback programme, there are elements of good practice within all of the projects being trialled and combinations of these (in particular, the Waveney and North Norfolk approaches) may deliver models which add value and could be replicated on a larger scale.

29. Buy and lease back has not worked in practice due largely to the costs involved (e.g. in bringing properties up to a suitable standard) and the perceived risks to local authorities. However, it could work in areas where properties are of a higher standard initially. It may also be worth investigating whether legislation (e.g. housing regulations) could be more flexible in areas affected by coastal change to deliver this type of intervention or whether other approaches could be considered such as the potential for the private sector to acquire and manage these properties. In any case, the work carried out will provide valuable lessons for any authority considering it in the future.

30. Overall, the Pathfinder programme has shown that communities can be encouraged to adapt to coastal change. The main barriers to adaptation appear to be:

- public understanding and awareness
- funding for delivering adaptation action
- planning policy – which can also be an enabler (see para. 27 above)
- capacity within local authorities and other partners and the priority given to coastal change adaptation

31. In terms of addressing the issue of **public understanding and awareness**, a number of key lessons for community engagement have been learned by a number of Pathfinders, particularly the Jurassic Coast project (see Section 4).
32. In terms of **future funding for delivering adaptation**, in the short term, the programme has established momentum and several Pathfinders have suggested that making targeted Government funds available to implement adaptation actions that have emerged from the initial projects could be a useful way of maintaining that momentum at minimum cost.
33. In the longer term, it could be argued that community engagement activities should be funded by local authorities as part of their core activities. Based on the findings of the in-depth evaluation, there does appear to be potential for some rollback schemes to be self-funding, or at least partially so in the future. For example, the North Norfolk approach using planning policy could attract private sector interest and thus lead to a substantially reduced cost and risk to the public sector. However, this approach may not be appropriate in other areas where property/land values are low. Raising funds locally through an increase in Council Tax could also be an option, but as shown by the Scratby Pathfinder, the amounts required often exceed what people are willing to pay. As shown by the development of the Selsey Coastal Trust, some communities may be more willing to raise funds for projects locally.
34. Several of the Pathfinders highlighted **capacity issues** within their local authorities (e.g. Chichester, Hastings and Sefton) and among partner organisations (e.g. Lincolnshire), which delayed progress on various adaptation activities. This is likely to be an increasing problem with the current financial situation in public sector bodies.
35. Coastal change adaptation is just one priority among many for local authorities and, as shown by Sefton, it can often be squeezed by other pressures. However, it is clear that the Pathfinder programme has raised the profile of coastal change among councils, including members. It is important that Government continues to support and encourage local authorities to consider coastal change adaptation.

1. Introduction

- 1.1 The Coastal Change Pathfinder programme was launched⁴ in June 2009 to road-test new and innovative approaches to planning for and managing coastal change.⁵ Fifteen local authorities received nearly £11 million to deliver the programme, the aims of which were to:
- improve understanding of how coastal communities can adapt to coastal change and the costs and benefits of these different approaches; and
 - provide practical lessons and examples which can be shared with other practitioners, particularly on community adaptation planning and engagement and the delivery of adaptive solutions.
- 1.2 The Pathfinder programme began in December 2009 and projects were intended to run until March 2011, although most have continued beyond this.
- 1.3 Funding for the Pathfinder Programme was transferred to local authorities via a Section 31 Grant determination process. Following Government guidance for such grants conditions were not placed upon recipient authorities for the monitoring or reporting of any work they carried out under the programme. The non-ring fenced nature of the funding allowed them to fully explore and adapt their approaches to the unique challenges they faced. The Programme has provided learning on coastal adaptation which contrasts different approaches and varying local circumstances. As such this report is neither fully a process or impact evaluation of the Programme but seeks to highlight the relevant learning and evidence that was identified. Defra would like to thank all of the Pathfinder authorities for working with the Department during this Programme and its evaluation.

High level evaluation of the Pathfinder programme

- 1.4 The In House Policy Resource (IHPR)⁶ was commissioned in May 2011 to carry out a high level evaluation of the Pathfinder programme, the key objectives being to:
- capture the main lessons and outcomes of the programme
 - assess success against the original aims of the programme
 - evaluate the value for money and additionality achieved by individual schemes and by the programme as a whole
 - identify best practice and lessons learned that can be shared with other local authorities
 - inform future policy of central government and local authorities

In-depth evaluation of the five largest Pathfinder projects

- 1.5 This evaluation has been informed by a more in-depth consideration of the five largest projects, which received £1 million or more and involved the following local authorities:

⁴ Defra (2009). *Consultation on Coastal Change Policy*. Defra, June 2009.

⁵ 'Coastal change' was defined in the Coastal Change Policy consultation document as '*physical change to the shoreline, i.e. erosion, coastal landslip, permanent inundation and coastal accretion*'.

⁶ An in house consultancy unit based in Defra.

- East Riding County Council (£1.2m)
- North Norfolk District Council (£3m)
- Scarborough Borough Council (£1m)
- Tendring District Council (£1m)
- Waveney District Council (£1.5m)

- 1.6 The specific objectives of the in-depth evaluation⁷ of the five largest projects were to:
- report on the outcomes achieved, including the real net additional benefits provided to communities affected by coastal change;
 - estimate where possible the monetary benefits of net additional Pathfinder projects and compare these with costs to allow comparison with other flood and coastal erosion risk management activities;
 - assess the extent to which Pathfinder projects could be replicated in other coastal adaptation settings in England;
 - assess situations where either value for money and/or the possibility of replication were not achieved and advise on any lessons for future adaptation initiatives;
 - provide specific advice on, and assessment of, the performance and potential development of 'rollback' and 'buy and lease back' schemes which were trialled by some of the Pathfinder authorities.
 - assess the extent to which the Pathfinder funding focused on general economic benefits rather than actions related to adapting to coastal change and whether the same outcomes could have been delivered through regeneration funding.

Report structure

- 1.7 The remainder of the report is set out under the following headings:
- Section 2: Background to the Evaluation
 - Section 3: Methodology
 - Section 4: Evaluation of the Pathfinder Programme
 - Section 5: Detailed evaluation of the ten smaller Pathfinder projects
 - Section 6: Evaluation of five larger Pathfinder projects

⁷ Regeneris Consulting (2011). *Coastal Pathfinder Evaluation: An Assessment of the Five Largest Pathfinder Projects*. Final Report by Regeneris Consulting. <http://www.defra.gov.uk/publications/>

2. Background to the evaluation

Coastal change

- 2.1 **'Coastal Change'** has been defined⁸ as **'the physical change to the shoreline, i.e. erosion, coastal landslip, permanent inundation and coastal accretion'** and is due to the continuous weathering of the coast from natural processes. The effects of these processes vary considerably from one part of the coastline to another depending on the geological nature of the coast, the durability of exposed rocks and materials, and the waves, tides and storm surges to which they are exposed. Consequently, the rate at which coastal change happens varies from close to nothing in some locations to over 2m in others. In some places, change is happening gradually whilst in others change is manifesting itself through events such as landslips, where many metres of land are being lost once every five or ten years. Climate change is already increasing flood and coastal erosion risk and will continue to do so in the future through projected sea level rise together with the potential increase in the intensity, severity and frequency of coastal storms. This will significantly increase the risk of permanent inundation to low lying coastal areas.
- 2.2 According to research carried out for Defra, of the 4,500km of coast in England, 1,800km is at risk of coastal erosion (340km of which is defended). It is estimated that 200 properties are currently vulnerable to coastal erosion but by 2029, up to 2,000 residential properties and 15km of major road and railway may become vulnerable.⁹
- 2.3 Together with local authorities, the Environment Agency manages the physical risks of both coastal erosion and flooding, through its strategic oversight of the production and quality of **Shoreline Management Plans (SMPs)**. SMPs provide a large-scale assessment of the physical risks associated with coastal processes and present a long term policy framework to reduce these risks to people and the developed, historic and natural environment in a sustainable manner. An SMP is a high level document that forms an important element of the strategy for flood and coastal erosion risk management. Coastal groups, made up primarily of coastal district authorities and other bodies with coastal defence responsibilities, provide a forum for discussion and co-operation and play an important part in developing SMPs for their area. Consultation with local communities is also a key part of developing SMPs.
- 2.4 Based on the best available science on climate change and understanding of coastal processes, SMPs can identify a range of responses for managing coastal erosion risk. These can include: continued investment in defence works (holding the line); a deliberate process of realigning defences, e.g. constructing a set-back line of defence (managed realignment); or allowing nature to define the position of the shoreline either by not building new defences or not maintaining existing ones (no active intervention). Where a decision is taken to no longer hold the line, this could be due to a wide range of reasons, not just financial ones. For example, the provision of defences in one area could interfere with the natural flow of beach sediment along the coastline and cause greater erosion rates further down the coast.
- 2.5 As well as informing decisions on investment, SMPs also inform regional and local spatial

⁸ Defra (2009). *Consultation on Coastal Change Policy*. Defra, June, 2009.

⁹ Defra (2009). *Appraisal of flood and coastal erosion risk management: A Defra policy statement*. Defra, June 2009.
<http://www.defra.gov.uk/publications/files/pb13278-erosion-manage-090619.pdf>

planning strategies to ensure inappropriate development does not take place in areas that are at risk of flooding or erosion either now or in the future.

National spatial planning legislation and policy

- 2.6 Under The Planning and Compulsory Purchase Act 2004,¹⁰ local planning authorities are required to prepare a Local Development Framework (LDF) which includes a set of Development Plan Documents (DPDs), in particular a Core Strategy, setting out the overall vision for the area and how the places within it should develop.
- 2.7 Current national planning policy for planning and the environment is set out in Planning Policy Statements (PPS) and Planning Policy Guidance (PPG). In March 2010, the Department for Communities and Local Government (DCLG) published *Planning Policy Statement 25 Supplement: Development and Coastal Change – Practice Guide*¹¹ which replaced the policy on managing the impacts of coastal erosion set out in Planning Policy Statement 20: Coastal Planning.¹²
- 2.8 The Government's aim, as set out in the PPS25 Supplement, is '*to ensure that our coastal communities continue to prosper and adapt to coastal change*'. This means that planning should:
- ensure that policies and decisions in coastal areas are based on an understanding of coastal change over time.
 - prevent new development from being put at risk from coastal change by:
 - avoiding inappropriate development in areas that are vulnerable to coastal change or any development that adds to the impacts of physical changes to the coast, and
 - directing development away from areas vulnerable to coastal change.
 - ensure that the risk to development which is exceptionally necessary in coastal change areas (because it requires a coastal location and provides substantial economic and social benefits to communities) is managed over its planned lifetime.
 - ensure that plans are in place to secure the long term sustainability of coastal areas.
- 2.9 The PPS25 Supplement sets out two key mechanisms through which the planning system could facilitate coastal adaptation at the regional and local scales. Policy DCC2 requires that the relevant Regional Spatial Strategy (RSS)¹³ should identify where communities impacted by coastal change may need to be relocated and in the context of coastal change, areas in which growth should be avoided. Under policy DCC3, local authorities are required to identify areas likely to be affected by physical changes to the coast and refer to this area as the **Coastal Change Management Area (CCMA)**. Local planning authorities should then set out the type of development that will be appropriate within the CCMA and allocate land within it for appropriate development. Where development and

¹⁰ Planning and Compulsory Purchase Act 2004

<http://www.legislation.gov.uk/ukpga/2004/5/contents>

¹¹ DCLG (2010). *Planning Policy Statement 25 Supplement: Development and Coastal Change – Practice Guide*. DCLG, March 2010.

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/1499049.pdf>

¹² DCLG (1992). *Planning Policy Guidance 20: Coastal Planning*. DCLG, October 1992.

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/147498.pdf>

¹³ Regional Spatial Strategies (RSSs) provided regional level planning frameworks for the English regions outside London. Their revocation was announced by the Government in July 2010.

infrastructure needs to be relocated from within CCMA's, local planning authorities should make provision for sufficient, suitable land outside those areas, e.g. through rollback.

2.10 At the time of writing, the status of PPS25 and its supplement was uncertain. The Government was reviewing current national planning policy with a view to consolidating the existing policy statements, circulars and guidance documents into a single National Planning Policy Framework¹⁴ covering all forms of development and setting out national economic, environmental and social priorities.

2.11 In addition, with the publication of the Localism Bill in December 2010, the Government has introduced fundamental changes to the spatial planning system. Firstly, the Bill provides for RSSs to be revoked and for strategic planning at the regional scale to cease. Secondly, through the introduction of neighbourhood planning, the intention is that communities should shape local areas. Specifically, if local people vote in favour of neighbourhood plans in local referenda, councils will have to adopt them as long as they are in accordance with the Core Strategy. The Bill also brings important changes to the Community Infrastructure Levy¹⁵, including the requirement that a proportion of funds should be passed to the neighbourhoods in which the development has taken place.

Funding for coastal defence works

2.12 The Government invested around £2.15bn on managing flood and coastal erosion risk in England between 2008/9 and 2010/11 and has committed a similar figure for the next four years (an average of around £540m per year). Defra provides the majority of this budget, but local authorities also receive funding from DCLG through formula grant for maintenance of coastal defences. This amounted to £280m between April 2008 and March 2011.¹⁶

2.13 Government's approach is that it will defend where it is sustainable and affordable to do so, but it is not possible to protect every stretch of coastline. Defences must be technically sensible and sustainable over time, and represent value for money to the taxpayer. During CSR07 the Environment Agency prioritised funding to schemes, including Maritime District Council promoted coast protection projects, taking a risk based approach to direct its resources to areas of highest risk and where investment per £1 yields the greatest benefits and to meet targets set by Ministers to protect households.¹⁷ This might mean that projects are less likely to go ahead in sparsely populated areas as opposed to projects which protect larger numbers of people and property for a given cost. Further details of how value for money is assessed for all proposed projects aimed at tackling flooding and coastal erosion is set out in the Environment Agency's Flood and Coastal Erosion Risk Management (FCERM) Appraisal Guidance.¹⁸

¹⁴ DCLG (2011). *Draft National Planning Policy Framework*. DCLG, July 2011.

<http://www.communities.gov.uk/documents/planningandbuilding/pdf/1951811.pdf>

¹⁵ The Community Infrastructure Levy (CIL) is a levy that local authorities can choose to charge on new developments in their area. The money obtained from new development planning applications can then be used to fund infrastructure that the council, local community and neighbourhoods have identified as being needed.

¹⁶ Defra website <http://www.defra.gov.uk/environment/flooding/funding-outcomes-insurance/>

¹⁷ Defra (2009). *Appraisal of flood and coastal erosion risk management: A Defra policy statement*. Defra, June 2009.

<http://www.defra.gov.uk/publications/files/pb13278-erosion-manage-090619.pdf>

¹⁸ Environment Agency (2010). *Flood Risk and Coastal Erosion Management Appraisal Guidance*. Environment Agency, March 2010.

<http://publications.environment-agency.gov.uk/PDF/GEHO0310BSDB-E-E.pdf>

2.14 However, central government funding is not the only possibility. Investment in flood and coastal erosion risk management can bring significant local and regional benefit, in terms of reducing damage to land, people and property, the economy and environment. It can also boost tourism and amenity benefits; regenerating local economies and creating jobs. In his review of the 2007 floods, Sir Michael Pitt concluded¹⁹ that it should not be assumed that all future costs should be met centrally, and that aligning those who benefit with those who pay could bring greater efficiency and greater responsiveness from those carrying out the work.

2.15 In line with this view, in May 2011 Defra announced²⁰ changes to the way funding will be allocated to future flood and coastal defence projects. Instead of meeting the full costs of a more limited number of schemes, a new partnership approach to funding flood and coastal resilience will mean Government money is potentially available towards the costs of any worthwhile scheme. Funding levels will be based on the numbers of households protected, the damage being prevented, and the other benefits a project will deliver. However, funding will only be provided for projects where there is an overall positive Benefit to Cost Ratio (BCR). Payment rates relate to:²¹

- All benefits arising as a result of the investment, less those valued under the other outcomes measures (Outcome Measure 1)
- Households moving from one category of flood risk to a lower category (Outcome Measure 2)
- Households being better protected against coastal erosion (Outcome Measure 3)
- Statutory environmental obligations being met through flood and erosion risk management (Outcome Measure 4)

2.16 The payment rate for properties protected from coastal erosion is based on the average annual rental income of a residential property in the UK. Annual value of a property is £6,000 so extending the life of a property by 5 years would produce a value of £30,000 (before discounting). The payment for coastal erosion schemes is then weighted according to added life given to the property by the scheme. The rate of payment is 45p per £1 of present value benefit for household protected in the 20% most deprived areas²² in England down to 20p in every £1 for household in the 60% least deprived areas.

Coastal Change Fund

2.17 Until relatively recently, the Defra programme on managing flood and coastal erosion risk did not provide any specific support to communities in adapting to coastal change. A Defra-commissioned study carried out by Scott Wilson in 2009²³ showed that local authority coastal activity was largely focused on coastal erosion risk management, with

¹⁹ Pitt (2008). *The Pitt Review. Lessons Learned from the 2007 Floods*.

<http://archive.cabinetoffice.gov.uk/pittreview/thepittreview.html>

²⁰ Defra (2011). *Flood and Coastal Resilience Partnership Funding*. Announcement of Defra policy statement. Defra, 23 May 2011.

<http://www.defra.gov.uk/environment/flooding/funding-outcomes-insurance/funding/>

²¹ Defra (2011). *Flood and Coastal Resilience Partnership Funding. An Introductory Guide*. Defra, 24 May 2011.

<http://archive.defra.gov.uk/environment/flooding/funding/documents/flood-coastal-resilience-intro-guide.pdf>

²² As measured by the index of Multiple Deprivation produced by DCLG.

²³ Scott Wilson (2009). *Understanding Local Authority Activities in Relation to Managing the Impacts of Coastal Change*. A report by Scott Wilson for Defra, June 2009.

<http://archive.defra.gov.uk/environment/flooding/documents/manage/la-impact-cchange-summary.pdf>

some authorities only just starting to think about what adapting to coastal change²⁴ could mean. Other key findings of the report were:

- Local authorities identified three potential national policy gaps:
 - a resettlement policy which may include several dimensions such as a consistent policy framework or guidance, compensation, and/or funding for local authorities to enable these processes.
 - consideration for the removal of redundant sea defences.
 - policy and programme support for *ad hoc* initiatives associated with supporting local economic development and regeneration.
- There is a potential lack of mainstreaming of the coastal change agenda across local authority services, possibly because in many areas the impacts are not yet being felt. This may result in sub-optimal, reactive policy responses only once the impacts begin rather than proactive responses considered at an earlier date.
- Coastal change presents challenges for local authorities in planning for the impacts well as delivering potentially competing objectives such as economic regeneration and environmental management/conservation.

2.18 The report suggested that more work was needed to understand what planning for and managing adaptation to coastal change meant for local authorities and their communities.

2.19 In recognition of this and in line with the Government's commitment to maintaining sustainable coastal communities, in its June 2009 'Consultation on Coastal Change Policy', Defra announced the launch of a new £11m **Coastal Change Pathfinder Programme** to "provide support for communities in planning for, and adapting to, the impacts of coastal change to help ensure they remain attractive places for people to live in and visit, and support thriving local economies". Bids were invited from local authorities wishing to become Coastal Change Pathfinders, with the intention that those selected would explore ways in which the fund could be used to better engage and support communities as they adjusted to the impacts of coastal change. It would also enable them to design and deliver local solutions that help communities with the transition associated with change. Further information on the Pathfinder Programme is given in 2.25-2.31.

2.20 The programme was to be funded by a new Coastal Change Fund, which was intended to be seen as a complementary source of funding directed at coastal change adaptation that would supplement the other grants and funding streams already potentially available (e.g. central Government grants, EU structural fund grants, grants and contributions from private developers and leaseholders, national lottery grants, use of capital receipts, revenue finance of capital expenditure, supported capital expenditure and other resources).

Coastal Erosion Assistance Package

2.21 The Coastal Change Policy consultation also proposed that part of the fund should be made available to cover some of the transition costs currently incurred by individual homeowners who experience total loss of a home due to coastal erosion and in March

²⁴ Adaptation is defined as 'the process of becoming adjusted to new conditions, in a way that makes individuals, communities or systems better suited to their environment'. (Defra Coastal Change Policy Consultation, 2009)

2010, the **Coastal Erosion Assistance Grant** was introduced²⁵ at a fixed level of £6,000 per property.

2.22 The basis of the longstanding policy not to pay compensation for properties lost as a result of coastal erosion is that no-one has the statutory right to flood or erosion protection, and therefore where protection cannot be provided, the homeowner cannot claim compensation.²⁶ At the point where a home is lost or becomes unsafe to live in because total loss due to erosion is imminent, the homeowner is also liable for the costs of demolishing the property to make it safe. Insurance is not normally available to homes at risk of erosion for these and other costs such as those associated with moving house. These costs are incurred at a time when the homeowner may be facing financial hardship due to the loss of the property and the anxiety and distress this can bring.

2.23 The coastal erosion assistance grant is designed to provide practical assistance to homeowners in the interim period whilst understanding of the risks associated with coastal erosion improves. In the future, information published in SMPs and coastal erosion risk mapping data will help coastal home purchasers and others to make informed, risk-based investments.

2.24 The grant sits alongside existing support mechanisms. In particular, households facing complete loss of their home to coastal erosion already automatically have access to the existing housing support framework. They are encouraged to seek timely advice from their local authorities to discuss existing sources of help and advice with housing. Local authorities can advise on a range of housing options that may be appropriate to the household. These include renting in the social and private rented sector and Low Cost Home Ownership schemes.

Coastal Change Pathfinder Programme

2.25 Working in partnership with their communities, the Pathfinder projects were intended to road-test new and innovative approaches to planning for and managing change. Through this work, the Pathfinder Programme was intended to:

- improve understanding of how coastal communities can adapt to coastal change and the costs and benefits of these different approaches; and
- provide practical lessons and examples which can be shared with other practitioners, particularly on community adaptation planning and engagement and delivery of adaptive solutions.

Suggested approaches for Pathfinders to explore in planning and managing coastal change

2.26 The June 2009 Coastal Change Policy consultation and the subsequent '*Adapting to Coastal Change: Developing a Policy Framework*' suggested a range of approaches that could be trialled by local authorities including: projects to help maintain beach car parks or

²⁵ Defra (2010). *Adapting to Coastal Change. Developing a Policy Framework*. Defra, March 2010.

<http://archive.defra.gov.uk/environment/flooding/documents/manage/coastalchange-policyframework.pdf>

²⁶ The homeowner does have the right to be engaged in the process of appraising whether investment to reduce the risk is justified. There is also currently provision within the existing statutory framework for the Environment Agency to pay compensation where it intentionally reduces the level of protection to a property, e.g. by lowering or removing defences to help manage the risk elsewhere.

access points damaged by coastal change; exploring ways of supporting rollback; and developing buy and lease back schemes to smooth the transition where a property is at risk of being lost in the near future. More detailed guidance and ideas on how to plan for and manage change (several of which were already being carried out by some local authorities) were also set out for the selected Pathfinder authorities to draw and build on. These are set out in Annex A. Mention was also made of forthcoming guidance by Scott Wilson on how local authorities can involve communities in planning for coastal change.²⁷

Bid process and evaluation criteria

2.27 Potential Pathfinders were invited to apply for funding by 11 September 2009. A total of 20 bids were received and these were assessed²⁸ against the following criteria, which were set out in the Coastal Change consultation:

- The focus should be on ***adapting to coastal change*** (although approaches that additionally support adaptation to coastal flooding risk could also be explored).²⁹
- The emphasis should be on providing benefits to the wider community where these are proportionate to the costs.
- The focus should be on those sections of the community that are the most vulnerable to the impacts of coastal change.
- Approaches should tie in with a long-term plan for change within the community and be supported through extensive community engagement and discussion.

2.28 Bids were also expected to demonstrate the following:

- Evidence of the risk of coastal change that the community is facing, with priority being given to areas facing significant or immediate challenge.
- The contribution the proposed spending will make to the overall aim of supporting communities in adapting to coastal change in a way that ensures continuity of community.
- Broad objectives and outcomes – with identified and timetabled deliverables, including consideration of how the work undertaken during the pathfinder could be carried forward in the long-term.
- Commitment to working with existing funding streams; and identifying and exploring opportunities for income generation and working alongside other private contributions.
- Commitment to work with local partners (both public and private), and engage with the local community. We will be particularly interested in approaches which seek to support better informed communities able to shape decisions and innovative approaches to build local adaptation solutions.
- How the approach will link up with local spatial planning and enable the local community to influence and shape strategic decision-making for their areas.
- Clear commitment at senior level to share lessons and participate in wider evaluation of the pathfinder programme.

²⁷ Scott Wilson (2009). *Guidance for Community Adaptation Planning and Engagement (CAPE) on the Coast*. A report by Scott Wilson for Defra, October 2009.

http://randd.defra.gov.uk/Document.aspx?Document=FD2624_8901_FRP.pdf

²⁸ The panel comprised representatives from Defra, the Environment Agency, DCLG, the Commission for Rural Communities, the Community Development Foundation and the local government Improvement and Development Agency (IDeA).

²⁹ Interestingly, there was no definition of either 'coastal change' or 'coastal flooding' in the main text of the consultation document (only in the Glossary) or in the subsequent application form.

2.29 The 15 successful Pathfinder projects were announced³⁰ on 1 December 2009. They were located all around England's coast and it was anticipated that their geographical spread, together with the wide range of projects being explored, would provide invaluable insights into different approaches to supporting community adaptation to coastal change.

2.30 The full list, together with their geographical location, the level of funding allocated and the type of coastal change and/or flooding to which they are attempting to adapt, is given in Table 2.1. The largest five Pathfinder projects, which received £1m or more, accounted for around 71% of the total budget available.

Table 2.1: List of Pathfinder projects.

Pathfinder project	Lead Authority	Geographical location	Type of coastal change	Allocated ³¹ (£k)
North Norfolk	North Norfolk DC	East	Coastal erosion	£3,000
Scarborough	Scarborough BC	North East	Coastal erosion	£1,022
Tendring	Tendring DC	East	Coastal erosion/ flooding	£1,000
Waveney	Waveney DC	East	Coastal erosion	£1,534
East Riding	East Riding CC	North East	Coastal erosion	£1,206
Lincolnshire	Lincolnshire CC	East	Coastal flooding/ inundation	£810
Chichester	Chichester DC	South East	Coastal erosion/ flooding	£450
Jurassic Coast/Dorset	Dorset CC	South	Coastal erosion/ flooding	£376
Sefton	Sefton MBC	North West	Coastal erosion/ Flooding	£337
Scratby/Great Yarmouth	Great Yarmouth BC	East	Coastal erosion	£296
Hampshire	Hampshire CC	South	Coastal erosion/ flooding	£254

³⁰ <http://archive.defra.gov.uk/environment/flooding/manage/pathfinder/>

³¹ Rounded to the nearest £1k.

Cuckmere/East Sussex	East Sussex CC	South East	Coastal erosion/ flooding	£250
Somerset	Somerset CC	South West	Coastal erosion/ flooding	£235
Hastings	Hastings BC	South East	Accretion	£116
Slapton Line/South Hams	South Hams DC	South West	Coastal erosion/ flooding	£38
Total ³²				£10,925

Monitoring and evaluation

2.31 The Pathfinder Programme was intended to run until March 2011, although most have continued beyond that date with the agreement of Defra. As stated in the 'Notes for Applicants' on the application form, *"In line with Government policy, and to reduce bureaucracy associated with the fund to manage Coastal Change, this grant is not ring-fenced and has no mandatory reporting process against it."* However, grant recipients were asked to provide feedback *"on how projects are going"* and *"data about progress"*. In addition, to enable good practice to be identified and disseminated, they were expected to *"participate in evaluation and learning processes as a requirement of receiving funding."*

Other sources of funding for coastal change adaptation

2.32 The ***Innovative Management for Europe's Changing Coastal Resource (IMCORE)*** project, part-funded by the EU Interreg IVB programme, has been operating since 2007 and is due to finish in 2011. Involving nine EU partners, it aims to investigate ways of developing understanding, knowledge and responses to coastal change in a changing climate. Sefton Council is one of the nine partners. Further information is given in Annex L

2.33 Beginning earlier this year and co-financed by the Interreg IVA2 Seas programme, ***Coastal Communities 2150 (CC2150)***³³ is a communications project to engage vulnerable communities who are at risk from coastal change, with the aims of:

- increasing awareness of climate change for coastal communities.
- developing communications tools to integrate working on coastal issues.
- developing coastal visions for a number of pilot areas, decided by local people, reflecting their needs and aspirations to manage future coastal climate change.
- developing engagement tools that can be used across other European coastal communities.

2.34 The project involves the Environment Agency, Hampshire County Council and Kent County Council, together with three Dutch partners.

³² The total does not include the £75k available for the Coastal Erosion Assistance Grant.

³³ Further information can be found at: <http://www.environment-agency.gov.uk/aboutus/wfo/128455.aspx>

2.35 Launched in July this year,³⁴ a new ***Coastal Communities Fund*** will be financed by the Government through the allocation of funding equivalent to 50% of the revenues from the Crown Estate's marine activities. The new fund is designed to support the economic development of coastal communities and will support a wide range of projects, including those that support charities, the environment, education and health. The fund will be available on a bid basis and the Government is in discussion with the Big Fund, part of the Big Lottery Fund, about the detailed terms on which it could deliver the funds to communities.

³⁴ Further information can be found at: http://www.hm-treasury.gov.uk/press_86_11.htm

3. Methodology

3.1 The main **objectives** of the high level evaluation were to:

- capture the key lessons and outcomes of the programme;
- assess success against the original aims of the programme;
- evaluate the value for money and additionality achieved by individual projects and by the programme as a whole;
- identify best practice and lessons learned that can be shared with other local authorities; and
- inform future policy of central government and local authorities.

Questionnaire

3.2 The evaluation was undertaken by analysing key documentation (including final reports, etc.) and carrying out structured interviews with each of the 15 Pathfinder authorities based on a questionnaire that was sent out and completed beforehand. The questionnaire (at Annex B), which was trialled with two of the Pathfinder authorities before being used, covered the following areas:

- **Delivery of activity** – what was delivered, how it compared with what was planned, how successful it was and what risks and issues were encountered.
- **Benefits to individuals and communities** – including details of any formal evaluation undertaken, where the benefits fell and whether they would have been achieved without Pathfinder funding.
- **Costs** – by objective and type of spend and detailing any additional funding secured (see below).
- **Promising ideas** – whether any of the projects trialled could be replicated and, if so, whether they could be self-funding.
- **Improvements to the Pathfinder programme** – suggestions for what could have been done differently.
- **Ability to adapt** – whether the Pathfinder scheme had increased the ability of the community to adapt to the impacts of coastal change in future.
- **Specific lessons for the planning system in relation to adaptation** – lessons arising from the project about how the planning system could be used to facilitate adaptation to coastal change.
- **Lessons for future policy on coastal change adaptation** – whether adaptation can work in this way and how barriers (including funding) could be overcome.

3.3 On costs, Pathfinder authorities were asked to include a breakdown of the activities carried out under the following objectives:

- **Engaging the community on coastal change adaptation** – work aimed at explaining coastal change and possible adaptive responses to the community, including workshops, consultations, education materials and publications.
- **Adaptation planning** – drawing up policies and strategies to adapt to coastal change. Also research and studies aimed at future adaptation.
- **Delivering adaptive solutions** – delivering solutions on the ground, including maintaining and improving assets damaged by erosion, rollback schemes and buy and lease back schemes.

- **Wider economic development not directly linked to coastal change adaptation** – broader economic development in areas affected by coastal change, but not directly linked to coastal change adaptation.
- **Coastal protection** – maintaining or constructing coastal protection measures, including setting up mechanisms to fund coastal protection in future and engaging the public on coastal protection.
- **Managing flood risk** – work aimed at managing flood risk, including raising awareness of current and future flood risk.
- **Other** – any work not directly related to flooding or coastal erosion.

3.4 In practice, most Pathfinder authorities tended to include all work carried out on community engagement under the first heading irrespective of whether it was related to coastal change or managing flood risk. Similarly, some included flood risk planning under adaptation planning. In some cases, this was because both coastal erosion and flooding were relevant at a particular location and therefore it made sense to cover them together. However, it may also indicate a lack of clarity on what is meant by coastal change adaptation. This is discussed further in Section 4.

3.5 In relation to the evaluation questions on ‘Lessons for future policy on coastal change adaptation’, there appears to have been some confusion among interviewees about the meaning of ‘Looking back to the original aims of the Pathfinder, can adaptation work in this way or are there barriers?’ The question was intended to find out whether the particular approaches trialled by the local authorities were workable, but some interpreted it to mean ‘Can adaptation work when funded by a Pathfinder-type programme?’

Evaluation

3.6 An evaluation of the individual projects and the programme as a whole was carried out based on: an analysis of questionnaire responses and final reports; an assessment of the following questions (below); and discussions with each of the local authorities involved and other key stakeholders.³⁵ (A list of all those interviewed is at Annex C.):

- To what extent did the Pathfinder projects focus on innovation in adapting to coastal change as opposed to other priorities such as wider economic growth; adapting to climate change more generally; or exploring options for future funding of coastal defences?
- Could/should the benefits of the Pathfinder projects have been delivered by other funding streams, e.g. local authority mainstream funding, the Environment Agency, regeneration and business development funding streams?
- Did the schemes represent value for money?
- Will the knowledge/experience gained be retained and disseminated? (For example, if significant funding went on staff costs, will these staff be lost now that the funding has ended?)

3.7 The high level evaluation was also informed by the key findings of an in-depth consideration of the five largest Pathfinder projects (East Riding, North Norfolk, Scarborough, Tendring and Waveney) undertaken by the external consultants, Regeneris, which focused particularly on assessing the costs and benefits, lessons learned and future

³⁵ Thanks go to all the local authority staff, elected Members and other key stakeholders interviewed as part of the evaluation.

potential of two particular concepts: roll-back and buy and lease back. The main objectives of this in-depth evaluation are given in Section 1.

Value for money

3.8 Value for money assessments were carried out on the individual elements of each project (where possible), the projects themselves and the programme as a whole.

Five larger Pathfinder projects

3.9 Assessments for the five larger Pathfinder projects were taken from the separate in-depth evaluation. These were undertaken by applying the broad principles of the FCERM Appraisal Guidance and focusing on (a) a society wide benefit-cost analysis (net benefits and costs for all parties) and (b) the benefits and costs to the public purse. For the Pathfinders, these two concepts are distinct since activities have sometimes involved a mix of private and public costs (e.g. rollback where some or all rebuilding costs may be met privately). This suggests a slightly different approach to value for money assessment than is usually used for coastal erosion projects (e.g. defences), which to date have typically been wholly publically funded. The framework developed consisted of the following principles. Further details are given in the in-depth evaluation.

Society-wide benefit cost analysis (net benefits and costs for all parties)

- Do Nothing Case: takes into account the loss of properties to erosion using the risk-free capital value in the year when the property will be lost. Annual rental yields are used to estimate the benefits under the do nothing scenario when properties are known to have a certain number of years remaining before they fail. Assumptions have been made on a project by project basis about what would happen under the do nothing scenario after failure.
- Do something case (e.g. a rollback scheme): takes into account public and private costs which include demolition costs and redevelopment at a new site (including build cost and land acquisition with planning consent). However, it does not include costs relating to acquisition of the at-risk property as this is seen as a transfer value and so the cost is offset by the benefit to the recipient (nets to zero). Benefits include the risk-free market value of any assets directly created, protected or whose useful life is enhanced. The society-wide net present value is calculated as net present benefits minus net present costs.

Benefits and costs to the public purse

- Do Nothing Case: same as under the society-wide analysis.
- Do something cost (e.g. rollback): costs include any costs expended from the Pathfinder or other local authority budgets. This includes any costs ultimately regarded as transfers in the society wide analysis, such as property acquisition. The benefits secured are equivalent to the net present value under the society wide analysis above. A benefit-cost ratio to public funds is calculated as the societal net present value divided by public costs. This is in line with the HM Treasury Green Book definition of “benefit cost ratio”, i.e. Net Present Value/Government Cost or

“NPV/G”³⁶.

3.10 *Other benefits which were not possible to quantify and which were qualitatively assessed included the following:*

- impact on any business activity (GVA) – distinguishing between local and national impacts.
- impact on wider asset values from any reduction in blighting effects.
- impact on quantifiable community cohesion or regeneration benefits

Smaller Pathfinder projects

3.11 In terms of the smaller Pathfinder projects, the value for money of individual activities was assessed using a subset of the following criteria where appropriate:

- Activity that leaves a lasting legacy.
- Activity that could not have been carried out by any other means.
- Activity that has been formally evaluated.
- Comparative costs of activities being carried out by several Pathfinders.
- Activity that replicates other work being carried out elsewhere (outside of the Pathfinder programme).
- Activity that does not contribute to the successful delivery of the project.
- Activity that is not directed at adapting to coastal change.
- Less successful activity.

Practical difficulties in determining value for money

3.12 There were some practical difficulties in determining the value for money of individual projects due to factors such as:

- the different approaches taken by each project;
- the flexibility of the programme;
- the lack of a formal evaluation of the benefits achieved in all cases (and the lack of any monetisation of these benefits) – with the exception of the Jurassic Coast, no Pathfinder carried out a ‘before and after’ survey, and so it was difficult to quantify the impact and benefit of engagement activities;
- the recognition that unsuccessful projects are also valuable provided that the lessons are learned.

3.13 In the case of the five larger Pathfinder projects, there were some additional practical issues:

³⁶ This is a slight departure from the usual definition of benefit-cost ratio in flood and coastal erosion risk management (in practice, the ratio of societal benefits to publically-funded costs), but is necessary because of the presence of private costs in many Pathfinder activities. In time, with the increase in private sector contributions to traditional flood and coastal defence schemes, it is expected that an NPV/G ratio will be adopted here too. In the meantime, to compare a Pathfinder “public benefit cost ratio” with that for a traditional (fully publically-funded) defence scheme, subtract 1 from the latter (as where all costs are met from public funds, NPV/G = BCR-1).

- most have not collected information systematically on the future timing of benefits (for instance the useful life of assets or when new housing will be built);
- many of the projects are at an early stage or have not yet completed where although the costs are reasonably well established the benefits are not;
- although there is reasonable information on costs of physical investment, and support for relocation, none of the Pathfinders has been able or sought to measure the social and regeneration costs of doing nothing. So, these wider costs and benefits are not recorded or assessed (and it would be difficult to do so in many cases);
- although many projects have focused on boosting or at least sustaining the tourism economy evidence on the likely impacts have not been collected; and
- the 'Do Nothing' scenario has not always been clearly articulated or easy to establish, especially where there are elements of compensation involved or planning gain.³⁷

Reduced coastal erosion risk benchmarks

3.14 Whilst different in nature, it is important to understand how the Pathfinder adaptation activities compare to defence options in terms of the costs and benefits delivered.

3.15 There are around 100 potential investment schemes which will deliver reduced coastal erosion risk to 35,437 households in the SR10 period. The total estimated PV costs and benefits of these are £971m and £10,026m respectively. Therefore, the average Benefit to Cost Ratio (BCR)³⁸ is 10.3:1 and the total PV cost per household removed from risk is around £27,000.

3.16 However, it is important to appreciate that these value for money figures are in large part delivered by projects where the investment leads to the securing of physical assets that would otherwise be damaged. These ratios do not, in the main, relate to adaptation projects.

Governance

3.17 Both evaluations were overseen by a Pathfinder Evaluation Steering Group managed by Defra. A list of members is at Annex D.

³⁷ Planning gain refers primarily to the increase in the value of land which results from planning permission being granted for that land. This increase in land value mainly accrues to the owner of the land, but a levy or tax may be applied to divert some of the planning gain to the public sector. In England and Wales, such arrangements are currently negotiated between the developer and the Council, and take place under the terms of Section 106.

³⁸ This is the traditional gross benefit per £ of public cost metric. Using the NPV per £ of public cost metric used for the Pathfinder schemes in this report, the comparable figure would be 9.3:1

4. Evaluation of the pathfinder programme

4.1 The following section presents the key findings from all 15 Pathfinder projects, a summary of the views of key stakeholders and an overall evaluation of the programme. This has been informed by a detailed evaluation of the ten smaller Pathfinder projects (Section 5) and a higher level evaluation of five larger projects (Section 6), based on the findings of an in-depth examination.

PROGRAMME DELIVERY AND ACHIEVEMENTS

Delivery of activity

4.2 Summaries of the key outputs and outcomes of the ten smaller Pathfinder projects are given in Table 4.1, while those of the five larger projects are given in Table 4.2. Full details of the activities and outcomes delivered by all of the projects are given in Sections 5 and 6 and Annexes E to S.

Table 4.1: Key outputs and outcomes of the ten smaller Pathfinder projects.

Pathfinder project	Community engagement	Adaptation planning	Delivering adaptive solutions	Other outputs
Chichester	<p><i>Coastal Literacy</i> programme of engagement and awareness raising;</p> <p><i>Coastal Change Grants Scheme</i> (supported 12 community projects).</p>	<p><i>'Towards ICZM'</i> adopted as an aspirational plan & material planning consideration.</p>	<p>Re-instatement of <i>beach access ramp</i> at Selsey.</p>	<p><i>Selsey Coastal Trust</i> (testing whether a trust could manage regeneration projects on publicly owned land, with profits funding coastal defence activity)</p> <p><i>Manhood Peninsula Destination Management Plan</i> setting out key issues and actions for those interested in the local visitor economy.</p>
Cuckmere	<p><i>Consensus achieved</i> on way forward for the Estuary;</p> <p><i>Development of 'Friends of Cuckmere'</i> to help take forward preferred option (defence in the short term and reactivation of the</p>	<p><i>Research completed</i> on the economy, visitor profile, landscape and heritage of the Estuary, including visual modeling of options.</p>		

	meanders in the long term).			
Hampshire	<p><i>Community engagement on 'Coastal Change – past, present and future'</i></p> <p><i>Structured workshops to identify, assess & prioritise adaptation opportunities (e.g. Lepe Country Park);</i></p> <p><i>Education/awareness raising events involving ten schools and colleges.</i></p>	<p><i>Adaptation plan covering Beaulieu to Calshot (due for completion in November).</i></p>	<p><i>Feasibility study on possible access improvements in Lepe Country Park.</i></p>	
Hastings	<p><i>Consultation with fishermen – consensus reached on the initial options presented on adapting to accretion;</i></p> <p><i>Historical record of the impact of coastal change upon the fishing community.</i></p>	<p><i>Shingle movement study & development of adaptation options – study on reasons for and impacts of climate change on shingle movement in the harbour, and recommended options to reduce its impact on the fishing industry.</i></p>	<p><i>Small fund to help deliver the preferred option(s).</i></p>	
Jurassic Coast	<p><i>Scenario planning workshops in six case study areas, leading to development of adaptation options;</i></p> <p><i>Training for community leaders;</i></p> <p><i>Exchange visits for communities;</i></p> <p><i>Facilitator training for public servants;</i></p> <p><i>Public exhibition showing workshop conclusions;</i></p> <p><i>Baseline and follow-up public opinion surveys in six case study areas</i></p>	<p><i>Research into how spatial planning can best support sustainable adaptation to coastal change.</i></p>	<p><i>Community Adaptation Fund – to support adaptation options identified at workshops.</i></p>	

	<p>(follow-up survey showed no significant change in awareness of coastal change);</p> <p><i>Education project</i> to embed coastal change in the Geography curriculum in local schools.</p>			
Lincolnshire	<p><i>Coastal awareness campaign</i> to increase flood risk awareness and emergency preparedness;</p> <p>Targeted testing of <i>engagement techniques</i> to increase flood risk awareness;</p> <p><i>Mablethorpe Case Study</i>, which will deliver a range of awareness raising activities based in a new community information hub building.</p>	<p>Developing principles and potential spatial planning options through a <i>Coastal Study</i>;</p> <p><i>Mass evacuation research</i>, resulting in improved plans for evacuation of vulnerable groups;</p> <p>Improved <i>knowledge of 'hidden' caravan community</i>.</p>		<p><i>Economic coastal model</i> testing impacts of economic development, investment, climate change adaptation and housing market changes in the coastal region;</p> <p><i>Design solutions</i> e.g. handbook of flood resilience solutions; toolkit for developers in flood risk areas.</p>
Scratby	<p>Community education & information programme.</p>	<p>Research into equity release and equity transfer schemes;</p> <p>Research into funding sources for rollback;</p> <p>Exploration of rollback options; and development of a Community Adaptation Management Plan.</p>		
Sefton	<p>Formby Point visualisation;</p> <p>Car park study;</p> <p>Caravan park engagement;</p>	<p>Dune Slack Study.</p>	<p>Boardwalk construction.</p>	

	Dissemination activity.			
Slapton Line	<p><i>Coastal Change Adaptation Toolkit, Timelines and the changing coast</i> archive photographs, articles and videos</p> <p><i>Schools outreach and engagement</i>, including a programme of 'Learning with a Changing Coast'.</p>			Activity related to <i>business and tourism adaptation and resilience</i> , focusing on interpretation points
Somerset	<p><i>Scenario planning tool</i> – using future scenarios to identify adaptation measures (Porlock Weir);</p> <p>One-year funding for a <i>community engagement officer</i> (Stear);</p> <p>Development of a <i>community coastal change monitoring initiative</i> (Brean & Berrow);</p> <p><i>DVD</i> on Somerset's changing coastline;</p> <p><i>e-game</i> for all Somerset primary schools to enable children to learn about and explore the coast.</p>	Development of an <i>adaptation action plan</i> for Porlock Weir		

4.3 Of the **10 smaller projects**, most **remained reasonably faithful to their original project plans**, although in the majority of cases the work continued into the current financial year due to a combination of the short programme period (18 months) and a longer lead-in time than anticipated. Resources were generally diverted from original project ideas into other areas for entirely valid and practical reasons, such as when it became clear through contact with other Pathfinders that the work was unlikely to add value to what was being learned from similar, more advanced (in terms of timescale), larger or more ambitious projects or where material/work was already in existence. For example, the Jurassic Coast Pathfinder³⁹ abandoned its proposed 'trial negotiations' when it became clear that other Pathfinders such as North Norfolk and

³⁹ The full name of each Pathfinder project has been abbreviated to the Pathfinder area throughout the rest of the report.

Waveney were 'doing it for real'. Similarly, Somerset planned to film a DVD showing adaptation case studies from around the country. However, when it was discovered that the National Trust had already produced a comprehensive national DVD ('Living with a Changing Coastline'), which could be used as a supporting tool, it was decided to focus the Pathfinder DVD exclusively on the Somerset Coast.

- 4.4 There was a wide range of other reasons. For example, in the case of Lincolnshire, a change in Government policy towards Regional Spatial Strategies (RSSs) removed the main vehicle for developing principles and options within its proposed Coastal Study so that a rethink was necessary. An approach was subsequently agreed whereby they would feed directly into Local Development Frameworks (LDFs). In Cuckmere, which was a community-led project, there was a request for more research, leading to a project overspend, while in Hampshire proposed short term improvements to the access to the foreshore did not go ahead as planned because the main driver for this work was not the community but the landowners and site managers and it was difficult to secure agreement on the course of action.
- 4.5 The main exception to this was Sefton, which lost over half (56%) of its original budget due to financial pressures within the Council and lack of ring-fencing within the programme. This resulted in several activities being cancelled or cut back. Hampshire also lost 30% of its budget for the same reason but was able to carry out all the planned activities at a lower level. In the case of Scratby, the project appears to have cost less to deliver than anticipated, with most of the underspend (29%) going to Great Yarmouth Borough Council's general fund.

Table 4.2: Key outputs and outcomes of the five larger Pathfinder projects.

Pathfinder project	Community engagement	Adaptation planning	Delivering adaptive solutions	Other outputs
East Riding	Review of ICZM; Establishment of coastal officers group; Development of Coastal Partnership; Development of the ICZM Adaptation Communications Toolkit.	Rollback review and links to LDF; Vulnerable groups priority outcome (process for identifying and prioritising those most at risk).	Enhanced Assistance Package (EAP) (relocation and adaptation support packages); Investigation of rollback and buy and lease back; Small grants fund.	
North Norfolk	Coastal Heritage project involving events, training and resource use completed with publication of a heritage book still outstanding but already over-	Property acquisition for lease back scheme appraised but not pursued.	Happisburgh property acquisition and demolition programme; Happisburgh cliff top enhancement project involving construction of car park, toilets and	Business advice project involving 90 businesses (advice, business grants/loans and tourism audit); Marketing toolkit

	subscribed.		<p>new beach access ramp and removal of beach debris (NB: Not all activity may be considered adaptive);</p> <p><i>Rollback of the Manor caravan park</i> (extension granted to allow owner to find an alternative site);</p> <p>Infrastructure package (footpath realignment, removal of beach debris and investigation of rollback of Trimingham Village Hall) (NB: Not all activity may be considered adaptive).</p>	<p><i>for businesses;</i></p> <p>Study into the potential for private sector contributions towards a defence project in <i>Wolferton</i>.</p>
Scarborough	Extensive <i>community engagement</i> focusing on the 15 properties at immediate risk, resulting in 14 residents preferring the Council to purchase a communal plot.		<p>Site appraisal carried out, with Muston Road, Filey, being recommended.</p> <p>Discussions underway with residents, who prefer another site.</p>	
Tendring	Recruitment of <i>Community Development Worker</i> .	<p>Introduction of an interim <i>planning policy</i> to prevent development at Jaywick (subsequently rescinded on the basis of a lack of sufficient consultation with local people)</p> <p>Consideration of <i>buy and lease back</i> scheme (not pursued).</p>	<p><i>Acquisition of four properties</i> which were demolished (the programme was halted in September 2010 following a budget review).</p>	<p>Support for the construction of a <i>community garden at Brooklands Gardens;</i></p> <p>Crag Walk (coastal defence project that slows erosion, with a walkway to allow visitors to see the erosion processes)</p> <p>Tendring Peninsula Tourism Study not yet</p>

				commissioned.
Waveney		Review of <i>rollback policy</i> ; Workshops with utility providers to discuss coastal erosion impacts.	Testing of planned <i>rollback</i> of nine households most at risk in <i>Easton Bavents</i> .	Development & implementation of <i>Corton beach strategy</i> including works to beaches, improved beach access, footpaths and signage.

4.6 In the case of the **five larger Pathfinders**, it is a **more variable picture**, with some having spent only a small proportion of the funding allocated and, in total, only 36% of the original budget having been used to-date. For example, Scarborough had planned to spend its funding on rollback but this has been significantly delayed for a number of reasons (largely due to difficulties in finding a suitable site and in gaining community consensus on the way forward). At the time of writing, Scarborough hoped to find a way forward to complete the project. However the risk remains that it may ultimately not be possible to spend the funds in the way originally intended.

4.7 East Riding has so far spent only 40% of its budget but plans to use the remaining funding received to continue to deliver its Enhanced Assistance Package (EAP), supporting those most at risk from coastal erosion. North Norfolk and Waveney have committed the majority of their funding to the projects identified above, but to-date have only spent 42% and 22% of their original budgets. In contrast, Tendring has spent around 75% of its budget. It is not clear yet how it will use the remaining funds, though they may be used for regeneration projects in Jaywick which is at risk from coastal flooding and contains some of the most deprived wards in the country.

Benefits to individuals and the community

4.8 **The programme has delivered a wide range of benefits**, though not all have been evaluated by the Pathfinders (e.g. through detailed feedback and/or public opinion surveys). These are listed below, with specific examples given where appropriate. Where no examples are given, these benefits have been delivered by all projects. Some activities have resulted in a number of benefits.

Identification and delivery of adaptive solutions

- *Rollback/removal of properties/assets at risk*
 - East Riding – to-date, 12 households have accepted support for relocation via the EAP with three pending; 17 households have received basic support for property demolition and site restoration only; 10 households are discussing adaptation approaches, e.g. buy and lease back, access improvement/relocation or rollback; in total, 43 structures have been demolished (including temporary buildings and caravans)
 - North Norfolk – 9 residential properties at risk will be demolished; potential to relocate a community centre (Trimingham Village Hall) and caravan park (if implemented)

- Scarborough – potential for 15 residential properties to be relocated in the future (if implemented)
- Tending – 4 households demolished at Jaywick
- Waveney – 9 properties will be relocated at Easton Bavents through a rollback scheme (if successfully implemented)
- *Delivery of other adaptive solutions*
 - Chichester – reinstatement of beach access ramp in Selsey
 - East Riding – adaptation/resilience grants including Small Grants Fund
 - Hampshire – improvements to the access to the foreshore being considered
 - Hastings – small fund to help implement the preferred adaptation option(s)
 - Jurassic Coast – community adaptation fund to fund adaptation options developed at workshops
 - North Norfolk – realignment works on coastal footpath; reinstatement of beach access ramp and other cliff top enhancement projects at Happisburgh
 - Sefton – construction of boardwalk over sand dunes
 - Somerset – flood resilience kit provided to Porlock Weir residents; dune restoration work completed at Berrow
- *Planning for rollback/removal of properties/assets at risk*
 - East Riding – rollback policy review; approach developed to allow local authorities to assess and target communities most at risk
 - Jurassic Coast – rollback of key community and vulnerable assets being considered in Charmouth (Charmouth Coast Heritage Centre), Seatown (car park) and Sidmouth (Alma Bridge)
 - North Norfolk – methodology developed for valuing and purchasing properties for rollback
 - Scratby – 4 potential rollback areas identified in the village for 251 ‘at risk’ properties
- *Other adaptation planning*
 - Chichester – Integrated Coastal Zone Management (ICZM) planning
 - East Riding – investigation into buy and lease back
 - Hampshire – adaptation plan containing options for Beaulieu to Calshot developed
 - Hastings – range of adaptation options to cope with accretion identified for agreement by fishermen and other stakeholders
 - Jurassic Coast – adaptation plans developed for each of the six case study areas
 - Lincolnshire – improved plans for implementation of targeted evacuation based on research findings (mass evacuation and knowledge of ‘hidden’ caravan community); handbook of flood resilience measures for existing properties; toolkit for developers in flood risk areas; increase in emergency preparedness of residents due to awareness campaign
 - North Norfolk – research into buy and lease back
 - Somerset – flood adaptation plan developed for Porlock Weir community

Lessons in adaptation that can inform future delivery of programmes

- Rollback and buy and lease back (East Riding, North Norfolk, Scratby and Waveney (rollback only))

- Methodologies for supporting rollback that can be replicated in other coastal areas (East Riding and North Norfolk)
- Role of the planning system (East Riding, Jurassic Coast – spatial planning report; North Norfolk and Scratby)
- Engaging the community on adaptation (particularly Cuckmere, Jurassic Coast, Scarborough, Scratby and Somerset)

Increased knowledge and understanding of coastal change

- Improved understanding by local communities (local residents and businesses) about the impacts of coastal change on their location. (While this has perhaps inevitably led to an increase in concern among some communities, overall they have felt better prepared to deal with the impacts of coastal change.)
- Clearer idea by communities about who is involved in managing coastal change and about how decisions are made and how to take part in the decision-making process in the future
- Community-led decision making on how to adapt to coastal change (e.g. Cuckmere and Scratby)
- Increased understanding of coastal change among school children in coastal communities, both at primary (KS1 and KS2) and secondary (KS3 and KS4) levels (e.g. Jurassic Coast, Slapton Line, Somerset and Waveney)
- Increased understanding of coastal change processes through commissioned research (e.g. Cuckmere, Hastings, Lincolnshire and Scratby)
- Development of a legacy of resources for use by schools, colleges and universities (e.g. Hastings, Jurassic Coast, Slapton and Somerset)
- Improved awareness of coastal change issues among professionals in local authorities and agencies
- Better understanding by local authorities and agencies of the concerns that local communities have of coastal change (e.g. Chichester, Hampshire, Jurassic Coast and Scratby)
- Sharing of learning and best practice among Pathfinders (particularly, Jurassic Coast, North Norfolk and Slapton Line)

Development of tools and techniques for raising awareness of coastal change

- Improved understanding among professionals of how to engage effectively, backed up by methodologies for successful engagement (e.g. Hampshire, Jurassic Coast, Sefton and Somerset)
- Development of tools such as scenario planning (e.g. Jurassic Coast and Somerset), visualisation (e.g. Cuckmere, Hampshire, Jurassic Coast and Sefton), historical timeline (e.g. Hampshire, Hastings, Sefton and Slapton Line) and ICZM Adaptation Communication Toolkit (East Riding)

Improved relationships and achievement of consensus

- Stronger relationships between local authorities, agencies (e.g. Environment Agency) and local communities (e.g. Chichester, Cuckmere and Somerset)
- Better understanding of others' points of view and greater consensus among communities (e.g. Cuckmere and Scratby)

- Stronger relationships between different departments within local authorities (e.g. East Riding)

Other benefits

- *Local amenity benefits*
 - Chichester – reinstatement of beach access ramp; coastal change grants scheme
 - Hampshire – improvements to the access to the foreshore being considered
 - North Norfolk – reinstatement of beach access and cliff top enhancement at Happisburgh will result in positive use for residents; realignment of the Cromer Footpath
 - Sefton – construction of boardwalk over sand dunes
 - Tendring – Brooklands Gardens community garden has contributed to green space
 - Waveney – range of projects at Corton (including improved beach access and new facilities such as a cafe and parking) are expected to improve amenity for residents and businesses
- *Tourism benefits*
 - Chichester – potential to increase tourism as a result of Destination Management Study and re-instatement of beach access ramp
 - North Norfolk – e.g. potential to increase tourism at Happisburgh with package of improvements
 - Slapton Line – increased tourism due to the development of information/interpretation points and the continuing support for ‘Celebrate Start Bay
 - Tendring – potential to increase tourism at Crag Walk
 - Waveney – potential to increase tourism at Corton due to wide range of projects delivered
- *Other economic benefits*
 - Chichester – development of Selsey Coastal Trust
 - East Riding – business package under Small Grants Fund
 - Jurassic Coast – business planning tool for SMEs
 - Lincolnshire – development of an economic model to test a range of ‘scenarios’ relating to economic development, inward investment, climate change adaptation and housing market changes in the coastal region, thereby informing policy makers as to various strategic options
 - North Norfolk – business support projects
 - Slapton Line – benefits to local businesses due to the development of information/interpretation points and the continuing support for ‘Celebrate Start Bay
- *Protection of properties/assets at risk*
 - Tendring – risk to historic tourism attraction (Naze Tower), cafe and car park reduced through construction of Crag Walk
 - Waveney – cliff stabilisation works at Corton to slow down the rate of erosion and protect 150 residential properties, 4 holiday parks, a public house and shop

4.9 These benefits have been felt by individuals and the wider communities, as well as by local authorities and partner organisations. Individuals have largely benefited through rollback schemes, as well as through the delivery of adaptive solutions, e.g. grant schemes, while most of the other benefits have been felt at a community level. Local authorities and partner organisations have benefited in a number of ways such as increased awareness of coastal change issues, better understanding of communities' concerns, improved understanding of how to engage effectively, backed up by methodologies and tools for successful engagement, and improved relationships with communities as well as with each other.

Additionality

4.10 Among the **five larger Pathfinders**, it appears that **some of these benefits would have been achieved** in any case and, as such, there are low levels of additionality. For example, in Jaywick it is likely that other funding (potentially through Essex County Council) would have been used to trial a buy to demolish scheme since this was linked to regeneration objectives which were considered to be a high priority for the area. In Scarborough, some of the residents may be able to use their insurance payments from the loss of home to fund a development elsewhere (funding the land costs themselves rather than through the Pathfinder). It is not clear whether rollback of properties would have occurred to the same extent in Waveney in the absence of Pathfinder. However, in North Norfolk, it is unlikely. Although North Norfolk's EN12 planning policy should in theory have encouraged private individuals to rollback, it has probably needed a local authority scheme to raise awareness and encourage its use. In addition, without Pathfinder funding, the Council could not have carried out other aspects of the project on this scale. Similarly, in East Riding, it is unlikely that existing budgets would have been able to fund this work.

4.11 Among the **ten smaller Pathfinders**, there are also some cases where the level of additionality is questionable. For example, in Somerset, it is unclear what would have been achieved at Steart with the existing level of community engagement from the Environment Agency. It is also likely that some community engagement would have been carried out by a number of local authorities. However, this is likely to have been at a much lower level than was possible with Pathfinder funding. For example, in the Jurassic Coast, it is possible that some of the individual workstreams might have gone ahead (e.g. training for facilitators, support for community leaders and perhaps some limited engagement activity), but it is unlikely that such as large scale community engagement programme could have gone ahead without Pathfinder funding.

4.12 In Scratby, some of the projects might have been delivered as part of a scheme appraisal or through a community programme to try and reduce the negative effects of coastal erosion. However, it is highly unlikely that the same amount of community engagement and involvement would have been undertaken as was possible under the Pathfinder. Alternatively, it may have been possible to develop some small-scale projects with the community, perhaps funded by local authorities in association with local Non-Governmental Organisations (NGOs). However, as Pathfinder coincided with the start of a period of severe restraint on local authority budgets, it is difficult to see from where the funding would have been obtained or whether sufficient funding

would have been available.

- 4.13 In several projects, Pathfinder funding unlocked the potential for a range of initiatives to deliver more than they could have done on their own, particularly with regard to achieving an intensive, face-to-face engagement programme across the whole coastal area. For example, in Lincolnshire, existing initiatives to promote the Environment Agency's Floodline service and public consultation on a review of shoreline management practices were integrated with the need to promote better public understanding of coastal flood risk for emergency planning purposes, and the need for wider engagement and consideration of the broader implications for future planning and regeneration policy arising from the Coastal Study. Joined together through the impetus and pump-priming resource provided the Pathfinder programme, this set of requirements could be shaped into a joint coastal communications campaign.
- 4.14 Similarly, in the case of 'Coastal Conflicts' educational initiative in the Jurassic Coast, a DVD had been prepared to send to schools highlighting issues around coastal change, but Pathfinder funding: allowed a full training programme to be built around these issues for teachers; provided financial support to schools to develop their coastal change projects and learn outside the classroom; and brought it all together at the end with a conference. The DVD became one of the support materials for the project but without Pathfinder funding, it would simply have been sent to schools for them to consider alongside a wide range of other materials, greatly reducing the likely impact of the initiative.
- 4.15 It is possible that without Pathfinder funding, some community groups may have taken action anyway. For example, in Porlock Weir (Somerset), the community could have set itself up as a charity and raised funds to put together a community flood action plan and purchase resilience equipment for their properties. As charities they could have obtained funding from other registered grant-making charities, giving an additional income stream. However, awareness of the increased risk of extreme flooding events was low among the community and it is unlikely that they would have taken action until after there had been a serious flooding incident. In practice, community groups are only likely to form if there is a specific 'cause' and there are individuals who are prepared to take the lead. Awareness of coastal change issues is also a key factor and, as shown by some of the projects, this is still rather low.
- 4.16 Overall, ***it is unlikely that most of these benefits would have been possible without some Pathfinder funding.*** Even in those cases where the community had decision-making powers and, in effect drove the process (e.g. Cuckmere and Scratby), facilitation was still a key element of making it all happen and needed to be resourced.
- 4.17 In addition, as noted by the Jurassic Coast Pathfinder, part of the power of Pathfinder was that it was interpreted positively by communities as recognition from Government that it wants to support them in adapting. As such, even if alternative sources of funding had come forward, the process may not have been as effective, as it would not have had the explicit backing of central Government.

Less successful elements of the Pathfinder projects

- 4.18 Inevitably, in an innovative programme of this type, not everything went well. A

consideration of the less successful aspects of the programme as a whole is given in paras. 4.75 to 4.78 and further details of what worked less well in individual projects are given in Sections 5 and 6.

- 4.19 One of the less successful elements of several Pathfinders (e.g. Jurassic Coast, Scratby and Waveney) was the **lack of engagement from business**. For example, Scratby tried a range of approaches to contact businesses (letters, email, phone calls and offers of visits to their premises), but very few businesses took up these opportunities. It was suggested this may be partly because there were very few businesses that were at risk from coastal change and because much of the engagement took place over the summer, when holiday businesses were at their busiest. However, even when contacted during October there was little response from businesses. In Waveney, it was also difficult to engage businesses, particularly where they were part of a larger organisation. These companies found it difficult to be clear about what their plans might be in, say, 20 years and considered that the risk of coastal change was too far away to be of concern. Many had already achieved a return on their investment and were not too concerned if they were to lose their assets. Engagement with business was more successful in North Norfolk, but the advice provided was more generic business advice rather than dealing with coastal change. There were also loan and grant schemes to support businesses.
- 4.20 Several Pathfinders underestimated the **time required to start up their projects** (e.g. Cuckmere, Jurassic Coast, Lincolnshire, Scratby and Waveney) and the **resources required** to deliver the activities, particularly in relation to community engagement (e.g. Cuckmere, Hampshire, Hastings and Waveney). The need to rely on resources from already stretched partner organisations was also problematic for some Pathfinders such as Lincolnshire.
- 4.21 Both Somerset and the Jurassic Coast commented on the **balance between building adaptive capacity and delivering adaptation action** and, with hindsight, felt that their bids should have included provision for funding to deliver specific adaptation actions as, particularly in the Jurassic Coast, the perception that the project might not lead to practical outcomes was one of the obstacles to engagement at the early stages. In the Jurassic Coast, a Community Action Fund was subsequently set up to address this. Similarly, in Hastings a small fund has been put together to help implement the preferred adaptation option.

Five larger Pathfinders

- 4.22 Several of the five larger Pathfinder projects (East Riding, North Norfolk and Tendring) aimed to test **buy and lease back**. However, it has not worked for a number of reasons, largely due to the cost of bringing properties up to a suitable standard to enable them to be leased out and a lack of interest from Registered Social Landlords or other suitable organisations to manage the process. In North Norfolk, a detailed report was completed that compared different approaches in which buy and lease back could be implemented in Happisburgh focusing on properties with a 20-100 year lease. It was recommended that it should not be taken forward due to the level of risk to the Council. However, the detailed work carried out in this area will be valuable for future policy and for any other local authority with properties at risk from coastal erosion or flooding considering a buy and lease back approach for their

area.

- 4.23 Several of these projects did not set out clear eligibility criteria or means testing. For example, in Tendring home owners at Jaywick were landlords with a number of properties and received funding to purchase a home once this was burnt down (this occurred prior to them being offered Pathfinder funding and the purchase price reflected this). One individual also relocated within Jaywick and so the household itself has not been removed from risk. A number of Pathfinder areas have also struggled with the issue of whether second home owners should benefit. In Scarborough, the eligibility criteria were changed part way through the programme to allow second home owners to benefit. However, in East Riding there was a reduction in support for second home owners who could not access the full support available to more 'vulnerable' residents.
- 4.24 Any intervention by Government must have a clear **market failure rationale**. As part of the bidding process, it was not necessary for local authorities to set out a clear market failure argument or to develop clear objectives to guide the delivery of projects. Consequently, in evaluating the five larger projects, it was not always easy to establish a clear market failure rationale for intervention or to understand the final objectives. In a number of cases (e.g. Scarborough and Easton Bavents), households were reported to be aware of the risk prior to purchasing their property and in other cases, householders were second home owners and therefore delivering social equity benefits was not a clear argument.
- 4.25 The issue of whether the five larger Pathfinder projects have in effect been **compensating individuals** for the loss of their home is a complex one. Government policy is not to compensate individuals for the loss of their property due to coastal erosion. Compensation can cover situations where households have received financial support which is above the 'at risk' value of their property and as such it is likely that they are being compensated (or benefitting financially) for the loss of their property. In North Norfolk, the payment to residents at risk could be considered to be compensatory since a 'supplementary payment' (to assist with removal costs and disturbance as per the compulsory purchase rules) has been awarded to these households. However, the Pathfinder Team has argued that it wants the households to move quickly and is therefore in a weak bargaining position and needs to pay more. A programme operating over longer timescales might be able to avoid paying compensation to the same extent.
- 4.26 The 'at risk' value payment for properties in North Norfolk could also be viewed as compensatory given that the local authority has not benefitted from the purchase. While it could be argued that the value for the local authority and the community is the reduction in blight and better cliff top environment, it is questionable whether this is enough to justify the payment. The same point could be made about the demolition of properties in Tendring. The Waveney and Scarborough approaches could also be considered to be compensatory since individuals are being compensated for land lost due to coastal erosion, particularly if the contribution is not being recovered elsewhere.
- 4.27 In East Riding, the situation is less straightforward. In this case, individuals are being offered an assistance package which is more generous than that given to people who

become homeless for other reasons and in this way it could be argued as being unfair. However, again, the counter-argument is that this could be justified if it assists with relocation away from the coast in a more planned and orderly manner. In addition, the point has also been made that these households are not able to receive insurance for the loss of their property and basic support is available nationally to help those who are at risk from flooding.

4.28 A number of the Pathfinder areas do not appear to have accessed the separate funding available to support the **cost of demolition**. (In some cases, this was because the properties were purchased prior to a particular cut-off date and hence were ineligible for the Coastal Erosion Assistance Grant.) Feedback from the Pathfinder Teams also suggests that the cost of demolition varies considerably from property to property and that in many cases has been significantly higher than the Assistance Grant available. East Riding is planning to carry out a separate piece of research to provide evidence on the varying costs of demolition as part of the Pathfinder programme. There may be ways to reduce the cost of demolition, for example through demolishing a number of properties at once where economies of scale may be available and through the choice of contractor (one Pathfinder indicated that they had to use a preferred supplier selected by the local authority).

4.29 The five larger Pathfinder projects have highlighted the difficulties in identifying suitable sites for rollback. East Riding, for example, has had difficulties in finding sites for residential rollback that are in the right location (close to existing affected areas) and have a life of at least 100 years. Scarborough has had significant difficulties in finding a suitable location due to the fact that there are few sites available which are not at risk from coastal erosion. In Happisburgh, there have been problems in identifying suitable sites for business use (a caravan park) since it has been difficult to find sites not at risk in the same location and to meet the specific requirements of the business. It is considered that land banking for business properties would be too difficult since they have differing needs depending on the precise nature of the business. Finally, in Waveney the preferred site is not currently allocated for residential use but was selected due to the lack of suitable sites for housing.

Costs and type of spend

4.30 Table 4.3 sets out the Pathfinder funding received for the ten smaller projects, together with any additional funding.

Table 4.3: Total funding for ten smaller Pathfinder projects.

Pathfinder	Pathfinder funding allocated	Pathfinder funding spent or committed	Additional local authority funding	Additional local authority support in kind (e.g. staff resource)	Other funding	Total
Chichester	£450,000	£450,000	£0	£0	£5,000	£455,000
Cuckmere	£249,997	£249,997	£13,777	c£50,000	£5,000	c£318,774

Hampshire	£254,000	£171,000	(-£83,000)	£11,500	£5,000	£187,500
Hastings	£115,625	£115,625	£0	Not costed	£0	£115,625
Jurassic Coast	£376,500	£376,500	£0	c£50,000-100,000	£0	c£426,500-476,500
Lincolnshire	£810,000	£810,000 ¹	£286,300	5 FTE	£158,000	£1,254,300
Scratby	£296,000	£211,585	(£-84,415)	£20,000	£0	£231,585
Slapton	£38,000	£38,000	£13,000	£0	£18,000	£69,000
Sefton	£337,000	£149,000	(-£188,000)	£25,000	c£500,000 ¹	£174,000
Somerset	£235,000	£235,000		£11,000	£0	£246,000
Total	£3,158,122	£2,808,707 (89%) ³	£313,077	£167,500-217,500	£191,000	£3,478,284-3,528,284

Notes: 1: Of the original budget of £810,000, £651,290 has been spent to-date, with £158,710 committed to ongoing activity

2: Funding of £500k was available from an EU IMCORE project for related activity but has not been included in overall total.

3: Percentage of the original budget spent or committed to Pathfinder-related activity.

4.31 As noted previously, the **ten smaller Pathfinder projects** have now largely come to an end, with the vast majority of their funding already having been spent. The main exception to this is Lincolnshire, where around £160k (20%) of the original budget has not yet been spent and some of this funding will be used to carry out awareness raising activities on coastal change in Mablethorpe over the next three years. Of the original budget of around £3.1m, about £2.8m has been spent on Pathfinder-related activity, with around £313k (11%) being lost to the programme due to the lack of ring-fencing.

4.32 Tables 4.4 and 4.5 respectively set out the expenditure to-date and future spend and the additional funds secured for the five larger projects.

Table 4.4: Expenditure to-date and future spend for the five larger projects.

	A. Expenditure to-date		B. Future spend		Total (A + B)		Total Pathfinder funding
	£	% of Total	£	% of Total	£	% of Total	Allocated
East Riding	£478,336	40%	£727,273	60%	£1,205,609	100%	£1,205,609
North Norfolk	£1,263,102	42%	£1,710,040	57%	£2,973,142	99% ¹	£3,000,000
Scarborough	£16,900	2%	£755,600	74%	£772,500	76%	£1,022,500
Tendring	£741,944	74%	£0	0%	£741,944	74%	£1,000,000
Waveney	£330,352	22%	£1,204,203	78%	£1,534,150	100%	£1,534,555
Total	£2,880,634	36%	£4,397,116	57%	£7,227,345	93%	£7,762,664

Note: 1: North Norfolk has allowed for 1% of the funding to be reserved for contingency.

Table 4.5: Total anticipated spend for the five larger projects including additional funds.

	Total anticipated Pathfinder spend	Additional funding secured	Total anticipated spend
East Riding	£1,205,609	£57,807 ¹	£1,263,416
North Norfolk	£2,973,142	c£295,000 ¹	£3,268,142
Scarborough	£772,500	£0	£772,500
Tendring	£741,944	£641,711	£1,383,655
Waveney	£1,534,150	£53,152 ¹	£1,587,302
Total	£7,227,345	£1,047,670	£8,275,015

Note: 1: These figures are/include in-kind contributions.

4.33 As noted previously, only 36% of the total budget for the **five larger Pathfinder projects** has so far been spent, with three (East Riding, North Norfolk and Waveney) having committed their remaining budgets to Pathfinder-related activity. It is still uncertain whether Scarborough will complete its proposed rollback scheme, but even if it does, it envisages only spending around £772k on this work, with a potential loss of £250k to the programme. It is not yet clear how Tendring will spend its remaining funds (£258k), but, as noted previously, they are likely to be used for regeneration projects which may be outside the scope of the Pathfinder programme. Thus, taken together with the £313k already identified, there is a risk that a total of **£821k (7.5%) could be lost from the programme**, being diverted into activities not related to coastal change adaptation. If Scarborough is unable to complete its rollback scheme, this could potentially rise to around £1.6m (14.5%)

4.34 On the other hand, most Pathfinders have been able to secure additional funds and in-kind contributions, resulting in an estimated additional funding of at least £1.2m (11%) to the programme. However, it should be noted that around half of this funding was for a coastal protection project at Crag Walk in Tendring.

4.35 Table 4.6 provides a breakdown of actual and planned expenditure by type of spend. Staff costs, as a percentage of the total project budget, ranged widely, from 5 to 91%, with an average of 14% for the whole programme. However, these figures do not include in kind support from local authorities and other partners. The staff costs also vary due to the nature of the projects. For example, in Cuckmere, Hampshire and Scratby, external consultants undertook much of the project activity (e.g. engagement and research; 66-84%), so there were lower staff costs. In addition, in Scratby, the lead project officer was employed as a consultant due to recruitment difficulties. In contrast, in the Jurassic Coast, Somerset and Slapton Line, local authority staff undertook most of the work, resulting in a higher proportion of staff costs (43%, 54% and 91% respectively). Staff costs are also higher as a proportion of the total project budgets in the 10 smaller projects (average of 24%) compared to the five larger projects (9%). Again, this is due to differences in the types of project.

4.36 Not surprisingly, the proportion of capital spend on delivering adaptive solutions is low in the ten smaller Pathfinders (9% of their budgets), with only two carrying out capital projects (Chichester and Sefton). In contrast, among the five larger Pathfinders, it accounts for 64% of spend. Overall, for the whole programme, capital spend accounts for almost half (49%) of the budget. Revenue spend is lower, at 11%.

4.37 The only other significant expenditure was on consultancy support, at 16% of the total programme budget. There were marked differences between the ten smaller and five larger Pathfinders in the proportions of the budget spent on these services, at 44%

and 6% respectively.

Table 4.6: Breakdown of actual and planned expenditure by type of spend.

	Staff costs £k (%)	Consultancy £k (%)	Capital spend on delivering adaptive solutions £k (%)	Revenue spend on delivering adaptive solutions £k (%)	Workshops, publications & other comms materials £k (%)	Small grants £k (%)	Other £k (%)	Total £k
Chichester	£128k (28%)	£125k (28%)	£150k (33%)	£44k (10%)	£4.5k (1%)	£37k (8%)		£450k
Cuckmere	£43k (17%)	£191k (77%)			£16k (6%)			£250k
Hampshire	£32k (19%)	£113k (66%)			£19.5k (11%)		£6k (4%)	£171k
Hastings	£22.5k (20%)	£73k (63%)			£20k (17%)			£116k
Jurassic Coast	£161k (43%)	£62k (17%)		£27k (7%)	£126k (33%)			£376.5k
Lincolnshire	£142k (18%)	£456k (56%)		£3k (<1%)	£209k (26%)			£810k
Scratsby	£20k (9%)	£173k (82%)			<£1k (<1%)	£2k (1%)	£16k (8%)	£211.5
Sefton	£13k (9%)	£45k (30%)	£91k (61%)					£149k
Slapton	£24.5 (91%)				£13.5 (9%)			£38k
Somerset	£127k (54%)	£19.5k (8%)		£36.5k (16%)	£45k (19%)	£4k (2%)	£3k (1%)	£235k
<i>Total</i>	<i>£713k (24%)</i>	<i>£1,258k (44%)</i>	<i>£241k (9%)</i>	<i>£110k (4%)</i>	<i>£454k (16%)</i>	<i>£43k (2%)</i>	<i>£25k (1%)</i>	<i>£2,809</i>
East Riding	£96k (8%)		£336k (28%)	£583 (49%)	£40k (2%)	£150k (13%)		£1,206k
N Norfolk	£352k (12%)	£172k (6%)	£1,875k (63%)	£455k (15%)	£5k (<1%)	£115k (4%)		£2,973k
Scarboro			£772.5 ¹					£772.5k

Tendring	£46k (5%)		£696k (70%)				£258k ² (26%)	£1,000k (£742k)
Waveney	£175k (12%)	£204k (13%)	£971k (63%)	£4k (<1%)	£6k (<1%)	£30k (2%)	£145k (10%)	£1,534k
<i>Total</i>	£669k (9%)	£376 (6%)	£4,650k (64%)	£1,042k (14%)	£51k (1%)	£295k (4%)	£145k (2%)	£7,227k
Programme total	£1,382k (14%)	£1,634k (16%)	£4,891k (49%)	£1,152k (11%)	£505k (5%)	£338k (3%)	£170k (2%)	£10,036k

Notes: 1: It has been assumed that current and possible future spend will both be capital.

2: Tendring has uncommitted funds of £258k. They may be spent on regeneration activities outwith the Pathfinder programme and so they have not been included in the totals column..

Focus on adaptation compared to other priorities

4.38 Table 4.7 provides a breakdown of expenditure by objective using information provided by Pathfinders.

Table 4.7: Breakdown of actual and planned expenditure by objective.

	Community engagement £k (%)	Adaptation planning £k (%)	Delivering adaptive solutions £k (%)	Managing flood risk £k (%)	Wider economic development £k (%)	Coastal protection £k (%)	Other ¹ £k (%)	Total £k
Chichester	£122k (27%)	£38k (8%)	£207k (46%)		£27k (6%)	£30.5k (7%)		£450k
Cuckmere	£81k (33%)	£125k (50%)					£43k £17%	£250k
Hampshire	£122k (71%)	£10.5k (6%)					£38k (23%)	£171k
Hastings	£67k (58%)	£40k (34%)	£9k (8%)					£116k
Jurassic Coast	£325k (86%)	£15k (4%)	£27k (7%)				£10k (3%)	£376.5k
Lincolnshire	£292k (36%)	£214k (26%)		£163k (20%)	£80k (10%)		£61k (8%)	£810k
Scratby	£95k (45%)	£113k (53%)					£3.5k (2%)	£211.5
Sefton	£20k (14%)	£30k (20%)	£91k (61%)				£8k (5%)	£149k

Slapton	£31.5k (83%)				£6k (16%)		£0.5k (1%)	£38k
Somerset	£157k (67%)	£6.5k (3%)	£4k (2%)	£65k (28%)			£3k (1%)	£235k
Total	£1,312k (47%)	£592k (21%)	£338k (13%)	£228k (8%)	£113k (4%)	£30.5k (1%)	£167k (6%)	£2,807k
East Riding	£172k (14%)	£40k (3%)	£994k (83%)	£2k (<1%)				£1,206k
N Norfolk		£20k (<1%)	£2,211 (75%)		£722k (24%)	£20k ² (<1%)		£2,973k
Scarboro			£722.5k					£722.5k
Tendring	£23k (2%)		£176k (17%)	£23k (2%)		£520k (52%)	£258k ³ (26%)	£1,000k (£742k)
Waveney	£224k (14%)		£159k (10%)		£577k (37%)	£300k (20%)	£286k (19%)	£1,534k
Total	£419k (6%)	£60k (1%)	£4,262k (59%)	£25k (<1%)	£1,299 (18%)	£860k (12%)	£286k (4%)	£7,227k
Programme total	£1,731 (17%)	£652k (7%)	£4,600k (46%)	£253k (3%)	£1,412k (14%)	£890k (9%)	£453k (4%)	£10,036k

Notes: 1: The 'Other' category includes a range of costs. For example, in some Pathfinders (e.g. Cuckmere, Hampshire and Waveney, this category includes staff or project management costs. In others (e.g. Tendring and Waveney) it includes as yet unspent funds.

2: In North Norfolk, the Wolferton coastal protection project was allocated to adaptation planning by the Pathfinder Team. It has been reallocated to coastal protection.

3: Tendring has uncommitted funds of £258k. They may be spent on regeneration activities outside the Pathfinder programme and so they have not been included in the totals column.

4.39 It should be noted that Pathfinders have taken different approaches to completing the table. For example, some such as Cuckmere, Hampshire and Waveney have separated out staff/project management costs, whereas others have included them under the relevant activities. On occasion it has also been difficult to work how activities have been allocated to coastal change adaptation and to flood risk management. In terms of community engagement, most activity has been included under the heading of 'Engaging the community on coastal change adaptation' whether it was related to coastal change or to flood risk. In some cases, the activities are clearly linked. For example, in Hampshire, both coastal erosion and coastal flooding are problems within Lepe Country Park and so it makes sense to tackle them together in developing an adaptation plan. However, in other cases, it may indicate different interpretations of coastal change.

4.40 The definition of coastal change given in the Coastal Change Policy consultation document is *'the physical change to the shoreline, i.e. erosion, coastal landslip,*

permanent inundation and coastal accretion'. Using this definition suggests that much of the activity undertaken in Lincolnshire could be regarded as being related to coastal change adaptation as the future risk is of permanent inundation. However, although £163k (20%) has been allocated to flood risk management (in relation to the Coastal Study and hidden communities work), it could also be argued that some of the other activities associated with preparing for a flood emergency could also come under that category. In Porlock Weir (Somerset), the activities carried out have been allocated to coastal change adaptation. On the face of it, they appear to be related solely to managing flood risk. However, the increased risk of serious flooding is due to erosion of the existing defences and, thus, it seems reasonable that they are categorised as coastal change adaptation activity. All activities carried out at Steart have been categorised as 'managing flood risk' and, indeed, this is one of the three approaches to flood defence. However, as managed realignment will result in a physical change to the shoreline, it could be argued that these activities are also related to coastal change adaptation. It would be helpful if Defra could more clearly define what it regards as 'coastal change'.

4.41 As shown in Table 4.7, and bearing in mind the above caveats, it appears that **most of the activity within the Pathfinder programme was directed towards adapting to coastal change**. In the case of the **ten smaller Pathfinders**, as noted previously, most of the **adaptation activity was geared towards engagement (47%) and planning (21%)**, with around 13% on delivering adaptive solutions (most of which was due to the access ramp at Chichester and the boardwalk at Sefton). Activity related to flood risk only occurred in Lincolnshire and Somerset, while coastal protection activity only occurred in Chichester. Activity related to wider economic development occurred only in Chichester, Lincolnshire and Slapton.

4.42 There is a **more variable picture with the five largest Pathfinders**. Whereas delivery of **adaptive solutions is projected to comprise over half of the budget (59%)**, at £4.3m, most of this activity has occurred/will occur in East Riding, North Norfolk and Scarborough (assuming the rollback scheme goes to plan). In Tendring and Waveney, wider economic development and coastal protection have also featured strongly. Indeed, in both Pathfinders, the proportions of their budgets devoted to delivering adaptive solutions are less than 20% (17.5% at Tendring and 10% at Waveney).

Value for money

4.43 Value for money assessments were carried out on the individual project activities, on the projects themselves and on the whole programme.

4.44 In terms of the **ten smaller Pathfinders**, the value for money of individual activities was assessed using a subset of the following criteria where appropriate:

- Activity that leaves a lasting legacy.
- Activity that could not have been carried out by any other means.
- Activity that has been formally evaluated.
- Comparative costs of activities being carried out by several Pathfinders.
- Activity that replicates other work being carried out elsewhere (outside of the

Pathfinder programme).

- Activity that does not contribute to the successful delivery of the project.
- Activity that is not directed at adapting to coastal change.
- Less successful activity.

4.45 Using these criteria, it was concluded that ***the majority of the activities undertaken represented good value for money***. Examples of activities which demonstrated excellent value for money included: the development of an adaptation plan which contained a list of specific and practical adaptation options that can be taken forward in Lepe Country Park and surrounding coastal areas (Beaulieu to Calshot) (£10.5k; Hampshire); the Hastings shingle movement study which provided an understanding of shingle movement around the harbour and a set of costed adaptation options to deal with accretion for the fishermen to consider and take forward (£30k); and the scenario planning workshops undertaken at the six case study areas in the Jurassic Coast (£67k), which captured the 'before and after' views of local communities and resulted in adaptation plans which are now being taken forward by the communities. The Lincolnshire Pathfinder carried out a number of activities that demonstrated excellent value for money including a coastal awareness campaign, which resulted in a measurable increase in emergency preparedness among communities in the coastal zone, and several useful outputs that have national applicability, such as a handbook of flood resilience measures for existing properties and a toolkit for developers in flood risk areas.

4.46 Examples of activities which appeared to represent lower value for money included the Coastal Literacy work undertaken in Chichester (which at £40k appeared to under-deliver against its original aim), the initial engagement activity in Hampshire (some of which at £58k was rather unfocused in terms of coastal change) and the Arts-Science project in the Jurassic Coast (which at £20k was again rather unfocused). There was also some uncertainty about what would have been achieved at Steart (Somerset) with the existing level of community engagement from the Environment Agency, casting some doubt on the value for money of engaging a full time community engagement officer at £30k.

4.47 ***At a project level, it was also concluded that the majority had demonstrated good value for money***. Projects representing particularly good value for money included: the Hastings Pathfinder, which was a small but highly focused project; the Jurassic Coast Pathfinder, which successfully engaged with six communities using some innovative tools and techniques, provided significant learning on effective methods of engagement and commissioned spatial planning research that has national applicability; and the Lincolnshire Coastal Pathfinder, which built on and added value to existing activities, made a measurable difference on emergency preparedness and delivered a range of very useful outputs that have a wider applicability.

4.48 Of the three projects which lost a proportion of their funding, Hampshire delivered an adaptation plan as well as carrying out highly innovative engagement activities and developing a range of communication tools that can be used elsewhere. The project is now being rolled out across the Solent as part of the wider CC2150 project and, on the basis of this work, a bid has been made to the Heritage Lottery Fund (HLF). As such, it appears to have provided very good value for money. However, whether

what has been delivered represents as good value for money when considered against the original Pathfinder budget of £254k is less clear.

- 4.49 In the case of Scratby, all elements of the project: were important to the delivery of the project; were well carried out by the contractors; and achieved their intended objectives. The work on developing adaptation options, as well as other survey findings (e.g. willingness to pay) should also have wider applicability. The project findings have been adopted by the Council and are now being considered as part of the LDF process. Although a significant proportion of the original budget was not spent on the project (up to 29%), it still represents good value for money overall. However, its longer term value will depend on how it is taken forward. For example, the potential to use planning gain to help fund rollback in Scratby is likely to be limited due to the residents' concerns over expansion of the village.
- 4.50 With Sefton, although the planned activity was significantly curtailed, the project still managed to deliver some useful outputs such as a boardwalk, a historical timeline, and, potentially, some visualisations. However, while most of the individual elements demonstrated good value for money, the overall impact of the project was significantly lower than originally intended and, in terms of the Pathfinder programme, the project did not deliver value for money.
- 4.51 Finally, in the case of Cuckmere, while the individual elements appear to represent good value for money, in terms of the project as a whole, this is less clear. There have undoubtedly been project benefits and useful learning gained from allowing the community to make the decisions throughout the process, but whether the resulting end-point justifies the investment made is still unclear and will depend on whether or not the community can find ways to fund their chosen option.
- 4.52 In terms of the five larger Pathfinder projects, value for money assessments were carried out for the rollback schemes carried out through the Pathfinder programme using the methodology set out in Section 3 (paras. 3.9-3.10). Further details are given in the in-depth evaluation. Due partly to difficulties in accessing information from Pathfinder projects (largely as this has not been collected or because some of the projects are still at a relatively early stage), it was not possible to carry out value for money calculations for all activities undertaken.
- 4.53 The key points to note are:

- It is estimated that the rollback project at **Waveney will perform better in terms of costs and benefits than other projects for which costs and benefits were quantified** (with a public Benefit to Cost Ratio (BCR) of 1.9:1).⁴⁰ This reflects the fact that the public sector cost of the intervention is relatively low, largely due to the fact the Council does not need to purchase the existing properties to facilitate rollback. The scheme has not yet been implemented and there is potential that the costs could be greater than anticipated, particularly if households require support to develop new homes. However, if successful, the

⁴⁰ To compare the Pathfinder public BCR with that for a traditional (fully publically-funded) defence scheme, 1 needs to be added to the former. Hence the public BCR of the proposed rollback scheme would be 2.9:1.

- Waveney scheme could be replicated at other locations.
- The rollback schemes in **East Riding and Tendring both have negative BCRs**. This reflects the fact that both interventions remove (and do not replace) potential income that could have been achieved if the properties were to remain. As such, whilst there is potentially a positive monetary benefit under the 'Do Nothing' scenario, under the interventions this is neutral. However, it is important to note that the cost benefit analyses for these schemes only tell part of the story. The aim of both interventions is to remove property and individuals from the risk of coastal erosion (rather than to replace property). As such, the nature and rationale of the intervention demand that greater emphasis should be placed on more qualitative forms of analysis than is the case for other Pathfinders. It should also be noted that the wider benefits associated with these schemes (e.g. regeneration benefits) have not been assessed due to the fact that the information has not been collected. However, due to the limited number of households supported (due to the timescales and other factors), it is likely that these benefits are fairly low.
 - In the case of **Scarborough**, it is estimated that the project will achieve **a reasonable BCR compared to some other rollback schemes (0.1:1)**.⁴¹ However, it is important to bear in mind the points above regarding the additionality of the project. This suggests that the property owners would have used their insurance money from the loss of property to rebuild a house elsewhere in any case.
 - **The public BCR for the Happisburgh removal and replacement scheme in North Norfolk is negative**. However, it should be noted that this development is yet to be built and, as such, accurate information on its likely costs and value is not yet available. As a result of this, all costs and benefits in the assessment are high level estimates based on the initial scoping work done by the property consultants. It should also be noted that it has not been possible to quantify a number of benefits such as reducing blight effects and ensuring that demand for local amenities is sustained, but it is likely that the value of these will be relatively low.⁴² Although the BCR is negative, it is recognised that there are some strengths to this approach and that it may be possible to improve this ratio, for example by reducing the cost of purchasing properties at risk (e.g. not offering the supplementary payment) or increasing the return to the Council which would count as an additional benefit. The intervention to relocate Trimmingham Village Hall is also negative as the assumed benefits of the new village hall are less than the public sector contribution towards the building.

4.54 It is important to note that there are a number of issues with assessing the value for money of these schemes (as set out in Section 3). The key issues are: the difficulties in predicting what the do nothing scenario might be; and the inability to attribute values to community cohesion and regeneration impacts. It is also important to note that the projects are only partially complete, and therefore the value of the eventual benefits is not yet known.

⁴¹ Again, to allow comparison with a traditional (fully publically-funded) defence scheme, 1 needs to be added to the Pathfinder public BCR, giving a ratio of 1.1:1 for the proposed rollback scheme.

⁴² It could be argued that Happisburgh is growing so demand for services will be sustained anyway. In addition, while removal of blight may be considered a benefit at local level, it is not considered to be a benefit at national level as increasing house prices does not provide any net benefit to the country.

4.55 At a **programme level**, while there is a risk that around £820k (7.5%) could be spent on activities unrelated to coastal change adaptation, this amount is relatively low considering the flexibility given to local authorities. (However, it could become more significant – at around £1.6m or 14.4% – if Scarborough is unable to complete its rollback scheme.) In addition, most Pathfinders have been able to secure additional funds and in-kind contributions, resulting in an estimated additional funding of at least £1.2m (11%) to the programme (although around half of this was for a coastal protection project at Crag Walk in Tendring).

4.56 Most of the ten smaller Pathfinder projects have demonstrated good value for money and, although some of the rollback schemes have shown a negative public BCR, the projects themselves have provided a wide range of benefits for individuals and local communities, as well as for local and central Government. Overall, therefore, assuming that the remaining unspent funds are directed towards coastal change adaptation as planned, it can be concluded that the **programme has demonstrated good value for money**. However, it will be important to monitor those projects that are still underway to ensure that they are successfully completed.

Promising ideas

4.57 **All of the smaller Pathfinders have come up with promising ideas, mostly related to community engagement**, that could be replicated elsewhere and are summarised below.

Community engagement techniques and tools

- **Facilitation approach** – following an approach that begins by identifying what the community wants and how they want to receive that information provides a strong basis for beginning discussions. This approach was used in Scratby and could be easily replicated in other areas, although it can be time consuming at the outset.
- **Community-led process** – this approach, which was used in Cuckmere and Scratby, places communities at the heart of the decision making. In Cuckmere, the key components of the engagement process were:
 - *the Community Forum* – a group of volunteers who drove the approach
 - *public engagement programme* – an independently designed and facilitated programme
 - *communication tools* – as well as the standard communication tools (project website and regular newsletters) and working with the local media, the most useful tool was a suite of static images, derived from the technical modelling.
- **Community workshop** – the use of a community workshop with invited attendees that are known to have very different views can be a very useful way of bringing people together and achieving consensus. By using an approach based on active, managed debate that is designed to provide the catalyst for creative and positive thinking, this encourages individuals to moderate or change their position to help achieve consensus. This approach was used successfully in developing the Community Statement in Scratby.
- **Improved coastal awareness on emergency preparedness through a widespread campaign** – building on existing awareness raising activity and

working with partners, a high profile campaign was carried out within the Lincolnshire coastal zone involving a wide range of materials and methods (e.g. posters, flood information packs, etc.). This resulted in a measurable improvement in emergency preparedness and could be carried out elsewhere.

- **Dedicated project officer** – having a dedicated project officer who can spend time getting to know key stakeholders in an area, although fairly time consuming, builds up invaluable relationships with them to help them work on developing plans together. This approach was used in all three case study areas in Somerset.
- **Scenario planning** – this approach was used in the Jurassic Coast and Somerset (Porlock Weir) and involves using scenarios of future change to inform discussions within communities via facilitated workshops. In Porlock Weir, a mock newspaper was used.
- **Visualisations of coastal change** – high quality digital visualisations of change using LIDAR (Light Detection and Ranging) and aerial photography showing what the coast might look like should erosion continue to the fullest extent of the 20, 50 and 100 year risk lines identified in SMPs were used very effectively as part of the scenario planning workshops and public exhibitions in the Jurassic Coast. Similar visualisations were also used in Cuckmere, Hampshire and Sefton and could be replicated elsewhere. Significant economies of scale could be achieved by commissioning visualisations at a national scale.
- **Timelines** – the use of timelines or stories of change (where people can record their own memories) to illustrate how the coast has changed in the past is a good way of explaining future coastal change and was used successfully in Hampshire, Hastings, Slapton Line and Sefton. (In North Norfolk, the Coastal Heritage Project was also successful in engaging local interest and has been key to securing wider community buy-in to the Pathfinder programme overall. This included a number of events, training sessions and resource use and a heritage book is now being published.)
- **Educational initiatives** – in the Jurassic Coast seven schools were given financial and practical support to mount investigations into how coastal change could affect an ‘adopted’ stretch of coast. Students conducted field trips, research and interviews with coastal stakeholders and reported their findings to a Pathfinder Schools Conference. This project could be replicated in a wide range of coastal areas for relatively limited cost and would ultimately lead to a significantly higher level of coastal literacy among the coastal residents and decision-makers of tomorrow. Educational initiatives were also carried out in Hampshire, Slapton Line and Somerset where a coastal e-game was developed, which was found to be a useful way of getting messages over about coastal change to children.
- **Monitoring the effects of coastal change** – in Somerset, there were many opportunities for local people to be involved in monitoring and dune restoration projects at Brean & Berrow and this is likely to continue with the added co-ordination help from Pathfinder. This could certainly be replicated in other areas and, indeed, was carried out in Hampshire and North Norfolk. In Hampshire, one idea that is being developed further, through an HLF project at Lepe Country Park, is a Solent Community Coastal Observatory. This idea involves volunteers collecting, archiving and presenting information about the coast and coastal change. Examples include monitoring coastal change impacts on heritage features, carrying out bird surveys, community digs to discover the past and

continuing to collect stories about the coast.

Other ideas

- **Research into spatial planning and coastal change** – research was commissioned into the role of the spatial planning system in addressing coastal change along the Jurassic Coast. This work could be applicable elsewhere.
- **Evacuation planning research methodology** – research was carried out in Lincolnshire and led to the development of improved plans for implementation of targeted evacuation of more vulnerable groups as part of the response to an impending incident of major coastal inundation. The research findings could be applied elsewhere.
- **Promoting sustainable design solutions** – a number of outputs have been produced through the Lincolnshire Pathfinder and will be made available on the Lincolnshire County Council website. These can be used in other flood risk areas at no additional cost:
 - development of a Handbook of flood resilience measures for existing properties with national applicability
 - development of a toolkit for developers working in flood risk areas
 - contribution towards a Supplementary Planning Document in relation to flood risk areas
 - guidance for emergency planning comments on planning applications in flood risk areas
- **Economic model** – through the Lincolnshire Pathfinder, an economic model has been designed to test a range of ‘scenarios’ relating to economic development, inward investment, climate change adaptation and housing market changes in the coastal region, thereby informing policy makers as to various strategic options. The model is being developed through the Coastal Communities’ Alliance (CCA) for use by other coastal areas around the UK.
- The **Coastal Trust** project model, which was developed in Chichester, could be replicated by other coastal towns as a way of raising local contributions to defence schemes. Under this model, a charitable trust is set up that can take over the management of public owned assets e.g. car parks, toilets, areas of land, community buildings etc. Any surpluses from these operations can be ploughed back into a fund set up and/or administered by the operating authorities to support the maintenance of sea defences

4.58 Some of these ideas are ready for dissemination and there will be no further cost (e.g. Lincolnshire’s sustainable design solutions). Others could be fully or partially self-funding. For example, timelines or stories of change could be sold to the public. The ultimate aim is for the Selsey Coastal Trust to be self-sufficient, with surpluses that could contribute to coastal defence funding. Similarly, the ‘Community Forum’ approach could rely on volunteer support. However, while it could work well in some areas, it does depend on the capacity of the community and, particularly its understanding of coastal change issues and the need to adapt and its ability to give time freely to take the work forward. The idea of adapting to coastal change rather than continuing to defend is still relatively new and so some in kind support and guidance from local authorities and agencies might be necessary even if there is no direct funding.

4.59 While others may not be self-funding, they could be incorporated into projects that are seeking external funding from other sources e.g. Landfill Tax, HLF, etc. The Community Coastal Observatory approach could include elements that are funded. For example, volunteer training could also be run as adult education courses and as it is a good way of involving volunteers it may qualify for different sources of Government and other funding.

4.60 However, while some of these ideas could be partially self-funding, it is less easy to see how community engagement activities could be, other than in the general sense that effective engagement upstream will save public money downstream as there will be more realistic expectations and a wider range of more affordable adaptation options available to reduce pressure on the public purse. However, the benefits of stakeholder engagement which have arisen from the Pathfinders suggest that local authorities should invest in the capacity to manage this kind of dialogue as a core function.

4.61 There have also been promising ideas arising from the **five larger Pathfinder projects**, particularly in relation to **rollback**.

- **Definition of 'imminent risk' in East Riding** – one of the lasting benefits of the East Riding Pathfinder has been the development and adoption of a **consistent definition of 'imminent risk'** established as part of the Enhanced Assistance Package (EAP) assessment. This risk based approach has allowed the integration of existing coastal management mechanisms including the SMP and the Council's coastal monitoring data. This is in line with national guidance in relation to spatial planning in the coastal zone. The process has ensured consistency and has allowed transparency, which has led to greater acceptance of decisions amongst the community. This is particularly important given the fact that this programme has not focused on a particular community. It prioritises the most vulnerable residents. This approach could easily be repeated on other stretches of coastline where coastal monitoring programmes are in place.
- **Happisburgh acquisition and replacement scheme** – according to the Pathfinder Team, this had two purposes: to relocate housing that would otherwise be lost; and to improve the cliff top environment. Together these have had the effect of boosting confidence and allowing some people, blighted by the position of their houses, to move on. By using the planning framework some of the funds used initially could be recycled for use elsewhere. As noted above, the public BCR of this scheme was negative. However, there are some strengths to this approach (e.g. development of a methodology for valuing and purchasing properties up to the 2025 year epoch) and that it may be possible to improve the BCR by reducing the cost of purchasing properties at risk (e.g. not offering the supplementary payment) or increasing the return to the Council which would count as an additional benefit.
- **Special rights to rebuild** – the loss of property and planning rights as a result of coastal erosion was a key issue for the residents and property owners at Easton Bavents in Waveney. Waveney District Council has formulated and adopted planning policies to allow for the replacement and relocation of 'at risk' properties to land safe from erosion. If a similar planning policy framework does not exist or is going through an examination process a local authority can provide a legal

agreement between individuals and the authority that should they lose their land and/or home as result of coastal erosion they have special rights to rebuild elsewhere. This approach can be easily replicated elsewhere.

- **Facilitating the relocation of properties at risk in Easton Bavents** – whilst adopted planning policy established a principle to allow for the relocation of properties, property owners as a collective group did not have the resources to successfully get a proposal for relocation through the planning system. In Easton Bavents Pathfinder provided funds to bring in specialist planning consultants to help the residents locate a suitable site and obtain outline planning for the relocation for properties that were at risk from coastal erosion. Support of this type could be replicated elsewhere and would assist both residents at risk and the planning authority. There are now ongoing discussions regarding purchase of this site and the Council is considering the exact delivery model. One option is that the Council will retain ownership of the land and provide affected households with a 999 year lease

4.62 Two other ideas arising from the North Norfolk Pathfinder which could be replicated elsewhere were:

- **Replacement of infrastructure** – loss of infrastructure has an immediate economic effect that can quickly result in loss of community confidence and blight. Therefore projects that replace lost infrastructure can reverse that trend. Examples from North Norfolk included the re-establishment of the path at Cromer and access ramp in Happisburgh, the relocation of the car park and toilets in Happisburgh and the fund to relocate the village hall in Trimmingham
- **Business support and marketing** – this is considered to have been of significant long-term benefit by the Pathfinder Team. It has certainly been more successful than other attempts to engage with business. However, the link to coastal change adaptation has been tenuous in some cases and this would need to be addressed before considering rolling it out further.

4.63 There is potential for some rollback schemes to be self-funding, or at least partially so in the future. For example a re-sited car park (or any other infrastructure) could be funded by takings from the car park (or other facility), although the initial capital cost might need seed funding. Housing rollback could generate a return if a higher value re-development site is chosen, but this might be at the expense of community cohesion if the new site is well away from the site being lost. However, this has not been a major factor for most communities.

Retention and dissemination of knowledge and experience

4.64 In some cases, the project officers involved – who were temporary staff – have already left or will shortly do so, taking away significant learning and expertise. However, some continuity will generally be provided through existing local authority staff and most Pathfinders have spent significant effort making sure that the work undertaken has been well publicised through websites and other means. The main issue will be to ensure that the findings are disseminated more widely now that the

programme is coming to an end. The Community of Practice⁴³ has not been particularly well used to-date but this may be because most Pathfinders have been heavily involved with their own projects. Some Pathfinders are planning events to disseminate their findings to other Pathfinders and more widely (e.g. Hastings, Jurassic Coast and Lincolnshire), while others will continue to use their websites (e.g. Somerset). Publication of this report will also help, but there may need to be some additional follow-up activity.

Views of national stakeholders

4.65 Views on the programme were sought from a number of key national stakeholders (see Annex C for the list). All felt that the programme had largely been successful, showing for the first time that there was an alternative to defence and even having a positive impact on those previously 'in denial'. However, some considered that it had not delivered all that it could have done. For example, buy and lease back had not been trialled effectively. It was felt that some kind of exit strategy was now needed and it was helpful that some Pathfinders were considering this.

4.66 The following additional points were made by one of more stakeholders about the Pathfinder programme as a whole and the North Norfolk Pathfinder in particular:

Importance of community engagement and buy-in

4.67 It was felt that North Norfolk had been more successful than some others due to way in which the community engagement had been carried out. As part of this, the historic environment elements of the Pathfinder (e.g. developing a historical record of Happisburgh; training in monitoring and recording historic features) had been important in helping to achieve support for the other adaptation work.

Flexibility

4.68 One of the biggest benefits of the Pathfinder programme was considered to be the flexibility given to local authorities to try out new and innovative approaches and to make mistakes. In doing so, they had worked closely with local communities, giving them for the first time an effective voice on coastal change issues. This also chimed with the increased focus on localism, with central government funding being spent locally.

Value for money

4.69 It was felt that a huge amount had been achieved with a relatively small amount of money and it was argued that there was a strong case for continued funding as this work was currently not being funded elsewhere. In North Norfolk there had previously been extensive community engagement. However, with Pathfinder funding local people had begun to take a more constructive approach to finding solutions and to look for opportunities and synergies, e.g. relocation of Trimmingham village hall.

⁴³ This is a community platform supporting collaborative networks for those involved in local delivery: central departments, local authorities, other public bodies, frontline staff, health staff, people working in charities and the private sector who are in some way delivering for the public.

Timing

4.70 It was noted that the Pathfinder programme had come along shortly after the SMP process and, together, they had pushed coastal change issues up the agenda. It was felt strongly that this higher profile must not be lost and it was the right time to build on this positive engagement with communities.

Gap-filling funding

4.71 North Norfolk had carried out several small projects that it was felt would not have happened otherwise, e.g. removal of broken sea defences from the beach at Happisburgh, which were a health and safety hazard and prevented development of the beach. The programme had also allowed basic and applied R&D to be funded, e.g. Wolferton Creek project to explore whether business would support the part-funding of defences. The point was made that while Defra could fund some of this research, there were advantages in carrying it out more locally, allowing 'real world' learning that had wider applicability. Several Pathfinders had also funded more theoretical research that had wider applicability, e.g. North Norfolk had commissioned research into buy to demolish using a professional firm of valuers, while the Jurassic Coast had commissioned research into the role of spatial planning in coastal adaptation. The importance of synthesising this and other learning was stressed.

Innovation

4.72 There had been a number of highly innovative projects within the Pathfinder programme, e.g. on rollback. In addition, the North Norfolk Pathfinder had worked with Business Link to develop a business advice and support package for East Norfolk where tourism was still under-developed. It was felt that this was something that could be rolled out in other coastal areas.

Historic buildings

4.73 It was pointed out that the emphasis on adaptation/rollback within the programme had largely been in terms of residential dwellings and businesses. In contrast, with the exception of Trimmingham Village Hall, other community assets such as historic buildings had received little attention so far. Relocation might be possible (though expensive) for a few timber-framed buildings, but large masonry structures such as churches could not be moved. Recording in advance of destruction would be the only option. However, even that would call for considerable funds, as there are many structures around the country that will be lost this century to coastal erosion. It was noted that there are several examples in East Anglia where this is likely to be an issue by the middle of this century (Happisburgh, Mundesley etc): indeed the churchyard at Heysham, Lancashire is already eroding.

Next steps

4.74 Stakeholders made three main recommendations:

- the momentum on coastal change issues gained from having the SMP process followed by Pathfinder should not be lost, so a commitment for on-going funding – even a relatively small amount for pump-priming – would be useful as the programme had acted as a catalyst for partnership working and this had been a great spin-off benefit.
- a rolling programme of funding for adaptation was needed as this was not being funded elsewhere
- the best ideas needed to be shared and developed further with these and other coastal authorities

Improvements to the Pathfinder programme

4.75 All Pathfinders appreciated the flexibility they were given to run their schemes and there were few criticisms of the programme overall. The main one was the **short time period over which it was run**. As noted by Somerset, *“The difficulty with a project like this is that it takes a long time to build up community contacts in an area and also to gain people’s trust. When a lot of groundwork has been done a continued presence of the project is needed to encourage people to keep up the work which has been started. Perhaps if run again the Pathfinder programme could be operate over three or more years.”*

4.76 Two other useful suggestions put forward by Scratby were:

- **greater collaboration between local authorities at the bidding stage** – there may have been opportunities for different local authorities to address different issues although some overlap is desired as it allows for comparison between communities. Consistent working approaches could also have been applied so that all the projects could feed data into the ‘overall’ project, delivering a much larger data set that could be achieved by any one Pathfinder Project on its own.
- **a staggered approach** – with some projects running in years 2009-2011, some from 2010-2012 and some from 2012-2013 may have provided greater opportunities for sequential learning. Such an approach could have allowed one project to build on the findings of a previous one, moving towards the ultimate aim of delivering a template for use once the Pathfinder scheme as a whole was complete.

4.77 While the flexibility was appreciated by most Pathfinders, the **lack of ring-fencing** within the programme, although consistent with Government policy on grants to local authorities, did prove problematic for some local authorities such as Hampshire and Sefton where, as a result of financial pressures, significant proportions of the original Pathfinder budgets were transferred to other budget lines within the councils and, overall, it could result in around 7.5% of the programme funds being ‘lost’. This would suggest that coastal change adaptation has a lower priority in these two local authorities. However, in both cases, they are involved in larger EU projects on coastal change adaptation.

4.78 Other less successful aspects of the programme are given below. Less successful elements of individual Pathfinders, particularly the five larger projects, are given in paras. 4.18-4.29.

- **Strong focus on community engagement rather than delivering adaptive solutions among the smaller Pathfinders** – most of the smaller Pathfinders tended to focus heavily on community engagement and adaptation planning rather than delivering adaptive solutions, in part because of lower level of funding available and perhaps also because raising awareness is the essential first step. This meant that there were relatively few practical lessons about how communities can adapt to coastal change among these projects. This was recognised by some as a significant omission from their projects and several subsequently set up coastal change adaptation grant schemes or small funds to help address this (e.g. Hastings and the Jurassic Coast). However, the delivery of adaptive solutions was a key feature of the larger Pathfinders so, at a programme level, this was addressed.
- **Lack of a rigorous monitoring and evaluation framework** – as noted in Section 2, in line with Government policy, there was no mandatory reporting process but grant recipients were asked to provide feedback “*on how projects are going*” and “*data about progress*”. In addition, to enable good practice to be identified and disseminated, they were expected to “*participate in evaluation and learning processes as a requirement of receiving funding.*” However, the absence of a monitoring and evaluation framework, agreed and adopted by all Pathfinders at the outset, has made the evaluation process more difficult as although all have monitored costs, not all have collected data systematically to enable the benefits to be evaluated. Evaluation has also been made more difficult by the fact that most of the projects have continued into this financial year and, therefore, have been evaluated while they are still ongoing.
- **Lack of clarity over aims and objectives** – as noted in Section 2, not only was the definition of ‘coastal change’ not clearly stated in the Coastal change consultation document that launched the programme, but the first funding criterion for successful bids stated that “*the focus should be on adapting to coastal change (although approaches that additionally support adaptation to coastal flooding risk could also be explored)*”, which made the overall aim of the programme less clear. There has also been a lack of clarity at a project level over whether the aim was to tackle coastal change or stimulate regeneration. For example, in Tendring with the implementation of a programme of buy to demolish at Jaywick, the overall rationale appears to be linked to regeneration and not to coastal change objectives. This also appears to be the case at Corton in Waveney.

Summary and conclusions

4.79 Despite the lack of ring-fencing, the absence of a clear monitoring and evaluation framework and a lack of clarity over aims and objectives (the first two being in line with Government policy regarding grants to local authorities), and provided that the remaining unspent funds are directed towards coastal change adaptation as planned, it can be concluded that ***the programme has delivered a significant number of benefits and has represented good value for money overall.*** Both individual projects and the programme as a whole have achieved the two high level programme aims:

- To improve understanding of how coastal communities can adapt to coastal change and the costs and benefits of these different approaches; and

- To provide practical lessons and examples which can be shared with other practitioners, particularly on community adaptation planning and engagement and delivery of adaptive solutions.

4.80 Most projects and the programme as a whole have also met the four initial criteria, set out in the Coastal Change consultation, against which bids were assessed:

- The focus should be on **adapting to coastal change** (although approaches that additionally support adaptation to coastal flooding risk could also be explored).
- The emphasis should be on providing benefits to the wider community where these are proportionate to the costs.
- The focus should be on those sections of the community that are the most vulnerable to the impacts of coastal change.
- Approaches should tie in with a long-term plan for change within the community and be supported through extensive community engagement and discussion.

LESSONS ARISING FROM THE PATHFINDER PROGRAMME

Ability of the community to adapt to coastal change

4.81 **Most of the Pathfinders have demonstrated an increased ability by communities to adapt** whether it has been by raising their awareness of coastal change issues – which is the first stage of the ‘adaptation journey’ – or by starting to plan for change or by implementing specific adaptation solutions. Clearly, the ten smaller Pathfinders have generally only been able to tackle awareness raising and adaptation planning (e.g. Hampshire, Hastings, Jurassic Coast and Scratby) due to the limited funds available, while the larger five have been able to help individuals to implement solutions through rollback and other assistance.

4.82 In the Jurassic Coast, communities were felt better able to adapt in the following key respects:

- **Greater awareness of risk** – as well as leading to practical steps to improve resilience, heightened awareness of risk also leads to better psychological preparedness to deal with risk (though this is perhaps more relevant in terms of flood risk).
- **Planning for resilience** – in Dorset, four of the six case study communities are now taking forward an emergency planning exercise with the support of their local authorities giving specific consideration to coastal change risk.
- **Planning for long-term adaptation** – in Dorset, some of the case study communities are beginning to look at relocating vulnerable assets. They will need further support, however, in assessing the feasibility of different options and finding the resources to adapt.

4.83 In Lincolnshire, communities have demonstrated an increased ability to adapt to coastal change (due to inundation) through a mix of improved awareness, planning and action:

- Increased awareness by local communities of the issues and facts around coastal inundation
- Increased proportion of better informed community, measured by increased ability to prepare for impacts of coastal flooding
- Doubled uptake of personal flood plans
- Increased uptake of flood warning service
- Improved engagement with key business sectors in the coastal zone, resulting in greater understanding and willingness to address flood risk in their forward planning (e.g. business continuity and resilience)
- Improved policy decision-making based on better communication with local communities and businesses

4.84 In North Norfolk, it was felt that the Pathfinder project had increased the ability of the community to adapt to a certain extent. Notwithstanding the Council's efforts to support them, prior to the award coastal communities had felt abandoned. For the time being, at least, the coastal communities felt less vulnerable. It was also clear that that an essential element in enabling communities to adapt to coastal change was to ensure that the correct information was made available and that it was provided in a way which was conducive to developing coastal literacy. The point was made that through knowledge and understanding communities and individuals can make better decisions and choices and so therefore are better prepared for changes which will occur in the future.

4.85 In Scratby, there appears to be more of an understanding by those at risk and by the wider community that compensation may not be forthcoming and that they will need to consider adaptation options and alternative funding. The fact that the community has agreed a Community Statement identifying a Coastal Change Management Area (CCMA) and setting out policies for rollback demonstrates an increased ability to consider the options to adapt to the impacts of coastal change.

4.86 However, despite this, when questioned, 71% of Scratby residents, including some in the high risk zones, said they would not change their future plans and a significant proportion of the community still supports the extension of coastal defences. Similarly, in the Jurassic Coast and Slapton Line, proposals for coastal defences have also come forward during the Pathfinder period, while in Selsey the principle behind the coastal trust is to create funds for coastal defence measures through various regeneration projects. This perhaps suggests that statutory bodies and local authorities need to engage early with communities facing change before they have convinced themselves that defence is the only option.

4.87 It may also demonstrate that some communities need time to accept adaptation as an alternative. This certainly appears to be the case in Cuckmere, where the community's preferred approach is to maintain the *status quo* (i.e. continue to maintain the defences) in the short term to enable a more detailed consideration of adaptation options to reactivate the 'meanders'. This also seems to be the situation in Jaywick (Tendring) where there is a very low awareness of – or willingness to accept – the benefits of adaptation and threats of coastal change/flooding and this is heightened by a lack of financial means to adapt. It may be that there were unrealistic expectations at the outset about what could be achieved by such a short programme.

Community funding expectations revealed by Pathfinder

- 4.88 There were ***varying views on the expectations of communities in terms of future funding*** and the impact that Pathfinder projects had made on those expectations. In several Pathfinders, notably North Norfolk, Scratby and Waveney, the ***expectations of the local communities were strongly that the Government should provide support whether it was for defence or for adaptation***. For example, in Scratby, it was felt that while the project had resulted in a greater understanding of the issues, the feeling remained that the system of prioritisation and allocation of national funding for flood and coastal erosion risk management was unjust. In addition, when questioned about who should pay for the different adaptation options being considered, the majority of people (up to 78% depending on the option), identified that they expected central Government to pay for adaptation options as they would expect them to pay for protection works. Similarly, in North Norfolk pressure for support for coastal change was brought about by the publication of a draft SMP that promoted policies of No Active Intervention or Managed Realignment where previously the policy had been to Hold the Line. It was felt that the Pathfinder had, if anything, confirmed the views of the communities concerned that coastal change resulting from a change of FCERM policy could not go ahead without substantial additional ongoing support. Finally, in Waveney, it was felt that expectations around adaptation would always be in conflict with the communities' desire for either compensation for loss of land and/or property and an even greater desire for coastal defences. While Pathfinder had helped a shift towards acceptance for adaptation, it had not changed the communities' fundamental view on where Government funding should be directed.
- 4.89 Expectations of continued Government support were also high among the communities in Chichester, Cuckmere, East Riding, Jurassic Coast and Lincolnshire. However, in the Jurassic Coast, where the project had allowed a more concerted engagement with communities, it had been possible to manage these expectations to a more realistic level. However, in the East Riding, it was felt that the Pathfinder had significantly raised the expectations of residents with regard to coastal change assistance and should there be no long-term funding stream provided there could be a negative perception from residents who had not yet received support but had an expectation that they will.
- 4.90 In Cuckmere, the emergence of the 'Friends of Cuckmere' suggests that there may be a growing recognition among part of that community that it also has a role to play in implementing the preferred management option. Similarly, the development of the Selsey Coastal Trust shows that there is a willingness within some local communities to raise funds for local projects.
- 4.91 In Lincolnshire, evaluation of the communications campaign and associated engagement projects indicated that community willingness to engage with the public sector and improve understanding and preparedness for coastal flooding was greater than might have been expected. It also suggested that improved understanding was leading to greater acceptance of the need for communities and individuals to take greater local responsibility for managing flood risk. Similarly, In Somerset, it was shown that with pre-planning and some Government support, communities could be

more willing and able to help themselves.

4.92 Finally, in Hastings there was no expectation among fishermen that Government would provide any support to what they considered to be their problem and they were surprised and pleased to be taken seriously by Defra.

Specific lessons for the planning system in terms of adaptation

4.93 Planning policy has been important in supporting rollback in East Riding, North Norfolk and Waveney. In the case of North Norfolk, spatial planning is being used to facilitate rollback. The Council has devised a consistent methodology for acquiring properties and is purchasing a nearby site to replace the homes lost to coastal erosion. Policy EN12 at North Norfolk permits the owner of a house threatened by erosion in the next 20 years to seek planning consent for a new development on land not allocated for housing. This gives new use value to the development site that can be used to augment the purchase price and give the owner of the development site an incentive to enter into a development agreement. The planning policy is fairly inflexible and requires a series of steps to be taken which have increased the level of risk for the Council and have extended the timeframes required. Using professional advice has mitigated these risks to a considerable extent, although there is still a possibility that the costs of purchase will not be recouped should the proposed new housing development not take place. However, if successful, North Norfolk's EN12 policy could be replicated elsewhere to facilitate rollback.

4.94 East Riding has also considered how to use planning policy to support coastal change adaptation, such as removing the residential status of the property at risk in order to operate a buy and lease back scheme for commercial use only (hence avoiding some of the difficulties associated with residential buy and lease back). The household would receive some financial assistance and this would remove the burden of demolition and land restoration costs. It is considered that this approach is consistent with that being advocated through PPS 25 and the proposed introduction of CCMA's (i.e. appropriate temporary uses within the coastal zone) and the planning policy is being introduced under PPS25.

4.95 East Riding has also reviewed its rollback policy to incorporate business properties (e.g. tourism infrastructure) into the suite of rollback policies that already cover caravan parks, residential properties and farmsteads. The aim is to produce a single multi-faceted Coastal Change Management Policy. This will allow the short term rollback of appropriate infrastructure in line with PPS25. Experience in implementing rollback as part of the Pathfinder project has highlighted that existing planning policy can also be restrictive since only sites with a life of 100 years or more can be used. The Council is considering changing this to allow some residential development to take place between the 50 and 100 year SMP lines as long as certain criteria are met. These may include the use of planning conditions, restriction of the selling on of any property, that habitation is only to be the person(s) wishing to rollback and that the building type and construction is such that it could be easily removed or rolled back again.

4.96 In Waveney, work has been carried out to clarify planning rights. This allows households to rebuild a property on another site safe from coastal erosion (including

those not allocated for residential use). The legal work carried out (essentially developing a contractual arrangement between Waveney Council and home owners at Easton Bavents, which sets out the rights and responsibilities of each party) will help other Pathfinder areas and could lead to a reduced cost if they wished to replicate this.

4.97 In Lincolnshire, the coastal economic model was used to investigate how to achieve sustainability for coastal businesses and people in flood risk areas where strategic housing growth is not permitted. Corroborated by the design solutions work, it appeared that development and growth are not held back by flood risk alone, but by the overall economic structure in the area. When looking at the potential for developing specific sites in Boston, it became apparent that the major problem was low land values. This meant that developers struggled to get the return on their investment once the costs of appropriate flood mitigation measures were taken into account. This also has implications for attracting development funding from Community Infrastructure Levy, or Section 106 agreements.

4.98 It was felt that that greater clarity was needed from DCLG and Defra about the linkages between appropriate 'sustainable development' and the need to avoid inappropriate development in flood risk areas. In particular, DCLG needed to define 'sustainable' if the national planning framework was to make a presumption in favour of sustainable development. This could not be done locally, because inconsistency in the planning system could lead developers to favour one area over another if local planning authorities have different approaches. This was felt to be a serious hindrance to developing clear policies for the coastal area.

4.99 In the Jurassic Coast, as part of the project, consultants⁴⁴ were commissioned to look into the role of the planning system in supporting coastal change adaptation. In addition to a number of specific recommendations for local planning authorities on the Jurassic Coast, the following recommendations were made for central Government:

- National policy should continue to require local authorities to plan for coastal change within LDFs (or new-style local plans), and to collaborate in the production of such plans, particularly where SMP boundaries include more than one local authority.
- Defra should work closely with DCLG to ensure that the policies in the PPS25 Supplement (Development and Coastal Change) are included in the new National Planning Policy Framework (NPPF).
- The NPPF should maintain and reinforce the guidance contained in PPS25 Supplement and the accompanying practice guidance, that LPAs should take account of the evidence and policies contained in SMPs when preparing local planning policies. Local policies that do not conform with those of the SMP, should be subject to scrutiny by the Regional Flood and Coast Committee.

⁴⁴ Land Use Consultants (2011). *Jurassic Coast Pathfinder Spatial Planning Research Project*. Final Report. Prepared for Dorset County Council by Land Use Consultants, July 2011.

- Looking forward to the next round of SMPs, Government should consider how they could be given a firmer statutory basis, including an implementation plan and the funding needed to deliver this.
- Additional technical guidance is needed on the means by which adaptation measures referred to in PPS25 Supplement can be implemented (i.e. how to identify CCMAAs and how to facilitate rollback), including funding mechanisms, drawing on the lessons learnt through the Pathfinder projects around the country.
- Defra's flood and coastal defence funding formula should enable investment in community planning, including the relocation of at-risk properties, where this contributes to SMP policies. For example, an increasing proportion of the public funding available for coastal defence could be used to support sustainable adaptation and in particular be directed to supporting adaptation in communities where continued or new coastal defence is not an option.
- The role of Housing Associations in the implementation of rollback policies should be explored further.

Lessons for future policy on coastal change adaptation

Rollback and buy and lease back

4.100 **Rollback** has been shown to work well for businesses where they can either fund the relocation themselves or obtain a loan. In terms of residential properties, whilst none of the Pathfinder areas has fully implemented a rollback programme, there are elements of good practice within all of the projects being trialled and combinations of these (in particular, the Waveney and North Norfolk approaches) may deliver models which add value and could be replicated on a larger scale.

4.101 The Waveney rollback scheme performs better than other projects in terms of its BCR (public BCR of 1.9:1).⁴⁵ This provides a model which could be replicated elsewhere. However, this model relies on householders affected by coastal erosion having the means to fund rebuilding of their properties elsewhere (and it is too early to say whether this will work in practice).

4.102 The North Norfolk approach, which allows an economic value to be realised through planning policy EN12, could attract private sector interest which could lead to a substantially reduced cost and risk to the public sector (though this has not been tested to date). However, this approach may not be appropriate in other areas where property/land values are low (for example in Jaywick). The North Norfolk model also demonstrates how a rollback scheme could be integrated with other adaptation projects to bring benefits to the wider community.

4.103 **Buy and lease back** has not worked in practice due to the costs involved (e.g. in bringing properties up to a suitable standard) and the perceived risks to local

⁴⁵ To compare the Pathfinder public BCR with that for a traditional (fully publically-funded) defence scheme, 1 needs to be added to the former. Hence the public BCR for the proposed scheme would be 2.9:1.

authorities. However, it may work in areas where properties are of a higher standard and thus require less initial investment. It may also be worth further investigation, particularly into whether legislation (e.g. housing regulations) could be more flexible in areas affected by coastal change to deliver this type of intervention or whether other approaches could be considered such as the potential for the private sector to acquire and manage these properties. For example, it may be that buy and lease back could work in other locations where Registered Social Landlords are willing to manage the properties. In any case, the work carried out will provide valuable lessons for any authority considering it in the future.

4.104 The in-depth evaluation also highlighted a number of other lessons which can inform delivery of future programmes and these are summarised below.

- Several of the Pathfinders highlighted the difficulties in finding suitable sites for rollback. A more **planned and co-ordinated approach** is therefore needed to address coastal erosion. For example, work to identify suitable sites in advance (e.g. for residential and business properties) could be beneficial and specific sites for those communities at risk of coastal erosion could be allocated within planning policy using monitoring information on the level of land required. This will probably be easier for residential properties than businesses (due to their specific requirements), but this should not be ruled out. It is also important to allocate land for the rollback of community assets such as roads.
- There is also a need to make **people more aware of the risk of coastal erosion** prior to purchasing a property. The Pathfinder projects appear to have been successful mechanisms for raising awareness amongst affected communities (e.g. the majority have held events with the community). However, more could be done, for example working with estate agents to ensure that they are aware of the risks and are able to inform prospective buyers in a way which is informative and effective. Local and central Government also have a role to ensure that they have up to date and accurate information on coastal erosion and the impacts on properties. This point was also made strongly by some of the smaller Pathfinders such as the Jurassic Coast.
- There appears to be a need for guidance to coastal authorities on how to use legislation (e.g. housing and building control amongst others) to tackle issues associated with coastal erosion, particularly in relation to rollback and buy and lease back. As identified above, there is a particular need to consider how planning policy can be used to support coastal adaptation. The guidance needs to take account of the lessons learned by the Pathfinders, such as East Riding's attempt to remove the residential status of properties and North Norfolk's rollback policy.
- Due to feedback from several Pathfinder areas (including East Riding and Tendring), the Government may need to consider whether the Coastal Erosion Assistance Grant, which assists with **demolition costs**, is too low. East Riding is currently preparing a report on demolition costs based on its experience during the Pathfinder project.
- A **partnership approach** should be encouraged in tackling coastal change. For example, the East Riding Coastal Officers Working Group could be replicated across other locations at risk. Evidence from the ten smaller Pathfinders has also suggested that there are significant benefits in ensuring a joined up approach both within council services (e.g. planning, housing and

building control work) and with other partners (e.g. Environment Agency).

- The East Riding approach to **monitoring and assessing risk** and targeting support at those within the most imminent risk category could also be replicated. This will ensure that support is targeted where it is needed most.

4.105 Overall, the Pathfinder programme has shown that communities can be encouraged and helped to adapt to coastal change. The main **barriers to adaptation** appear to be:

- public understanding and awareness
- funding for delivering adaptation action
- planning policy – which can also be an enabler (see paras. above)
- capacity within local authorities and other partners and the priority given to coastal change adaptation

4.106 In terms of addressing the issue of **public understanding and awareness**, a number of key lessons for community engagement were learned from the Jurassic Coast project and highlighted by the Pathfinder Team. These are summarised below:

- **Good process design is the key to successful engagement** – training a network of public sector facilitators not just with the functional skills to manage a group discussion, but with the planning skills to design an effective process provided invaluable.
- **An open, honest approach is needed** – the experience of the Pathfinder project suggests that, to have a sensible and constructive discussion about adaptation options, the statutory sector and coastal management professionals need to be as open and honest as possible about what they know about the risks, and about what can and cannot be done within the prevailing economic and regulatory climate. There is also role for the state in requiring the best information to be provided to would-be property owners to enable them to make informed decisions about risk.
- **There is opportunity in coastal change as well as threat** – communities facing coastal change do not instinctively associate it with opportunity, but Pathfinder demonstrated that with structured and facilitated discussion, most communities had little difficulty in identifying a range of potentially positive outcomes from coastal change.
- **An ongoing commitment to stakeholder engagement is required** – engagement must be maintained over time as a start-stop process could lose the momentum and undermine the goodwill generated to date.
- **An inclusive approach is a pre-requisite** – where there are existing conflicts or differences of opinion about future management options between communities and regulators, these are more likely to be addressed and resolved if **all** the relevant stakeholders are brought together in the same room under a ‘neutral’ banner.
- **A picture speaks 1,000 words and 10,000 ‘high-level statistics’** – the project invested significantly in high quality visualisations of coastal change to make the reality of change more accessible to communities and to illustrate the likely impacts of SMP policy for their areas. The feedback from participants was that these demonstrated powerfully both the implications and inevitability of change,

and in doing so helped them appreciate the need to adapt, and the importance of thinking about adaptation now, even if the predicted impacts of change might be some way off. There are important lessons from this in the way that the evidence collated by the National Coastal Erosion Mapping exercise is presented to the public.

- **Engaging those with most to lose** – effort needs to be made to ensure that residents in properties at risk contribute to the process. Doing so as part of a well-facilitated workshop, where tensions can be managed, and where an alternative point of view is usually available to challenge preconceived ideas can provide an effective means to ensure that legitimate concerns are aired, and that the collective efforts of many stakeholders are focused on addressing them.
- **Engaging ‘future generations’ of coastal residents and decision-makers** – the Jurassic Coast Pathfinder project sought to do so with a specific focus on secondary schools, the Geography curriculum and how young people might be better engaged in the issue of coastal change.
- **Expectations are high but can be managed** – expectations on the role of the state in dealing with coastal change are very high, nowhere more so than in people’s perception of the ‘right’ to compensation for the value of property threatened by coastal change. However, a key learning point from the scenario planning workshops was that most people in property at risk were pragmatic and while there may be understandable emotional attachment to such property, very few people were unprepared to consider relocation if an appropriate package of support was available.
- **Engaging stakeholders in coastal change who do not think they have a stake** – in addition to the usual ‘hard-to-reach’ groups, there are many stakeholders who probably have an interest in coastal change but do not realise it, and they can prove difficult to engage. The main groups in these categories are (i) residents of coastal communities beyond the areas facing imminent or significant risk and (ii) visitors to coastal towns and their rural hinterland. (i) Involving these residents in the engagement process can change the character of the debate, turning the focus from the interests of a small number of individuals to those of the wider community..(ii) Engaging visitors to coastal areas can be difficult but understanding why they are attracted to the coast is clearly important as they play such an important part of the local economy and can inform future marketing and adaptation planning for the future.
- **Persuading the silent minority to make itself heard** – the Pathfinder Education project produced a revealing piece of anecdotal evidence in terms of the risks and costs faced by the owners of threatened properties. School children interviewed a number of property owners in their own homes and some of them said that although eventually losing their property was obviously a concern, they accepted that they could not resist natural processes and they did not really expect anything to be done about it. Hearing such views in a workshop context challenged some of the accepted wisdoms about where responsibility for managing coastal change really sits.

4.107 In terms of **future funding for delivering adaptation**, in the short term, the programme has established momentum and several Pathfinders have suggested that making targeted Government funds available to implement adaptation actions that have emerged from the initial projects could be a useful way of maintaining that momentum at minimum cost. In the longer term, it could be argued that community

engagement activities should be funded by local authorities as part of their core activities. Based on the findings of the in-depth evaluation, there does appear to be potential for some rollback schemes to be self-funding, or at least partially so in the future. For example, the North Norfolk approach using planning policy could attract private sector interest and thus lead to a substantially reduced cost and risk to the public sector. However, this approach may not be appropriate in other areas where property/land values are low. Raising funds locally through an increase in Council Tax could also be an option, but as shown by the Scratby Pathfinder, the amounts required often exceed what people are willing to pay. As shown by the development of the Selsey Coastal Trust, some communities may be more willing to raise funds for projects locally. Other suggestions for possible funding sources are given in paras. 4.58-4.59.

- 4.108 Several of the Pathfinders highlighted **capacity issues** within their local authorities (e.g. Chichester, Hastings and Sefton) and among partner organisations (e.g. Lincolnshire), which delayed progress on various adaptation activities. This is likely to be an increasing problem with the current financial situation in public sector bodies. It was felt that it needed to be tackled by local authorities themselves with support from Defra, the Environment Agency and the Local Government Association.
- 4.109 Coastal change adaptation is just one priority among many for local authorities and, as shown by Sefton, it can often be squeezed by other pressures. However, it is clear that the Pathfinder programme has raised the profile of coastal change among councils, including members. It is important that Government continues to support and encourage local authorities to consider adaptation.

5. Detailed evaluation of the ten smaller pathfinder projects

5.1 A detailed evaluation of the ten smaller Pathfinder projects, which received 29% of the total programme budget, is given below. Further details on each of the Pathfinders are given in Annexes E to N. The five larger Pathfinders are considered in Section 6 based on the findings of a separate in-depth evaluation.

Chichester coastal change pathfinder project

Background

Chichester District Council received £450,000 to explore planning for, and managing, adaptation to coastal change for the communities of the Manhood Peninsula.

Coastal change issues

The Manhood Peninsula is a small triangular peninsula south of Chichester. Historically, the Peninsula has experienced considerable coastal change, including permanent inundation, land reclamation, erosion and coastal flooding. Currently, 1,168 properties and businesses on the peninsula are protected from flooding and erosion by defences, but these will be at risk if funding to maintain/replace them cannot be identified in future. In 2007 a section of sea wall in Selsey collapsed. Funds were approved for essential repairs but most of the remaining defences have a life expectancy of less than ten years. The risks from coastal flooding and erosion in the area are expected to increase in the next 20-25 years, and will be exacerbated by climate change. With rising sea levels, the number of properties and businesses likely to be flooded could rise to over 4,571 in the next 100 years. If the existing defences are not maintained, erosion could cause an additional 1,500 properties to be lost over this period.

The current Pagham to East Head Coastal Defence Strategy recognises that, with the exception of the Medmerry Managed Realignment Scheme, the likelihood of securing 100% national funding is unlikely.

Summary of proposed approach

- **Community engagement:** development of a coastal literacy education programme; wider work on engagement; feasibility work on the concept of a community owned trust for the town of Selsey, with a view to this coastal trust potentially overseeing a series of regeneration projects; production of a Destination Management Study to support the Trust concept and investigate opportunities created by the coastal realignment scheme; and match-funding community adaptation projects through a Coastal Change Grant Scheme.
- **Adaptation planning:** development of an Integrated Coastal Zone Management (ICZM) plan to encourage local adaptation planning and inform the Local Development Framework.
- **Delivering adaptive solutions:** contributing towards capital projects to reinstate both a fishermen's ramp and divers' access ramp which have been rendered inaccessible due to coastal change (accretion) at East Beach in Selsey.

Main outputs and outcomes

- **Community engagement:** *Coastal Literary programme* including a baseline public opinion survey, seven films; and an information leaflet; and **Coastal Change Grants Scheme** which supported 12 community projects
- **Adaptation planning:** Production of *'Towards ICZM'* which has been adopted as an aspirational plan and material planning consideration
- **Delivering adaptive solutions:** re-instatement of beach access ramp
- **Other outputs:** Manhood Peninsula **Destination Management Plan** and accompanying studies (e.g. the Economic Impact of Tourism on the Peninsula) and visitor surveys; and Selsey **Coastal Trust prospectus**, 'Living by and working with the sea'.

Delivery of activity

5.2 Most of the activities set out in the bid document were delivered as planned. However, it was not possible to establish an ICZM partnership within the limited timeframe of the Pathfinder project. The following explanation was given by the Pathfinder Team: *"The reduction in grant award and the shortened delivery time necessitated renegotiation between the Council and the two groups that had originally put forward the projects as to where and how the money and resources would be reduced and reallocated. This caused differences between the parties involved. The time and mediation that would have been needed to bring them together in an ICZM partnership, with an agreed constitution, was not possible within the Pathfinder programme. Thus the goal of Integrated Coastal Zone Management remained, but the approach differed in that Manhood Peninsula Partnership (MPP)⁴⁶ produced the aspirational spatial plan 'Towards ICZM' with valuable assistance from Manhood Partnership Steering Group (MPSG) representatives, local business and Parish Council representatives, but without expanding the core membership of the partnership or revising its constitution."*

5.3 The fishermen's ramp was also not delivered as, despite extensive consultation prior to the Pathfinder award, when faced with the ongoing maintenance costs, the fishermen decided not to go ahead. The Pathfinder Team had raised the matched funding required to reinstate both the public and the fishermen's ramp, which ultimately had to be declined. No additional activities were undertaken. A summary of the key activities undertaken is given below and further details are given in Annex E.

Community engagement

- *Coastal Literacy* – funding was used to develop a programme of activity including: a baseline survey of public knowledge and perceptions of coastal

⁴⁶ The Manhood Peninsula Partnership (MPP) was formed over ten years ago in direct response to residents' concerns over planning, water management and inter-agency co-operation. The Manhood Peninsula Steering Group (MPSG) is a coastal lobbying group which developed the initial idea of a community owned trust as a means of generating income to maintain Selsey's ageing coastal defence.

issues; an information leaflet on 'Coastal Change on the Manhood Peninsula'; and a series of short films (four films exploring young people's views of the coast and a further three films highlighting the strength of coastal identity, exploring public perceptions of risk relating to coastal flooding and erosion and providing a case study of the consultation process within the Manhood Peninsula and the resulting problems.

- *Coastal Change Grant Fund* – a small grants fund, administered by a multi-agency panel, was set up to assist residents and community groups with projects relating to coastal change. The idea of this initiative was to capture community attention and raise awareness and acceptance of the inevitability of coastal change by directly linking the issue to community projects, hobbies and interest groups. The grants fund was conceived as a method of attracting positive publicity for the aims of the wider Pathfinder. The fund supported 12 local projects, with a maximum of £5k being provided. These included a shingle movement study, work to upgrade the coastal path to make it accessible to all, an oral history project to capture individual memories and experience of the coast, provision of essential equipment for the local archaeological society to enable them to survey land that will be lost as part of managed realignment and provision of information boards at two key coastal sites.

Adaptation planning

- *ICZM (Integrated Coastal Zone Management)* – funding was used to consolidate the results of previous consultation exercises into a single format and then to use that knowledge to inform and influence the development of spatial policy within the LDF. 'Towards ICZM' is therefore an emerging spatial plan (evolved from existing Village Design Statements/Neighbourhood Plans and the results of consultation exercises over the last ten years) which suggests various management options for the coastal zone. The plan, which includes an ICZM policy for inclusion within the LDF, has now been adopted as a material planning consideration by District Council's Cabinet

Delivering adaptive solutions

- *Re-instatement of beach access ramps* – to mitigate against the risk of the community criticism of spending money on research and policy development, the project wanted to deliver a tangible and totemic project. The town of Selsey used to have around 14 public launching facilities, all of which have been lost to coastal change; swept away by storms, lost to erosion or conversely are buried under six metres of shingle. Earlier consultation showed that residents felt this coastal town should have at least one facility. Consequently, match-funding was allocated towards the cost of reinstating the fishermen's and public access ramps at East Beach, Selsey. These ramps were built approximately 50 years ago, but coastal change has meant that most of the structures are buried under six metres of shingle. Although the fishermen's ramp is not going ahead, the contract for the reinstatement of the public ramp was awarded and construction was completed in late October so as not to disrupt the tourist season.

Other activity

- *Selsey Coastal Trust* – funding was used to investigate whether a community trust could be set up to manage a series of connected regeneration schemes utilising publicly owned sites, with surplus profits being redirected into a delivery partnership of the authorities responsible for coastal defence. The Trust project has been awarded “emerging trust status” by the (then) Development Trusts Association and is actively seeking funding. A series of public workshops formed the basis of a prospectus for the Trust project (‘Living by and working with the sea’) that is being used to illustrate the vision to prospective funders. Several funding options are being considered: self-financing; applying for grants and loans; private one-off funding from private donors/philanthropists; and partnering with a major developer. The Trust is actively exploring beach huts, cafes and walking/cycling trails as potential income generators. (See also Destination Management Study below.)
- *Destination Management Study* – in association with Visit Chichester, funding was used to commission the University of Chichester to develop the Manhood Peninsula Destination Management Plan, the aim of which is to set out, at a strategic level, the aspirations, key issues and actions for stakeholders with a responsibility or interest in local visitor economy. A number of economic studies and visitor surveys were also carried out that indicated that tourism on the peninsula counts for approximately half the value of the tourism product for the whole district. Before these these studies were commissioned there was an assumption that the theatre, racing, events at Goodwood and Chichester drove tourism. This work refined the thinking around the Coastal Trust concept and opportunities for public access that have arisen from the managed coastal realignment scheme to explore how tourists could be attracted to the rural towns and villages (as opposed to just the beaches) to try to retain their spend in local businesses and shops.

Benefits to individuals and the community

5.4 The following key benefits were identified:

- ***Coastal Literacy programme*** – the early stage of the project produced a useful baseline survey which confirmed that levels of awareness and confidence in participating in decision-making was low. The process of working with young people and community members in the production of the short films and the ‘Expert Panel’ which advised on this as well as the production of the information leaflet were useful exercises in raising awareness. It would have desirable to have repeated the survey in the light of the materials produced unfortunately these were delivered after the project had concluded and the team had been disbanded.
- ***Selsey Coastal Trust*** – this group commissioned three community visioning workshops involving residents and holiday makers, thereby focusing local attention on coastal change issues. These informed the production of a ‘masterplan’ for developing the trust, which acknowledges problems with future funding and seeks to plan for this by creating community owned assets that could contribute to future coastal maintenance. The work had a high profile within the town, creating a culture of ‘getting involved’ in problem solving. The

Town Council is now considering introducing a precept to create a fund for future maintenance and, post pathfinder, the trust is actively pursuing projects and funding.

- **Coastal Change Grant Fund** – this not only brought benefits to the groups and organisations that it directly supported and enabled, but also resulted in positive publicity for the wider Pathfinder project (thereby fulfilling its original aim) and increased awareness of coastal change issues, expressed as projects to help communities understand and adapt to the effects of these changes.
- **ICZM** – the opportunity to formalise community planning aspirations into one spatial plan engaged parishes and businesses in a positive and meaningful way. This gave the opportunity to expand the partnership to work with new partners within a multi-agency and community working group and also to hear and acknowledge the views of nearly 60 representatives who attended the workshop held in April 2011. In addition to raising awareness and a commitment to the need for adaptation planning at a very local level, the work has also informed the emerging LDF which will contain an ICZM policy within the core strategy and the plan has been formally adopted by the District Council as a material planning consideration.
- **Re-instatement of beach access ramps** – the obvious community benefit will be the facility for launching small craft for residents and visitors alike. This should assist with footfall and trade for the kiosks and shops nearby. As this facility had not been available for many years the baseline for evaluation was not valid within the timeframe of Pathfinder. Measuring usage and footfall in future years will determine the success of this facility. The consultations with users and potential users during the feasibility stage also raised awareness of coastal change.
- **Destination Management Group** – this was considered to be the most unexpected benefit, bringing together environmental organisations and local businesses to explore how the natural environment could be both protected and used as an economic asset through sustainable tourism. This strand of work explored the potential for multi-functionality of coastal defence measures by examining the potential for tourism arising from the large scale open coast managed realignment scheme at Medmerry. Using the theme of protecting the environment by treating it as economic asset for tourism providers and small businesses such as shops and cafes resulted in a lively and successful partnership between business and environmental organisations. The footpaths and cycleways included in the scheme offer an opportunity to connect Local Nature Reserves and move visitors around the peninsula in a sustainable manner to the benefit of small businesses. This successful group went beyond their original remit of producing research studies to securing additional funding, holding a consultation workshop for small business owners and ultimately delivering a full Destination Management Plan.
- **Improved understanding between agencies and the community** – one of the most valuable, albeit less tangible, benefit was considered to be improved understanding, dialogue and respect for different viewpoints between agencies, partnerships and community based coastal issues groups.

Additionality

5.5 It was felt strongly by the Pathfinder Team that these benefits would not have been

achieved in the absence of Pathfinder funding since, at the time the programme was launched, there was no capacity to draft the bid, let alone deliver the work. Since then pressures on funding, time and staff resource within the public sector cuts increased.

Less successful elements of the Pathfinder project

5.6 The work associated with re-instatement of the fishermen’s ramp was clearly the least successful element of the project. However, it was also felt that the Coastal Literacy programme had not delivered all that had been expected. In particular, although the films were considered to be excellent, the leaflet was felt to be rather disappointing and those stakeholders who had engaged in the early stages of this work commented that they did not fully identify with the final report on the Coastal Literacy framework. In summing up this element of the project, the Pathfinder Team commented: *“As it was understood that this was part of a wider CoastNet programme, the District Council and the MPP anticipated more practical outputs in the form of training and education materials. Stakeholders and elected members have expressed disappointment with overall outcomes given the amount of money that was allocated to it. There are no plans to take this work further.”*

Risks and issues

5.7 Most risks (e.g. use of fixed-term contracts) were anticipated and managed. However, it was felt by the Pathfinder Team that old tensions within the community (see Annex E) had been underestimated and that individuals were also suffering from ‘consultation fatigue’. As a consequence, public workshops, meetings and consultation exercises were kept to a minimum and project team instead collated the results of previous community engagement exercises and ensured that new engagement that was needed was open and transparent.

Costs and type of spend

5.8 The total funding for the project was £455,000, which included a contribution of £5,000 from local businesses towards work associated with the Destination Management Plan. A total of £136,260 was secured⁴⁷ but ultimately declined for construction of the fishermen’s ramp.

5.9 Table 5.1 gives a breakdown of costs by type of spend based on information provided by the Pathfinder Team. One-third of the budget was capital spend (on the beach ramp), with revenue spend accounting for 10%. Consultancy costs comprised around 28%, with staff costs accounting for a further 28%.

Table 5.1: Breakdown of expenditure by type of spend.

Category	Description	Amount
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⁴⁷ This comprised £40,000 from the SEEDA Rural Towns Development Fund, £82,500 from the European Fisheries Fund and £13,760 from the RDPE LEADER Fund.

Staff costs	Salary and associated costs inc office, IT equip, travel and attendance at conferences and events.	£127,853
Consultancy and professional advice	CoastNet (breakdown as above)	£55,000
	Engineering -various	£35,875
	Facilitation of workshops and drafting of Trust project Masterplan	£17,500
	Business plans for Trust project	£2335
	Destination Management Plan and research studies	£16,448
		£125,158
Capital spend on delivering adaptive solutions	Ramps project (Actual contract value £137,636. Balance retained as contingency for construction and/or maintenance fund)	£150,000
Revenue spend on delivering adaptive solutions	Ramps project	£40,000
	MMO licence for construction	£3225
	£900 (estimated) cost of Crown Estate operating lease	£900
		£44,225
Workshops, publications and other communications materials not included above	ICZM, websites	£4,537
Small grants	Small Grants	£36,775
Other (please specify)		
Total		£450,000

Focus on adaptation compared to other priorities

5.10 Table 5.2 gives a breakdown of expenditure by objective, again based on information provided by the Pathfinder Team. Nearly half (£207k; 46%) of the budget was spent on delivering adaptive solutions (re-instatement of the public access beach ramp), with a further 8% (£38k) on adaptation planning. Community engagement activity accounted for 27% (£122k), with a further £30k (7%) being spent on coastal protection work associated with the development of Selsey Coastal Trust and an additional £27k (6%) being spent on wider economic development work in relation to tourism to the area.

Table 5.2: Breakdown of expenditure by objective.

Category	Activity	Amount
Engaging the community on coastal change adaptation	Coastal Literacy	£50,999
	External PR & Communication	£2,140
	Coastal Change Grant Scheme	£68,617
		£121,756
Adaptation planning	ICZM	£38,049
Delivering adaptive solutions	Reinstatement of beach access ramp	£56,924 (revenue)
		£150,000 (capital)
		£206,924
Wider economic development not directly linked to coastal change adaptation	Destination Management	£27,447
Coastal protection	Selsey Coastal Trust Project	£20,577
	CoastNet support	£10,000
		£30,577
Managing flood risk	N/A	N/A
Total		£450,000

Value for money

5.11 In determining value for money, an assessment was made of the individual elements of the project and of the project as a whole. Several of the activities appear to have represented **very good value for money**:

- **‘Towards ICZM’**, an emerging spatial plan that sets out various management options for the coastal zone, this was carried out at little cost to the project (£38k), relying on support in kind from partners, and the plan has now been adopted as a material planning consideration by the District Council.
- **Destination Management Plan**, though not directly related to adapting to coastal change, was aimed at increasing sustainable tourism to the area and, hence, making the area more economically viable in the long-term. This work was carried out at a relatively low cost (£27.5k) and attracted additional funding from business. It also fed into the Selsey Coastal Trust business model. (However, there are some issues about future funding – see below).
- **Coastal Grant Scheme**, the main aim of which was to raise awareness about coastal change and support for the Pathfinder among the local community, also

delivered some projects that were clearly directed at adapting to coastal change. These included a shingle movement study, work to upgrade the coastal path to make it accessible to all, provision of essential equipment for the local archaeological society to enable them to survey land that will be lost as part of managed realignment and provision of information boards at two key coastal sites. At 67k, it represented good value for money.

5.12 In contrast, the value for money assessment of the following projects appears **less clear-cut**.

- **Work to re-instate the beach access ramps**, which aimed to deliver an adaptive solution by removing shingle from these ramps, was intended to be only part-funded by the Pathfinder project and additional funds (mainly for the fishermen's ramp) were secured from elsewhere. However, with the late withdrawal of the fishermen from this work, the additional funding had to be declined and only Pathfinder funding was used (£207k), with the agreement of Defra. This was in spite of considerable efforts by the local authority to find an acceptable way forward. Thus, the project represented lower value for money than originally anticipated despite the clear community benefits.
- **Coastal literacy programme** – at a cost of £51k, the aim of this work was to produce web based learning, information materials and other tools to equip local people with the knowledge and understanding needed to participate in adaptation decision making. While the films were well produced and clearly contributed to this aim, the leaflet was not as useful as it could have been and, overall, the programme appears to have under-delivered against the original aim.
- **Selsey Coastal Trust** – while good progress has been made in setting up the Trust, a final view on whether the pump-priming funding from Pathfinder (£31k) represents good value for money will depend largely on whether the 'emerging trust' can secure full trust status and continue to operate as a viable self-funding organisation.

5.13 Overall, the Pathfinder project appears to have **represented good value for money**. The proportion of the total budget used for staff costs appears higher than for some other Pathfinders, at 28%. However, in this project, staff were recruited specifically for the project and all staff costs were paid directly from the budget, whereas in some others, there have been additional in kind contributions.

Promising ideas

5.14 Several ideas could be replicated elsewhere:

- The **Coastal Trust** project model could be replicated by other coastal towns as a way of raising local contributions to defence schemes. Under this model, a charitable trust/community enterprise or similar is set up that can take over the management of public owned assets e.g. car parks, toilets, areas of land, community buildings etc. Any surpluses (profits) from these operations can be ploughed back into a fund set up and/or administered by the operating authorities to support the maintenance of sea defences. Clearly, the success of this model is dependent upon the gifting of public assets but this type of community led-

initiative could be replicated in other areas.

- The work carried out to develop the ***Destination Management Plan***, which aims to protect the environment by using it as an economic asset, could benefit other areas with similar sized communities located along stretches of coastline. The fundamental premise of the Destination Management Plan is to preserve and celebrate the uniqueness of coastal communities, whilst seeking to move tourists around in a more sustainable manner, thereby taking pressure off over subscribed areas and spreading the benefit of tourism spend.
- The model used to formulate '***Towards ICZM***' which creates an audit of existing village and town plans, knowledge and consultation and then seeks to integrate this into the framework of the Sustainable Communities Strategy and emerging marine and coastal planning policy could assist with informing CCMA's, Local Plans and LDFs in other areas.

Future funding

- 5.15 The ultimate aim is for the Selsey Coastal Trust to be self-sufficient, with surpluses that could contribute to coastal defence funding. The Coastal Trust is now seeking a further injection of funding to support a project officer to take forward the business plans. However, the Trust has already had significant pump-priming funding to reach this stage and, if more is still required, this does raise questions about its long-term sustainability. In Bawdsley, a community-led defence scheme was designed and implemented by unpaid volunteers, with some help from the local authority and the Environment Agency.⁴⁸ The question needs to be asked whether volunteers could not take this work forward in Selsey.
- 5.16 In the case of the Destination Management working group, significant progress has been made in securing private sector funding for additional studies and goodwill from the University of Chichester which has offered student assistance with future surveys.
- 5.17 When this piece of work was conceived, the exit strategy was that Visit Chichester (a public/private tourism partnership) would adopt the plan and take it forward to implementation. Unfortunately, the need to make significant savings has led to the decision to withdraw District Council funding for Visit Chichester. This means the project is on hold whilst work is re-prioritised and further funding is sought. The two satellite tourism groups 'Visit Wittering' and 'Visit Selsey' have agreed to work together and early discussions have centred on the use of subscriptions from local tourism operators and businesses to fund a part time co-ordinator to grow the capacity of the partnership and take the plan forward. This would initially require an injection of matched funding until the membership has grown.
- 5.18 While these groups need to find new sources of funding, similar exercises could be carried out that rely on investment from business.

⁴⁸ In 2007 a group of local landowners and residents formed the East Lane Trust to raise £2.2m to implement a coastal protection and flood defence scheme for a 250m section of coast. The money was raised by selling plots of land in nearby villages. In 2007, the Government granted special permission to allow 26 homes to be built on the plots which were not previously available for residential development. The money raised was given to the District Council to commission a sustainable coast protection scheme which was completed in summer 2009.

Improvements to the Pathfinder programme

5.19 No improvements to the Programme were suggested by the Pathfinder Team. It was felt that one lesson that had emerged clearly from the experiences of this area (and from before Pathfinder) was that 'one size definitely does not fit all.' Therefore, the Team felt that funding of best practice case studies at the most local level appeared to be the best way to inform future approaches.

Retention and dissemination of knowledge and experience

5.20 Unlike many of the other Pathfinder projects, the Team was recruited externally for the period of the project and, thus, several Team members have now left, although the Project Manager will be employed by the District Council on a part time basis until the end of November. There is also wider knowledge and expertise within the MPP and excellent use has been made of its website to disseminate information about the activities carried out by the project:

<http://peninsulapartnership.org.uk/projects/coastal-change-pathfinder-project/>

Ability of the community to adapt to coastal change

5.21 The Pathfinder Team felt that the project had increased public awareness of coastal change, and had significantly increased community confidence to get involved in these issues, both of which are necessary steps towards being able to adapt. The ICZM work had also provoked interest and debate over spatial planning for the area and it was considered by the Team that if the ICZM was taken forward, this could actually increase the **ability** of the community to adapt. Finally, the project was also felt to have heightened awareness of the issue of central funding for sea defences and encouraged the community to consider alternative approaches in partnership with the coastal operating authorities (e.g. Selsey Coastal Trust Project). However, these approaches have been directed at defence rather than adaptation.

Community funding expectations revealed by Pathfinder

5.22 Based on an initial survey, it appeared that early in the Pathfinder project most people thought that responsibility for providing defences lay with the District Council or possibly the Environment Agency, and did not perceive national government as having a role, and they still felt that defence of homes and communities from erosion and flooding was an automatic right.⁴⁹

5.23 Pathfinder appears to have helped in altering expectations and moving towards community owned solutions, e.g. through the Selsey Coastal Trust project (although this is still directed at coastal protection rather than adaptation) and the ICZM work. However, a number of other projects have also had an impact on funding expectations, such as the Medmerry Managed Realignment Scheme, for which there is now community support. The turning point in community opposition was the direct

⁴⁹ The 'revelation' that this is not the case caused the concern that led to the formation of the Manhood Peninsula Partnership (MPP) in 2001 and the anger that led to organised community protest and the formation of SOS (Save Our Selsey) and subsequently the Manhood Peninsula Steering Group (MSPG) in 2007.

involvement of community representatives and local stakeholders in developing this scheme which established that what the community wanted was access opportunities in the form of footpaths, bridleways and cycle paths which have been designed into the scheme.

Specific lessons for the planning system in terms of adaptation

- 5.24 Whilst the policy mechanisms for ICZM exist, it is suggested that they are not sufficiently promoted. The Pathfinder Team accept that they were fortunate to receive the funding and to be able to engage the interest and assistance of, amongst others, prominent local businesses, parish councillors and community representatives who happened to be professional water engineers. Expert advice was provided in kind by planning professionals from the District Council, County Council and Environment Agency.
- 5.25 The process of compiling the ICZM plan therefore differed from traditional approaches in that it was approached 'from the bottom up' and taken to the Local Planning Authority for adoption, as opposed to the other way round. Existing knowledge gained from consultation exercises and community plans was collated, updated and reflected back to the respective parish and town councils for checking. This plan has, in addition to being adopted as a material planning consideration, informed an ICZM Policy within the Core Strategy of the emerging LDF.
- 5.26 The Pathfinder projects have shown that awareness (of community, elected members and officers alike) of the potential impacts of coastal change can vary tremendously and in areas where ownership and awareness is low, such a robust approach may not be possible.
- 5.27 Finally, those who are able to take this community approach may produce plans and policies that vary hugely according to the needs and aspirations of their area; which could have implications for neighbouring authorities and the wider planning system.

Lessons for future policy on coastal change adaptation

- 5.28 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. It was felt that adaptation could – and should – work in this way: *“Gaining community acceptance of the need to plan for future change can only be achieved by meaningfully involving the community and working at community level. Yet to underestimate the sensitivity of the topic and the time and resources needed, will prove to be even more costly and time consuming as this area found to its cost. Community engagement cannot be imposed upon an area as part of a broad brush strategy.”*
- 5.29 The Project Team considered that a menu of different options was needed to meet the needs of different areas and their communities. For example, while the village of West Wittering had raised £250,000 towards the funding of their defence scheme, this is an affluent area that benefits from a Community Trust and other benefactors and so would not be widely replicable. The coastal trust could be a useful model for raising local contributions to Partnership Funding for coastal defence schemes,

although there are risks with this approach in that Government investment might be wasted if ultimately the funding cannot be raised.

Summary and conclusions

5.30 This Pathfinder project has delivered a number of clear benefits, including through reinstatement of the public access ramp, the coastal change grant scheme, development of the spatial plan, '*Towards ICZM*', and some aspects of the Coastal Literacy programme. There may also be longer term benefits as a result of the Destination Management Study and from the development of the Selsey Coastal Trust if it can secure future funding. The focus of the project has largely been on adapting to coastal change and it appears to have met the other three funding criteria. Overall, it has provided good value for money and has contributed to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change (although less has been learned about the costs and benefits of different approaches) and providing practical lessons that can be shared.

Cuckmere estuary pathfinder project (East Sussex cc)

Background

East Sussex County Council received £249,997 to explore planning for, and managing, adaptation to coastal change for the Cuckmere Estuary, its local community and visitors.

Coastal change issues

Cuckmere Haven (also known as the Cuckmere Estuary) is an area of floodplain in East Sussex between Eastbourne and Seaford. The River Cuckmere naturally meanders across the floodplain, but in the 19th century the course of the river was changed by the creation of a cut, which left the meanders redundant. Earth embankments were built to protect the surrounding land from flooding. Slow flows through the mouth also result in a blockage that has to be cleared to avoid flooding upstream.

The policy for the Cuckmere Haven frontage is to manage the existing defences with decreasing investment to enable the coastline to realign and allow the creation of a naturally functioning estuary and mouth.⁵⁰ This would result in the Estuary becoming intertidal, with the potential to create approximately 112 hectares of salt marsh and mudflat. In the short term (0 to 20 years), the implications of this policy would include some loss of agricultural land, loss of both coastal and inshore heritage sites, a change of character of the river valley, a risk that property access may be restricted and the loss of some footpaths. In the medium to long term, implications include the possible loss of infrastructure if the A259 trunk road is not protected.

The broad principle of returning the Estuary to a naturally functioning system is supported by some statutory organisations and part of the community. However, amongst the larger part of the local community there is a strong desire for the area to remain unchanged, with fears that the landscape would be destroyed and key tourist assets such as the iconic meanders irretrievably lost. The issue is therefore very contentious and high profile, not just amongst local communities but also nationally.

Summary of approach

Community engagement: the key aim of this project is to build on the work of the Cuckmere Estuary Partnership, working with the local community to reach consensus on how best to plan for change at the Cuckmere Estuary in the short, medium and long-term. This includes developing visual tools and improving provision of information to inform debate and establish a stakeholder forum to drive the development and consideration of options.

Adaptation planning: development of options and plans for change going forward, including through studies to gather historic, economic, visitor and landscape information to inform consideration of options.

⁵⁰ From April 2011, the Environment Agency ceased its routine maintenance of the flood defences in the area, with the exception of work to keep the mouth clear which will continue until such time as the system becomes self-sustaining (estimated at 15 years).

Main outputs and outcomes

Community engagement: *Consensus broadly achieved*⁵¹ on the way forward for the Estuary; and development of the 'Friends of Cuckmere' to help take forward the community's decision.

Adaptation planning: *Research completed* on the economy, visitors, landscape and heritage of the Estuary, including visual modelling of options.

Delivery of activity

5.31 The focus of the Pathfinder Project has been a series of engagement events at which members of the community⁵² have worked alongside East Sussex County Council, landowners and various statutory bodies to identify different options, and together come up with a preferred approach for the future of the Cuckmere Estuary. To support this work, new research was commissioned on the economy, visitors, landscape and heritage of the Estuary, and new technical and visual modelling was produced. A summary of the key steps followed is set out below, with further details given in Annex F.

- **Sharing understanding** – giving those involved in the project the chance to learn more about the reasons for the EA's decision to withdraw flood maintenance and present evidence for alternative options.
- **Agreeing the options** – agreeing a shortlist of possible options for the future management of the estuary, in the light of the EA's decision. These were:
 - Baseline
 - Option A: Partial breach managed realignment (EA)
 - Option B: Full breach managed realignment (EA)
 - Option C: Engineered reactivation of meanders & meandering creeks
 - Option D: Maintain the existing defences (EA Option 2a)
 - Option E: Sustain the existing defences – long term (EA Option 2b)
 - Option F: Sustain the existing defences – short term
- **Reviewing the evidence** – filling gaps in knowledge about the Cuckmere and commissioning four new research studies on the economy, landscape, visitors and heritage. The research considered the current situation and also what might happen in future under each of the seven options, using technical and visual modelling.
- **Setting the assessment criteria** – 10 criteria were agreed including maintaining the existing infrastructure and level of access, sustaining the current assets, e.g. landscape and historic environment, ensuring no increased flood risk upstream and encouraging tourism and local businesses.
- **Testing and piloting** – to ensure that the approach adopted to assess the

⁵¹ Written representations were received in December 2011 indicating that not everyone within the community is in agreement with the 'consensus view'.

⁵² The Cuckmere Community Forum was established in December 2009 to work alongside the Pathfinder project, notably in identifying the management options that the community wished the project to assess. The Forum involved around 60 local people of differing backgrounds and views on the options and these were divided into a number of sub-groups covering Options, Tourism, Heritage, Landscape, etc.

options against the criteria was fit for purpose.

- **Agreeing the approach** – final meeting at which consensus was reached that the preferred option was to ***maintain the existing defences in the short term***, and to explore further the option of ***reactivating the meanders as a longer term solution***

5.32 All but one of the activities included in the original bid (the Anglo-French exchange) was carried out, although there were some differences in the amount spent compared to that budgeted. A summary table showing what was delivered and at what cost, compared with the original outputs and budget submitted in the bid is given in Annex F.

Benefits to individuals and the community

5.33 There were a number of ***expected benefits***:

Achieving consensus on the future management of the Estuary

The key outcome that the Pathfinder project was trying to achieve was consensus on the future management of the Cuckmere Estuary. The Pathfinder Team commented that *“the project provided a process, through the engagement programme, that enabled the community to move from a position of conflict to a constructive dialogue as to how the Estuary should be managed in future. The consensus was formed around how best to ensure the long-term survival of the meanders, which the evidence showed could be a mix between holding the line in the short term and reactivating the meanders in the longer term. Consequently, most people and organisations could see their position being reflected in the final consensus.”* However, written representations have subsequently been received indicating that not everyone within the community is in agreement with this view.

Better informed decision-making

The additional research carried out provided everyone involved with much better information on which to make a decision as to the preferred approach to managing the Estuary in future. This has included gaining agreement on how best to manage both the coastal processes, to protect the existing Coastguard Cottages, and the flood risk within the estuary.

Increased public awareness and understanding:

There was a common misconception amongst members of the local community that a decision to ‘flood’ the Estuary had already been made. Through the engagement programme, working closely with the local media and a direct mail campaign to local households, the community was reassured that although the Environment Agency had made it clear in 2008 that it would be unable to maintain the defences and had stopped maintenance in 2011, it had made no decisions about the future management of the estuary.

5.34 There were also a number of ***unexpected benefits***: such as the Project Board, which provided a critical sounding board that captured the debate within the wider

community and proved invaluable in helping to steer the project, and the development of the 'Friends of Cuckmere'.

5.35 The project has brought benefits to individuals, the community as a whole and the organisations involved:

- *Benefits to individuals* – the engagement programme was designed to provide a means for everyone to have their voice heard, be empowered to influence strategic decision-making about the Cuckmere Estuary. The feedback from the events and workshops confirmed that this was achieved, with an average of 95% of participants across all the events and workshops saying that they had enough opportunity to express their views, and 84% saying that the event they attended had met its objectives. This undoubtedly helped to achieve consensus at the end of the project because it encouraged participants to remain fully engaged.
- *Wider community* – the Community Forum provided an essential opportunity for members of the community with different views on the future management of the Estuary to discuss these in detail which, in turn, is likely to have encouraged many people to engage well with the Pathfinder project. Through the Forum and the project more generally, the community has achieved a substantial degree of consensus that has enabled it to move beyond the old debate of hold the line versus managed realignment and to look to the future.
- *Organisations* – the decision to maintain the existing defences in the short term and to consider the reactivation of the meanders in the longer term provides a solution that enables organisations which supported different options to continue to work together and has strengthened relationships.

5.36 Evaluation of some of the benefits has been carried out as part of an evaluation of the community engagement events and has been reported back to the community.

Additionality

5.37 The view of the Pathfinder Team was that it was unlikely that these benefits would have been achieved in the absence of Pathfinder funding since sufficient resources were not available in the County Council or partner organisations to implement the community engagement programme and, particularly, to carry out the extensive set of research projects.

5.38 Certainly, it is unlikely that the extensive research programme would have been commissioned in the absence of Pathfinder funding. However, while some funding was perhaps needed to kick-start the Pathfinder project, it is clear that the benefits were also achieved because of the extensive unpaid work carried out by members of the Community Forum.

Less successful elements of the Pathfinder project

5.39 Two areas were highlighted by the Pathfinder Team as being less successful:

The value of the evidence gathered

5.40 It was noted that 93% of participants who completed an evaluation form at the final

Pathfinder event had stated that they found the evidence commissioned by the project to be either very helpful or helpful. However, there was also some limited individual feedback that suggested for some individuals:

- the amount of evidence presented was overwhelming;
- some of the evidence was not considered to be conclusive enough, for instance on the predicted change in visitor numbers to the Estuary;
- the evidence was not believed for a variety of reasons (e.g. it did not correspond with a participant's knowledge of the Estuary).

5.41 Importantly, there was no substantive challenge to the evidence presented at the two evidence sharing events and the final event, where these events acted as the 'evaluation' process of the evidence. Overall, it was felt that the additional evidence that was gathered, in response to feedback from the community, further increased the credibility of the assessment process, and will also assist in the implementation phase.

Project start-up

5.42 The Project Team commented that it took too long to start the project, including delays in recruiting the dedicated Project Officer, developing a project delivery programme, and beginning the public engagement and communication work. This partly caused the last half of the project to be rushed, and may not have provided some members of the community with enough time to get to grips with a large amount of sometimes complex information.

Process followed

5.43 Although not the view of the Pathfinder Team, it could also be argued that the process followed, in which the community chose the options to consider and, crucially, decided that the costs of each option should not be factored into decision-making (see Risks and issues below) was, in itself, unsuccessful as it resulted in a combination of two options, one of which is likely to be too costly to fund in its current form. As such, there is a risk that the Pathfinder project may have raised expectations about possible solutions that could ultimately prove to be unaffordable.

5.44 On the other hand, the process has allowed a broad consensus to develop that is shared by many – though not all – within the community, as well as by the agencies, and, in terms of the short-term defence option, it could potentially be partly paid for by the community if it chooses to do so. It should also be noted that 'maintaining the flood defences' (Option D) will not ensure the long-term survival of the meanders because they will continue to silt up gradually and so some form of reactivation will be needed if the community's main aim – survival of the meanders – is to be achieved. Although Option C, which involves a significant amount of costly hard engineering, was selected by the community, it was the principle that was agreed rather than the precise details of how this might be achieved. Work is now underway to explore cheaper ways of achieving this aim. However, it is by no means certain whether they will be found and funding secured.

Risks and issues

5.45 When putting the original bid together the County Council identified the following **potential risks**. It is interesting to note that the risk that the final consensus view would be to continue defending the Estuary was not identified by the Council. However, this was a risk that was highlighted by the assessment panel when considering the bid.

- Failure to deliver outputs and objective
- Failure to ensure long term sustainability of the project beyond the grant period
- Lack of support from partner organisations.
- Governance around decision-making
- Failure to achieve consensus

5.46 There were also a number of **unanticipated risks and issues**, which are summarised below, the most significant of which was the omission of cost data for the options:

- *Managing relationships* – with hindsight, too much time was spent in trying to engage with a few individuals who were unlikely to accept the Pathfinder project objectives.
- *The need for additional outputs* – as a result of feedback from the community, further research was carried out to allow a more informed comparison between the different management options, resulting in a project overspend.
- *Production of the list of options* – at one stage, there was a growing risk that the Community Forum would be unable to produce a final list of options to assess within the timescales required to complete the project.
- *Omission of cost data for the options* – it was originally intended to establish the approximate capital and maintenance costs of the different options, and to add these to an economic assessment of the options (i.e. the likely change in visitor numbers), to provide a whole-life cost and enable an assessment of the relative cost-benefit ratios of the different management options. However, the consensus view at one of the final community workshops was that cost should not be considered as part of the evaluation criteria because it was critical to agree, first, what the community wanted. Instead, cost would be considered as part of putting the subsequent business case together to obtain funding for the preferred option. At the final event on 7 June, a small minority of the community felt that a comparison of the options was incomplete without their costs. Nevertheless, it was felt that the lack of cost data did not appear to have any detrimental effect on the discussions at the final event, or call into question the consensus that was reached.

Costs and type of spend

5.47 The project received Pathfinder funding of £249,997. The total cost of the project was ca. £320,000, which included additional funding of £13,777 and support in kind of around £50,000 (for staff time) from the County Council and a contribution of £5,000 from the Environment Agency (for specialist consultancy advice to prepare the technical brief for the modelling work subsequently carried out by Capita Symonds). In addition, a number of members of the community and other

organisations also gave a great deal of their time, which has not been costed.

5.48 Table 5.3 gives a breakdown of expenditure by type of spend based on information provided by the Pathfinder Team. As shown, the vast majority of the budget was spent on consultancy support (£190k; 77%), with a further £43k (17%) being spent on staff costs.

Table 5.3: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs	£43,068
Consultancy and professional advice	Research studies, option feasibility study and community engagement activities	£190,706
Capital spend on delivering adaptive solutions		£0
Revenue spend on delivering adaptive solutions		£0
Workshops, publications and other communications materials not included above	NB: workshop costs are included in 'consultancy & professional advice' above)	£16,223
Small grants		£0
Other (please specify)		£0
Total		£249,997

Focus on adaptation compared to other priorities

5.49 Table 5.4 gives a breakdown of expenditure by objective, again based on information from the Pathfinder Team. Around £81k (32%) was spent on community engagement activities and around £125k (50%) on adaptation planning and, in particular, research to support the decision-making process.

Table 5.4: Breakdown of expenditure by objective.

Category	Activity	Amount
Engaging the community on coastal change adaptation	Community engagement	£65,267
	Communication tools	£16,224
		£81,491
Adaptation planning	Research studies	£125,438
Delivering adaptive solutions		
Wider economic development		
Coastal protection		
Managing flood risk		
Other (please specify)	Project management	£43,068
Total	£249,997	£249,997

Value for money

5.50 In determining value for money, an assessment was made of the individual elements of the project and of the project as a whole.

- **Community engagement activity** – this was an essential part of the project. Around £65k was spent compared with an initial estimate of £50k, but included eight community events rather than the three proposed. This gives a cost per event of around £8k, which is similar to the unit costs incurred by other Pathfinders.
- **Research studies** – the total cost of the various research studies was £139k, of which the Council contributed around £14k, compared to the original estimate of £91k. This was a significant overspend on the original allocation and occurred because it was decided to carry out detailed modelling and economic impact assessments on all seven options rather than the preferred one. This seems a reasonable approach as it increased the evidence base to support each option and will assist in future consideration of the options.

5.51 Project management costs were around 17% of the total project cost and seem reasonable compared with other Pathfinders.

5.52 While the individual elements appear to represent good value for money, in terms of the project as a whole, this is less clear. There have undoubtedly been project benefits and useful learning gained from allowing the community to make the decisions throughout the process, but whether the resulting end-point reached justifies the investment made is still unclear and will depend on whether or not the community can find ways to fund their chosen option.

Promising ideas

5.53 The project used a process of engagement which could certainly be replicated elsewhere in that it placed communities at the heart of decision making. The key components of the engagement process were:

- *the Community Forum* – a group of volunteers who drove the approach
- *public engagement programme* – an independently designed and facilitated programme
- *communication tools* – as well as the standard communication tools (project website and regular newsletters) and working with the local media, the most useful tool was a suite of static images, derived from the technical modelling. These illustrated the outcome of the different management options over different timescales and tidal cycles and provided a powerful means of conveying a large amount of information quickly and simply. (However, a downside is that the images may have oversimplified the choice between options, and encouraged people not to read the evidence reports.)

5.54 The Pathfinder Team felt that both the community engagement programme and set of communication tools would require local or central government funding. They felt

that while the 'Community Forum' approach should rely mainly on volunteer support, it would be likely to require some additional funding, at least initially. Indeed, the County Council, and partner organisations, are continuing to support the development of the 'Friends of Cuckmere' and have agreed to continue to work with the community in taking forward the preferred management options.

5.55 While the 'Community Forum' approach could work well in some areas, it does depend on the capacity of the community and, particularly its understanding of coastal change issues and the need to adapt and its ability to give time freely to take the work forward. The idea of adapting to coastal change rather than continuing to defend is still relatively new and so some in kind support and guidance from local authorities and agencies is likely to be necessary even if there is no direct funding.

Improvements to the Pathfinder programme

5.56 The flexibility shown by Defra and the willingness to fully fund projects were welcomed by the Pathfinder Team. However, it was noted that in several of the Pathfinder projects expectations had been raised that individual adaptation issues would be resolved, with the consequence that they needed some form of continuation funding to complete their objectives and capitalise on the investment made by Defra to date. Consequently, it was felt that a more explicit exit strategy for the programme would have been helpful in managing these expectations. The importance of disseminating the wealth of learning from the programme was also stressed.

5.57 It should be noted that the original objectives of the programme were to improve understanding of how coastal communities could adapt to coastal change and provide practical lessons that could be shared. With a relatively small budget of £11m, the programme was never intended to solve all of the issues in each area. Indeed, several Pathfinder teams commented specifically on the consequent need to manage expectations and some (e.g. Dorset) designed their own exit strategy through setting up a small grant scheme to fund some of the adaptation solutions identified by the community and/or providing time-limited support and advice.

Retention and dissemination of knowledge and experience

5.58 The Project Officer left during the project, but support for the work is continuing within the County Council. There has also been significant dissemination within Pathfinder area and more widely through the use of the project website and the local and national media: <http://cuckmerepathfinder.org.uk/>.

Ability of the community to adapt to coastal change

5.59 The consultation document defined '*adaptation*' as '*the process of becoming adjusted to new conditions, in a way that makes individuals, communities or systems better suited to their environment*', As such, it could be argued that the community's choice to maintain the defences in the short term suggests that it is not yet ready to consider adaptation.

5.60 This has been recognised by the Pathfinder Team which has commented, "*It could*

be interpreted that the choice of maintaining the defences in the short term demonstrates an unwillingness by the community to accept the need to adapt to the impacts of coastal change in future. However, the community reflected its willingness to adapt to the impacts of coastal change in future by accepting that a creative solution to maintaining the meanders, which also provides a means of adapting to coastal change in the long term, is the next most preferable approach to the future management of the estuary. Consequently, the choice to maintain the defences provides the time needed to explore in more detail how the reactivation of the meanders might be implemented.”

5.61 Although the community has chosen to continue to maintain the defences in the short term, the recognition that this is not a sustainable option in the long term and the general acceptance of the ‘reactivation of the meanders’ option which will eventually allow the flood plain, beach and river mouth to become a naturally functioning system, does appear to demonstrate that the community is *beginning to consider* adaptation. However, it needs to be recognised that adaptation may be a long term process: it may take time for the community to accept that the *status quo* cannot be maintained and it may take yet more time to identify possible funding sources to allow adaptation. The Cuckmere community has gone only part way through this process, with the identification of funding sources likely to be a major issue.

Community funding expectations revealed by Pathfinder

5.62 According to the Pathfinder Team, the most commonly held view within the community was that the Environment Agency, or central government more generally, should continue to maintain, and pay for, the flood defences within the Estuary, and should possibly also pay for the measures required to protect the Coastguard Cottages from coastal erosion. However, it was felt that the emergence of the ‘Friends of Cuckmere’ reflected the growing recognition amongst part of the community that it may have a role to play in implementing the preferred management option, supporting organisations that have the necessary capacity and relevant expertise.

Specific lessons for the planning system in terms of adaptation

5.63 No specific lessons for the planning system in terms of adaptation were highlighted by the project.

Lessons for future policy on coastal change adaptation

5.64 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. It was felt that adaptation can work in this way but there were a number of barriers such as:

- mistrust in the honesty and transparency of some public engagement processes, and the motivations of some organisations;
- people’s different perception as to what ‘adaptation’ means;
- a widespread dislike of change; and
- the difficulty of engaging the wider community, for instance a younger demographic, particularly when a high level of engagement was required.

- 5.65 It was felt that most of these barriers had been overcome in the Pathfinder project by putting the community at the heart of the decision-making process, i.e. giving it ownership of the process, and by providing the resources required to run an intensive and concerted public engagement programme, supported by robust evidence. However, it was noted that this kind of approach required resources, to devise and deliver community engagement and to provide a robust evidence base on which to engage. In addition, as shown by end result in this case, it also ran the risk of ending up with a decision that could be difficult to implement, for instance due to the cost of implementation, and could run counter to national policy. These lessons are likely to have implications for how the 'Big Society' concept is implemented more widely.
- 5.66 The Pathfinder Team felt that in terms of paying for the community's preferred approach in Cuckmere, no single individual, group of individuals, communities or organisations were the clear beneficiary and, thus, a mix of options might be needed, including:
- pump-priming from Government, as a means to capitalise both on the investment made to date in the Pathfinder project and the momentum gained in achieving consensus. This could cover those costs that would deliver the key adaptation benefits, including a proportion of the current flood maintenance measures required to provide the time to develop these adaptation measures;
 - a precept from the local community, who use the Cuckmere Estuary the most, feel most passionate about preserving the iconic meanders, and gain the most from visitors spending money within the area. This could be raised through a local precept, which would need to be agreed by the local community and conform to the standard eligibility requirements for precepts; and
 - visitors to the Estuary, to reflect the tourism value of what is currently a location that is free to access (though not to park at).
- 5.67 In terms of future funding, a distinction needs to be made between that which is required in the short-term for continued defence works and that which would be needed to reactivate the meanders. The level of funding needed in the short term is relatively low at around £10-20k per annum⁵³ and could be paid for by the community using either of the two options mentioned above. However, the long term solution is by far the most expensive option at around £11m and appears unaffordable in its current form. A significantly cheaper way of reactivating the meanders will need to be found – and funding secured – if this aim is to be achieved. This will be a major challenge.

Summary and conclusions

- 5.68 This Pathfinder project has provided a number of benefits to the community as well as to individuals and the organisations involved, including the achievement of a

⁵³ Data provided by Capita Symonds in their Option Impact Study and confirmed by the Environment Agency.

broad consensus over the way forward for the Estuary that is shared by many – though not all – within the community. There has also been useful learning from giving the community the decision-making role throughout the process. Although the community has chosen to continue to maintain the defences in the short term, the recognition that this is not a sustainable option in the long term and the acceptance of the ‘reactivation of the meanders’ option, which will eventually allow the flood plain, beach and river mouth to become a naturally functioning system, does suggest that the community is *beginning to consider* adaptation.

5.69 However, it needs to be recognised that adaptation may be a long term process, both in terms of acceptance by the community that the *status quo* cannot be maintained and in terms of identification of possible funding sources to allow adaptation. The Cuckmere community has only gone part way through this process. If, in the short term, the community is able to fund the defence works, this could provide a good example of a community-led solution. However, significant challenges remain in identifying a cheaper alternative for reactivating the meanders and then in securing funding. Future funding is also likely to be a significant issue for several other communities (e.g. Hastings, Jurassic Coast, Scratby, etc.).

5.70 The ultimate success – and value for money – of the project will depend on whether or not the community can find ways to fund their chosen option. Irrespective of the success or otherwise of the project, it has provided important learning in terms of the two high level programme aims and it has clearly met the four initial funding criteria.

Hampshire coastal pathfinder (CCATCH the solent)

Background

Hampshire County Council received £254,000 to explore planning for and managing adaptation to coastal change for a 10 km stretch of New Forest coastline between the River Beaulieu and Calshot, which includes Calshot Activity Centre, Lepe Country Park, important historic features, internationally designated nature conservation sites and a number of privately owned country estates.

Coastal change issues

Work undertaken by Hampshire County Council on planning for adaptation to climate change, has highlighted the risks of flooding and erosion due to sea level rise and increased storminess. Calshot spit was formed by longshore transport of sediment from west to east along the coast, and the future stability of the spit will depend on a supply of sediment from the west. At Lepe Country Park (an important community asset for leisure and tourism), erosion will cause loss of the foreshore and cliffs and rising sea levels and increased storminess will lower the beach area and cause flooding.

Summary of proposed approach

- **Community engagement:** a key focus of this pathfinder project is working with all sectors of the community to involve them in developing a coastal adaptation plan for a 10km stretch of the coastline from Beaulieu River to Southampton Water and shared

vision for Lepe, through workshops, meetings, “planning for real” exercises to embed stakeholder engagement throughout project. Alongside this, an education and awareness raising programme is being developed.

- **Adaptation planning:** development of coastal adaptation plan and exploring feasibility of short-term adaptation solutions.
- **Delivering adaptive solutions:** delivering short term capital works such as measures to improve access (damaged by erosion) to the beach and the site of D-Day preparations, possibly by building a boardwalk.

Main outputs and outcomes

- **Community engagement:** *Phase 1 engagement on ‘Coastal Change – past, present and future’* implemented through various activities and events; *Phase 2 community engagement* through structured workshops concentrating on identifying, assessing and prioritising adaptation opportunities (e.g. future of Lepe Country Park); and *education and awareness raising events* involving 10 schools and colleges.
- **Adaptation planning:** an *Adaptation Plan* covering Beaulieu to Calshot is currently being produced and will be completed by November.
- **Delivering adaptive solutions:** a *feasibility study* is being carried out to assess the implications of keeping the current level of access or improving it by removing the revetment and groynes.

Delivery of activity

5.71 A summary of the key activities undertaken, including any changes from the original bid, is given below. In general, less was spent on each activity than was planned due to the reallocation of 30% of the original funding (£83,000) to other projects within Hampshire County Council (see Risks and Issues below). Further details, including a table comparing what was delivered with the original outputs and proposed budget set out in the bid, are given in Annex G.

Community engagement

5.72 Phase 1 aimed to *‘initiate an engagement process that involves stakeholders in understanding the process of coastal change, and through this, engage them in developing strategies that enable adaptation and increase resilience.’* A Community Engagement Strategy was developed and implemented using a range of different activities including; having stands and activities at existing events such as Marine Week, face to face interviews, drop in sessions and attending local community meetings. All the Phase 1 engagement was around the theme of ‘Coastal Change – past, present and future’ and a number of techniques were used, e.g. Stories of Change (what was important about the coast) and timeline (using photographs, etc.).

5.73 Phase 2 of the community engagement work involved structured workshops concentrating on the key issues emerging from the first phase of engagement with the aim of identifying, assessing and prioritising the adaptation opportunities in Lepe Country Park and other sites within the 10 km coastline. To support this final stage of community engagement a number of resources were developed, such as coastal change mapping, computer generated aerial fly-throughs and a stories of change booklet.

5.74 One aspect of the engagement work that was not carried out was the production of a 3D model for educational use. While a number of prototypes were produced, they did not fully meet the requirements and following the production of computer generated 3D fly-throughs, it was decided to use these for educational purposes instead. Voiceovers have now been added and activity sheets are being finalised to accompany the DVD before being sent out to schools. Overall, more was spent on engagement than originally planned (£86k compared to £50k), although some of the materials produced by the consultants were used for education, reducing the costs for this type of activity (£19.5k compared to £45k).

Education and awareness raising

- 5.75 This work focused on developing education resources to support school involvement in the project and to raise awareness and increase understanding of coastal change. Ten school/college groups totally nearly 550 pupils, have been involved to date learning about coastal change at Lepe, Calshot and other locations on the New Forest coast. A number of activities have been developed including 'The Coast: Past, Present and Future Session Plan'
- 5.76 Other legacies of this work include 'Markers on the Shore', a permanent coastal change trail designed to help visitors to Lepe consider coastal change and the impact on the country park.

Adaptation Strategy

- 5.77 Based on the outcome of the Phase 2 engagement activity, an adaptation plan is currently being produced and was due to be completed by October 2011. The plan identifies a number of adaptation options for Lepe Country Park, Lepe Road and Calshot Spit and beach huts, as well as future changes to private sea defences.
- 5.78 For example, for Lepe Country Park, while stakeholders feel that much has already been achieved in terms of adaptation, they have identified that more could be done including firming up leasing arrangements and plans for the new buildings to create some sense of security at the site and ensure its longevity. In the short term, they would also like to see some flood-proofing of the existing facilities. Some ideas put forward for adapting to changes in the longer term include:
- an implementation plan for the new facilities, including a new car park.
 - setting back the path and facilities to secure them in the longer term
 - maintaining community engagement to ensure that adaptation plans are informed and broadly accepted.
- 5.79 The plan is intended to be a working document that will provide an action plan for implementation by all stakeholders including on-going communication and monitoring of the plan. The actions are currently being reviewed by stakeholders and partners prior to publication.

Adaptive solutions

5.80 At the time of preparing the bid, there was some concern that the project could be perceived as yet another strategy with no tangible results⁵⁴ and thus it was proposed to carry out some short term improvements to the access to the foreshore (at a cost of £50,000). However, this did not happen as planned because the driver for this action was not the community but landowners and site managers and it was difficult to secure agreement on the course of action. The footpath is formed by a revetment that has been damaged by flooding making it unsightly and a potential trip hazard. The landowners felt that this revetment and associated groynes acted as a sea defence protecting land further down the coast and were resistant to its removal, while Natural England wanted to return to a more natural state and the site manager wanted to ensure that visitors were safe. Agreement has now been reached to carry out an independent study that will consider the implications of repair or removal. This study is due to complete in November 2011.

Benefits to individuals and the community

5.81 The following list of benefits were identified by the Pathfinder Team, though no formal evaluation of these benefits has yet been carried out. It is likely that these benefits will mainly fall to the wider community.

Tools and techniques

- Development of innovative techniques to engage the community that can be transferred elsewhere within the Solent, the UK and Europe. (Work is now underway to consider how these can be scaled and shared with other projects.).
- A good range of education materials and activities have been produced that will continue to be used beyond the Pathfinder project.
- The concept of considering past, present and future through the timeline and stories of change successfully captured people's imaginations and helped them understand the issues and build ownership.
- Use of two different consultants for different stages of the project provided a range of techniques and methods.
- Initial production of an engagement strategy helped define who the stakeholders were and what would work best in this location.
- CCATCH the Solent project officers and Coastal Communities 2150 (CC2150)⁵⁵ partners trained in facilitating techniques which can be used in the CCATCH the Solent and CC2150 project.

Knowledge and understanding among stakeholders and the community

- Project Team and the Steering Group learned to think differently about true community engagement rather than consultation.
- Better understanding by Hampshire County Council and partner organisations of

⁵⁴ However, throughout the consultation that took place, this was never raised as an issue.

⁵⁵ The experience gained from the Pathfinder project has enabled HCC to develop a Solent-wide CCATCH project as part of the Environment Agency-led Coastal Communities 2150 and Beyond project, which is funded as part of the EU Interreg IVA Seas programme.

- the concerns that sectors of the local community have of coastal change.
- Better understanding by the Council and partner organisations of the concerns that landowners have regarding coastal change. This has led to a better relationship with the key landowners in the project area and will assist with the long term management and development of Lepe Country Park.
- Potentially a better knowledge and understanding of coastal processes by local communities and acceptance of coastal change and the need for adaptation (see below).
- Active volunteer involvement in the project which results in greater ownership of the issue and solutions.
- Better understanding of the access issue along the foreshore beyond the car park in terms of the drivers for adaptation.

Other benefits

- Better community and partner support for the Lepe Country Park Heritage Lottery Fund (HLF) bid.
- Ability to utilise Defra funding to lever funding from EU Interreg (CC2150) to roll out the project across the Solent.
- Possible replication of Pathfinder engagement activities by CC2150 project partners elsewhere in Europe.

5.82 It was acknowledged that it is difficult to measure increased knowledge and understanding of coastal change by local communities even with a 'before and after' survey. The Pathfinder Team will shortly be letting a contract to evaluate this work, which it is hoped will provide some evidence. However, they noted that from anecdotal evidence, there was support from the local community for the need to relocate the facilities at Lepe and that when the consultants, Dialogue Matters, first started their Phase 2 engagement contract they were surprised at the number of local people who had heard of the CCATCH project and knew it was about coastal change.

Additionality

5.83 The Pathfinder Team felt that it would not have been possible to achieve these benefits without Pathfinder funding: *"The Pathfinder funding has enabled us to engage with the community in a way that we would find difficult to finance with existing budgets."* The fact that one-third of the Pathfinder budget was reallocated to other capital projects within the County Council suggests that this is the case and that coastal change adaptation is considered a lower priority than other issues.

Less successful elements of the Pathfinder project

5.84 In addition to the short-term access works mentioned above, it was felt that the Pathfinder might have benefitted from a dedicated project officer rather being managed by a team from the County Council who worked on the project on a part-time basis. The staff time needed to carry out this work was also under-estimated. In addition, the comment was made that, *"It is important that the project is considered as a project led by HCC not an HCC project – this might have been achieved by*

getting higher level buy-in from partner organisations". Finally, the approach adopted in Phase 1 of the community engagement work was considered to be interesting and innovative, it was rather unfocused and did not assist in prioritising the issues to feed into the adaptation plan. This is discussed further below under the section on 'Value for money'.

Risks and issues

5.85 The main unforeseen risk to the project was the decision to reallocate 30% of the Pathfinder funding to capital projects within the County Council due to budgetary pressures. The comment was made that: *"This was discussed openly with the Steering group and partners who did not raise any objections."*

Costs and type of spend

5.86 The total cost of the project was ca. £187,500, which included £11,500 in the form of support in kind from the County Council (staff resource) and funding of £5,000 from the EU Interreg Programme for project evaluation. In the absence of this additional funding, the total budget was £171,000, which compared with the £254,000 originally provided by Defra.

5.87 Table 5.5 gives a breakdown of costs by type of spend based on information provided by the Pathfinder Team. Around two-thirds of the budget was spent on consultancy support (£113k; 66%), with a further £32k (19%) being spent on staff costs and around £20k (11%) on workshops, publications and other communications materials.

Table 5.5: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs	32,134
Consultancy and professional advice	e.g. Phase 1 and 2 engagement, educational work, adaptation planning	112,975
Capital spend on delivering adaptive solutions		
Revenue spend on delivering adaptive solutions		
Workshops, publications and other communications materials not included above		19,532
Small grants		
Other (please specify) room hire, refreshments, marquee hire,		6,358
Total		171,000

Focus on adaptation compared to other priorities

5.88 Table 5.6 gives a breakdown of expenditure by objective, again based on information provided by the Pathfinder Team. Around 71% of the budget (£122k) was spent on community engagement activity, with a further 6% (£10.5k) being spent on adaptation planning and, particularly developing an adaptation plan for the area.

Although both coastal erosion and coastal flooding are problems along this stretch of coast, no expenditure was identified for managing flood risk. However, this seems a reasonable approach as the two issues would need to be tackled together in developing an adaptation plan for Beaulieu to Calshot.

Table 5.6: Breakdown of expenditure by objective.

Category	Amount	Amount
Engaging the community on coastal change adaptation	Community engagement strategy	£10,000
		£58,188
	Phase 1 engagement	£24,087
	Phase 2 engagement	£19,533
	Educational work	£7,300 -
	3D models	£2,000
	Monitoring & Evaluation	£900
	Research	
		£122,008
Adaptation planning	Research to provide evidence for the strategy	£7,000
	Adaptation plan	£3,500
		£10,500
Delivering adaptive solutions		
Wider economic development not directly linked to coastal change adaptation		
Coastal protection		
Managing flood risk		
Other	Staff costs	£32,134
	Meetings, events, room hire, etc.	£6,358
		£38,492
Total		£171,000

Value for money

5.89 A value for money assessment was made on the individual elements of the project and on the project as a whole. It should be noted, however, that no formal evaluation

has yet been carried out on these elements by the Pathfinder Team

5.90 In terms of community engagement activity, around £92k⁵⁶ was spent compared with an initial estimate of £50k, but some of the materials produced were used for the educational work, thereby reducing the costs for this activity.

- **Phase 1 community engagement activity** – this cost around £68k and made use of different events and techniques (e.g. face to face interviews, drop in sessions, etc.) around the theme of ‘Coastal Change – past, present and future’. A significant amount of activity was undertaken that helped to raise awareness amongst the wider community who were unlikely to engage with a workshop process. In addition, some useful information was obtained on the users of Lepe Country Park and the surrounding area and a number of the innovative techniques were used (e.g. Stories of Change and timeline) that are being taken forward as part of the CC2150 project. However, some of the work was rather unfocused, with no clear outcome in terms of coastal change.
- **Phase 2 community engagement** – this work clearly concentrated on identifying, assessing and prioritising the adaptation opportunities in Lepe Country Park and other sites within the 10km coastline through the use of two structured workshops and the development of supporting resources such as coastal change mapping and computer generated aerial fly-throughs. This work, at around £24k (£12k per workshop), appears to represent better value for money.
- **Educational work** – costing around £19.5k, this work focused on developing resources to support school involvement in the project and to raise awareness and increase understanding of coastal change. As well as involving almost 550 pupils, this work produced a number of useful resources for future use and has resulted in other legacies such as the ‘Markers on the Shore’ coastal change trail and resource materials on the fly-throughs. This work also appears to represent good value for money.
- **Adaptation plan** – work associated with producing the adaptation plan (£10.5k) represents very good value for money as it will shortly lead to an adaptation plan with specific and practical adaptation options that can be taken forward in Lepe Country Park and other neighbouring sites. The work undertaken to produce the plan and associated learning may also be useful in terms of the wider CC2150 project.

5.91 Project management costs were around 19% of the total project cost and seem reasonable compared with other Pathfinders.

5.92 Despite losing a significant proportion of the original budget, the project has delivered most of what was originally planned, including some useful and highly relevant activities such as an adaptation plan and some tools that can be shared more widely. The project is also now being rolled out across the Solent as part of the wider CC2150 project and, on the basis of this work, a bid has been made to the HLF. As such, it appears to have provided very good value for money. However, whether what has been delivered represents as good value for money when considered

⁵⁶ This includes the associated costs of room hire, refreshments, etc.

against the original Pathfinder budget of £254k is less clear.

Promising ideas

5.93 Several ideas were suggested that could be replicable elsewhere:

- **Community engagement** – the Stories of Change and timeline worked particularly well in getting people to engage with change at the coast and their own feelings/memories. It appealed to a wide range of audiences and was easy to implement. A booklet containing the stories is currently being sold to the public to cover reprint costs.
- **Communication tools** – the need for visual interpretation of change at the coast was established early on. The 3D computer generated fly-throughs along with the voice-overs were a very effective way of showing this predicted change and could be carried out for any stretch of the coastline. These also have educational uses. The development of these communications would require some funding.
- **Educational materials** – a range of educational materials was developed at low cost and could be used elsewhere. Those involved with the Learning Outside the Classroom initiative with school groups could develop and share activities that assist with coastal change literacy through a website for very low cost.
- **Community Coastal Observatory** – one idea that is being developed further, through the HLF project at Lepe, is a Solent Community Observatory. This idea involves volunteers collecting, archiving and presenting information about the coast and coastal change. Examples include monitoring coastal change impacts on heritage features, carrying out bird surveys, community digs to discover the past and continuing to collect stories about the coast.

5.94 Overall, it was felt that while some of these are unlikely to be self-funding, they could be incorporated into projects that are seeking external funding from other sources e.g. Landfill Tax, HLF, etc. The Community Coastal Observatory could include elements that are funded. For example, volunteer training could also be run as adult education courses and as it is a good way of involving volunteers it may qualify for different sources of Government and other funding.

Improvements to the Pathfinder programme

5.95 The Pathfinder Team felt it was a well supported programme, with a useful Communities of Practice website. However, while not critical to the success of the programme, they felt that *“it would have been good to have Defra officers visit to see some of the work first hand”*.

Retention and dissemination of knowledge and experience

5.96 The project was managed by County Council staff and, thus, there has been no loss of knowledge and experience as it comes to an end. The project is also being rolled out across the Solent, thereby disseminating that knowledge and experience more widely.

Ability of the community to adapt to coastal change

5.97 The Pathfinder Team felt that it was too early to judge whether the project had increased the ability of the wider community to adapt as the adaptation plan for Beaulieu to Calshott had yet to be implemented, though it was further advanced and there was evidence of a greater understanding and support for the need for adaptation at the Park as a result of coastal change. However, they agreed that the adaptation plan would identify what was needed to adapt and therefore better prepare the community to do so.

Community funding expectations revealed by Pathfinder

5.98 The Pathfinder Team commented that: *“expectations encountered were related to defending the coast: local landowners raised concerns about the lack of government funding as a driver for the SMP policies and controls over what they can do on their land. Potentially there were some misunderstandings about coastal change that the Pathfinder project was able to dispel through providing information and building trust with landowners. As part of the adaptation planning at Lepe Country Park stakeholders and local communities explored funding options and Government was not expected to fund adaptation.”*

Specific lessons for the planning system in terms of adaptation

5.99 The Pathfinder Team felt that there no specific lessons, as planning permission for the Park had not yet been sought. However, this had not been raised as a major issue by New Forest National Park Authority which is the planning authority and also a key partner in the Pathfinder project. The land required for relocating the facilities is currently within the Park leasehold and discussions have taken place over possible rollback to accommodate parking if necessary with the adjacent landowner.

Lessons for future policy on coastal change adaptation

5.100 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. It was felt that the Pathfinder had enabled the County Council to explore in depth what was important to the local community and what it required in terms of adaptation rather than what was important only to the authorities or what was perceived to be important to local communities. In this way, it was felt that resources could be targeted to areas of greatest need.

5.101 In terms of who should pay for adaptation, it was felt that it depended on the type of adaptation required and the external funding programmes available to contribute to its delivery. However, it was considered that a combination of public and funding sources would be required.

Summary and conclusions

5.102 Despite losing a significant proportion of the original budget, the project has delivered most of what was planned, including a wide range benefits in terms of increased knowledge and awareness of coastal change among stakeholders and the wider community (including school children) and the development of innovative

tools and techniques that can be used more widely. An adaptation plan has also been developed, increasing the ability of the community to adapt by identifying options that can be taken forward within the Lepe Country Park and neighbouring areas. The approach taken within the Pathfinder project has resulted in a successful application for significant EU funding as part of a wider CC2150 project to continue the work across the Solent and to assist with the implementation of the adaptation plan. In addition, on the basis of this work, a bid has been made to the HLF. As such, it appears to have provided very good value for money. However, whether what has been delivered represents as good value for money when considered against the original Pathfinder budget of £254k is less clear.

- 5.103 The focus of the project has largely been on adapting to coastal change in terms of erosion and flood risk and, thus, it has met the first funding criterion. No expenditure has been identified for managing flood risk, but this seems a reasonable approach as the two issues would need to be tackled together in developing an adaptation plan for Beaulieu to Calshott. The project appears to have met the other three funding criteria and has contributed to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change (although less has been learned about the costs and benefits of different approaches) and providing practical lessons that can be shared.

Hastings coastal change pathfinder

Background

Hastings Borough Council received £115,625 to explore planning for, and managing, adaptation to coastal change for the Hastings fishing community in Stade.

Coastal change issues

The movement of shingle material along the Hastings coastline has resulted in a substantial accretion of shingle both within the harbour and on the beach. The steep gradient that this causes for the beach-launched fishing fleet has resulted in significant problems for the safe landing and launching of the fishing boats.

Summary of proposed approach

- **Community engagement:** engaging Hastings' fishing fleet in the development of an options plan, and to capture and share historical record of coastal change and its impact on the fleet
- **Adaptation planning:** identification of short, medium and long term adaptation solutions on the basis of research.

Main outputs and outcomes

- **Community engagement: *Consultation with fishermen*** – consensus reached on the initial options presented, with a workshop to decide on the preferred approach planned for September/October; ***historical record*** of the impact of coastal change upon the fishing community
- **Adaptation planning: *Shingle movement study and development of adaptation options*** – an investigation of the reasons for and impacts of coastal change upon the movement of shingle within and around the harbour, together with recommendations for a range of adaptation options to reduce the impact of sediment transport and climate change on the fishing industry.
- **Delivering adaptive solutions:** contribution to help deliver the preferred option(s) once agreed

Delivery of activity

5.104 The project delivered everything set out in the original bid, with some of the work still on-going. It was felt that the most complicated part of the project was undertaking the ***historical research on the fishing community*** and with hindsight it was not really necessary for project delivery. However, it was considered an important addition to the fishermen's museum in Stade, which attracts around 140,000 per year. Savings achieved in some parts of the project have enabled a small fund (around £9k) to be set up to initiate solutions once the preferred option has been agreed.

5.105 The key piece of research was the ***shingle movement study***, which investigated the reasons for and impacts of coastal change upon the movement of shingle within and around the harbour, which has had a direct impact on the fishing industry, and

set out some preliminary options for how to reduce that impact, including constructing launching ramps, regularly recycling shingle and introducing permanent bulldozers to haul the boats up the beach. These were discussed and agreed in principle with the fishermen. Further studies to consider the feasibility and costs of these options were carried out and shared with the fishermen, Environment Agency, Pevensey Coastal Defence Ltd and the Marine Management Organisation (MMO) in November 2011. Informal discussions were also held and views sought about the preferred approach. The final draft of the research and the historical findings were due to be presented at a multi-agency stakeholder meeting in December 2011. Further details, including a summary table of what was delivered and at what cost compared with the original bid, are given in Annex H.

Benefits to individuals and the community

5.106 The Pathfinder Team commented that through the project, a much greater understanding had been gained by all participants about the impacts of coastal change on the coastline around Hastings, the likely impacts of climate change in the coming years and the role the fishing beach plays in protecting other coastal users. Other benefits of the project were identified. In particular, it was felt to have:

- strengthened the Council's relationship with the fishermen and foreshore trust
- enabled the fisherman to be part of a project and built up their confidence about getting involved in large scale projects
- provided a set of practical options to deal with coastal change
- given a scientific basis to what the fishermen already knew and created an evidence base for other projects⁵⁷
- provided a lasting legacy of resources that would be freely available for use by the local community, schools, the college and university students
- to a lesser extent, provided a wider community benefit by improving knowledge and understanding about the fishermen through a series of public engagement events

5.107 It was noted that while no formal evaluation of the benefits had yet been carried out, the views of fishermen had been sought throughout and the informal feedback had been very positive. It was intended that more formal feedback would be sought after the workshop with fishermen in September/October at which a decision would be taken on which adaptation option(s) to adopt.

Additionality

5.108 The Pathfinder Team noted that adaptation was a growing area of work for Hastings Borough Council and it had been involved in a number of European funded projects and had developed its planning policies in line with guidance around adaptation. With regard to the fishing beach and Stade area, this had become a higher priority

⁵⁷ It is hoped that the project will help the Council to draw in additional funding in the near future, e.g. Environment Agency may provide additional funding to undertake a survey of the harbour arm and any capital works required. It was felt that without the research undertaken as part of the project, it would have been difficult to bid for additional funds as there would have been no supporting evidence.

due to the expected impacts of climate change from sea level rise and severe weather events and the Pathfinder funding had enabled the Council to research the likely impacts and adaptive response required. Without this funding, it was felt that the work would not have gone ahead as the Council did not have the resources needed to undertake the scientific and historical research nor capture the living history of the fishermen. It was also felt that although the Environment Agency was involved in the Defra-funded Regional Strategic Monitoring Report on shingle movement from the Thames Estuary to Adur in West Sussex, it was unlikely to have funded a very localised shingle movement study, especially with its funding constraints.

5.109 The most recent detailed Summary of Accounts for Hastings Borough Council is for 2010/11 and this indicates that of the budget of £20m for that year, the Council spent around £123k on coastal protection (1%). Thus, it is unlikely that a project of this scale could have been – or could be – funded.

Less successful elements of the Pathfinder project

5.110 The Pathfinder Team felt that engagement by the Environment Agency throughout the project had not been as strong as they had expected, particularly in relation to the research carried out on shingle movements, which was considered of direct relevance to their activities. In addition, the project was managed by Council staff on a part-time basis, which had slowed up the work at times.

Risks and issues

5.111 The Pathfinder Team highlighted unanticipated risks such as the change in national Government, the reduction in public spending and change in the national funding strategy for coastal defence. However, none of these impacted significantly on the project. The comment was also made that In terms of the fishermen’s ability to adapt the existing beach profile to meet their needs for fishing, one of the risks that was not anticipated was the rapid decay of the bulldozer fleet which they use to haul their boats over the shingle as a result of two very harsh winters.

Costs and type of spend

5.112 The total cost of the project was £115,625, but this does not include the significant support in kind provided by Council staff who took on the project in addition to their existing work commitments.

5.113 Table 5.7 gives a breakdown of costs by type of spend based on information provided by the Pathfinder Team. Around two-thirds of the budget was spent on consultancy support (£73k; 63%), with a further £20k on workshops and communication materials. Staff costs (£22.5k) accounted for 20% of the budget.

Table 5.7: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary & associated costs	£22,500
Consultancy and	Research studies and	£73,125

professional advice	engagement activity	
Capital spend on delivering adaptive solutions		NA
Revenue spend on delivering adaptive solutions		NA
Workshops, publications and other communications materials		£20,000
Small grants		NA
Other (please specify)		
Total		£115,625

Focus on adaptation compared to other priorities

5.114 Table 5.8 gives a breakdown of expenditure by objective, again based on information from the Pathfinder Team.

Table 5.8: Breakdown of expenditure by objective.

Category	Activity	Amount
Engaging the community on coastal change adaptation	Project management and associated costs (e.g. facilitating fishermen involvement)	£34,500
	Book of fishermen's life stories and exhibition material	£12,000
	Events, workshops, etc	£10,125
	Facilitation of history conversations	£7,500
	Film of workshop with the fishermen and the working fishing beach	£2,500
	Development of final web resources and publications	£5,000
	Training and awareness	£5,000
		£2,000
	£66,625	
Adaptation planning	Desk-based research (historical record & shingle movement study)	£9,687
	Shingle movement study (modelling, options & costs)	£30,000

		£39,687
Delivering adaptive solutions	Funf to help implement preferred option(s)	£9,313
Wider economic development not directly linked to coastal change adaptation		
Coastal protection		
Managing flood risk		
Other (please specify)		
Total		£115,625

5.115 As shown, the project was focused mainly on community engagement (£66k; 58%) and adaptation planning (£40k; 34%), with a small amount being used to help deliver the preferred option(s) once agreed (£9k; 8%). In terms of community engagement, a significant proportion of the expenditure was used to produce material documenting the lives and times of the past and present fishing community as a way of raising wider awareness of coastal change. Educational resources were also developed.

Value for money

5.116 A value for money assessment was carried out on the individual elements of the project and on the project as a whole. It should be noted, however, that no formal evaluation has yet been carried out on these elements by the Pathfinder Team. This will be undertaken at the end of the project. No value for money assessment was made of work associated with delivering adaptive solutions as this will be scoped after a decision has been taken on the preferred option.

- **Shingle movement study** – at around £33k, this represented excellent value for money as it was the basis for the whole project, providing an understanding of shingle movement around the harbour and a set of costed options for the fishermen to consider.
- **Historical record** – at around £10k, this was not really necessary for project delivery but will make a useful contribution to the fishermen's museum, which is a significant visitor attraction in Hastings. Thus, it can be considered to represent reasonable value for money.
- **Engagement activity** – a significant proportion of the expenditure was used to produce material documenting the lives and times of the past and present fishing community in a changing coast as a way of involving that community in the project and raising wider public awareness and understanding of the fishermen and coastal change. The expenditure also covered the development of educational materials. Much of this work will leave a lasting legacy and represents good value for money. A total of £12k was paid to the fishermen to cover loss of income, but this was necessary to enable them to engage fully with the project.

5.117 Project management costs were around 19% of the total project cost and were comparable to most other Pathfinders.

5.118 Overall, the project was highly focused on coastal change adaptation and, although

it has not yet finished, it appears to represent very good value for money.

Promising ideas

- 5.119 As the focus of the project was on accretion rather than erosion, the findings will be of interest to other areas experiencing similar issues. It was felt that the approach of not knowing the solution at the outset and carrying out research to understand why the problem) was happening before coming up with options could also be replicated. In addition, the process of capturing the living history of the fishermen is an approach that could be – and has been (e.g. Hampshire, North Norfolk, Sefton and Slapton Line) – used effectively in other areas.
- 5.120 The Pathfinder Team considered that it was not possible for a project of this nature to be self funding. They commented that what worked in this project was to ensure that there was a partnership approach (within the Council and also with the fishermen), and that the fishermen were part of the solution.
- 5.121 However, of the ideas suggested, the approach of capturing the living history of a coastal community could perhaps be self-funding, as shown by the Hampshire Pathfinder where a booklet containing the Stories of Change and timeline is currently being sold to the public to cover reprint costs.

Improvements to the Pathfinder programme

- 5.122 Suggested improvements included allowing time to visit other Pathfinders and providing further resources to support the delivery of adaptation options, although as noted previously, the pilot programme was never intended to solve all of the issues in each area. It was also felt that there could also have been more involvement from Defra during the programme. For example, it was noted that they had been invited to visit the Pathfinder but had declined and there could have been closer monitoring of individual projects.

Retention and dissemination of knowledge and experience

- 5.123 Retention of expertise is not an issue as existing Council staff managed the project. To-date, there has been no dissemination of knowledge (e.g. there is currently no information about the project on the Council website), but this is planned, with the final draft of the research and the historical findings due to have been presented at a multi-agency stakeholder meeting, including other Pathfinders, in December 2011.

Ability of the community to adapt to coastal change

- 5.124 The project has clearly increased the ability of the fishing community – as well as the Council – to adapt to coastal change. By the end of the project there will be a thorough appreciation of the likely future coastal change process that will affect not only the fishing beach but the wider coastline. This should enable the Council to plan much better for the future and enable the fishermen to adapt their fishing industry. The project, by its completion, should also allow a consensus to be reached as to the best next steps to take to allow the fisherman to operate from the fishing beach both in the short, medium and long term.

Community funding expectations revealed by Pathfinder

5.125 The Pathfinder Team commented that, *“The fishermen had no expectations about funding for adaptation and were astonished and pleased to be taken seriously by Defra.”* Of course, how the adaptation option ultimately chosen by the fishermen will be funded is still uncertain.

Specific lessons for the planning system in terms of adaptation

5.126 No specific lessons for the planning system in terms of adaptation were highlighted by the project.

Lessons for future policy on coastal change adaptation

5.127 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. It was felt that the approach adopted in Hastings worked well in practice, being an excellent way to raise awareness and understanding about a complicated issue. However, it was unclear how the adaptation option chosen by the fishermen would be funded. It was felt important that the Environment Agency took the lead on this type of adaptation activity.

5.128 The main barriers to adaptation were considered to be finance and, to a lesser extent, staff resources. In terms of overcoming these barriers, it was felt that by having a greater common understanding of the issues it should be easier to target resources in the future. However, *“The key barrier of financial resources is not easy to overcome in this current public sector climate – but perhaps with a greater evidential base it is harder to argue against any future investment as the implications of no action are too high risk. Setting out without a solution also helps, as it is easier to engage people if everyone has an equal stake and role to play – a consensus can be reached, with agreed outcomes, a shared understanding and agreed solutions.”*

5.129 In terms of paying for adaptation, a partnership approach was considered essential. European funding could be an option for external funding over time, but, in the short term, it was felt that Government needed to provide funding for adaptation options/solutions to keep up the momentum gained from Pathfinder.

Summary and conclusions

5.130 This has been a highly targeted – and, to-date, successful – project, aimed at developing adaptation options to deal with accretion in liaison with the fishing community, which has resulted in a much greater understanding by all participants about the impacts of coastal change on the coastline around Hastings, the likely impacts of climate change in the coming years and the role the fishing beach plays in protecting other coastal users. In doing so, the project has clearly increased the ability of the fishing community – as well as the Council – to adapt to coastal change.

5.131 The project has clearly been focused on adapting to coastal change and it appears

to have met the other three funding criteria. Although the project is not yet finished, it appears to have provided very good value for money and has contributed to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change (in this case, accretion) and providing practical lessons that can be shared.

Jurassic coast pathfinder project (Dorset)

Background

Dorset County Council received £376,500 to explore planning for, and managing, adaptation to coastal change on the 'Jurassic Coast'. This included the communities of Sidmouth, Charmouth, Seatown, Weymouth, Ringstead and Swanage.

Coastal change issues

Coastal change has shaped the 'Jurassic Coast' of East Devon and Dorset and its communities have historically experienced a mix of coastal erosion and flooding risks. These risks are likely to be exacerbated by climate change which will add to the activity of change on a stretch of coast which is already characterised by dramatic and unpredictable landslides and other erosion impacts. The challenges faced by the six communities are set out below, all of which are due to a change in the policy within the SMP from Hold the Line to Managed Realignment and/or No Active Intervention over the medium to long term:

Sidmouth

Due to its regional importance, the long term plan is to continue to Hold the Line such that the risk of flooding is reduced for at least 100 years. However, in the eastern town, the SMP policy could result in residential property and gardens facing erosion, which could also increase the risk of flooding.

Charmouth

The change in SMP policy will result in the damage, and ultimately loss, of a World Heritage visitor centre and part of the car park, with change being through a catastrophic storm event rather than a gradual process. Cliff top properties will become increasingly at risk from erosion, including episodic landslips.

Seatown

The village could lose a popular public house, private property, a coastal path and beach car park, with change occurring catastrophically during a major storm.

Preston Beach Road, Weymouth

This major access route into the town, which runs between the sea and a SSSI, is currently protected but in the long term this will become increasingly expensive, technically challenging and unsustainable.

Ringstead

This village comprising 25 private properties and a caravan park is currently protected by a defence scheme but Managed Realignment in the medium to long term could result in loss of property and part of the caravan site. A Scheduled Ancient Monument and the South West Coast Path could also be affected.

New Swanage

This is the area consists of a dense mixture of private property and large hotels, some of which are very close to the cliff top. A low sea wall protects the toe of the cliffs, which are designated as a SSSI for their geological interest. With a move to Managed Realignment in the longer term, cliff top property (private households and hotels) and public access could be at increased risk.

Summary of proposed approach

- **Community engagement:** the overall aim of this project is to ensure that coastal communities are well equipped to understand, debate and take part in decisions about coastal change, which will enable them to adapt and become more resilient to change. Site specific coastal change scenarios and a range of visual tools for engaging with and informing communities, are a key part of this. Networks of coastal change champions and facilitators, seminar series, education projects and work with local businesses and land owners, are all helping to inform and prepare communities for change
- **Adaptation planning:** development of a plan to help householders identify independent resilience activities they can carry out. Consideration of how local spatial planning can best support adaptation to coastal change, together with delivery of “Change we can plan for?” seminars.

Main outputs and outcomes⁵⁸

- **Scenario planning workshops** at the six case study areas, making use of high quality **visualisations** to illustrate the potential impacts of coastal change, leading to improved **awareness of coastal change issues** among key stakeholders in these communities, as well as among coastal managers and the communities themselves
- **Training** for community leaders, **exchange visits** for communities facing change and **training** for a network of **facilitators** within the public sector, increasing **capacity to lead and manage debate about coastal change**
- A **research project into how spatial planning** can best support sustainable adaptation to coastal change
- A **public exhibition** showcasing the conclusions from the scenario planning workshops and raising awareness
- Baseline and follow-up **public opinion surveys** within the six case study areas
- An **education project** to embed coastal change in the Geography curriculum locally and equip future generations with the knowledge and skills to address coastal change issues
- Increased **resilience** among communities – four of the six communities are considering emergency resilience plans
- Improved **dialogue between coastal managers and communities** – a number of specific proposals are under consideration, including the possible rollback of a key community building threatened by erosion

⁵⁸ With the exception of the spatial planning research project, the activities have all been related to community engagement.

Delivery of activity

5.132 Details of the activities delivered, including a summary table showing what was delivered and at what cost, compared with the original outputs and budget submitted in the bid, are given in Annex I. In brief, the following activities were carried out under each overarching aim:⁵⁹

Aim 1: Coastal communities who are well informed about coastal change

- Site specific coastal change scenario planning workshops
- Development of coastal change presentation materials, including visualisations using LIDAR data and aerial photography
- Arts-science project to raise awareness and understanding of coastal change

Aim 2: Coastal communities who are well equipped to debate coastal change

- Training and support for a network of coastal change champions such as parish councillors
- Training for a network of coastal change facilitators
- Jurassic Coast Conversation – exchange visits for communities facing change

Aim 3: Coastal communities who can play a meaningful role in decisions about coastal change

- Coastal change decision-making road map

Aim 5: Coastal communities who are supported in the testing and acceptance of practical action to adapt to coastal change.

- Business planning tool for SMEs

Aim 6: Future generations of coastal communities who are aware of the changes they face in the long-term and better prepared to deal with them

- ‘Coastal Conflicts’ educational initiative

Aim 7: A spatial planning system which is well-equipped to reconcile the potential conflicts between a sustainable approach to coastal change on the one hand, and onshore/offshore development pressures on the other

- Spatial planning and coastal change research

5.133 The Pathfinder project remained reasonably faithful to its original project plan, with 11 of the original 16 workstreams going ahead. Resources were diverted from some of the original ideas into other areas when it became clear through contact

⁵⁹ No activities were carried out under Aim 4: Coastal communities who are more resilient and well-prepared to deal with coastal emergencies as well as long-term change.

with other Pathfinders that they were unlikely to add any value to what they were learning from similar, more advanced (in terms of timescale), larger or more ambitious projects. For example, the proposed 'trial negotiations' with property owners were not taken forward when it became clear that other Pathfinders were doing this 'for real'. Resources from this were diverted into other areas of the project, particularly the scenario planning workshops, which proved to be more resource intensive than originally envisaged.

5.134 In addition, funds were diverted to two new activities:

- **Project continuation/exit strategy fund** – allocated to the Dorset Coast Forum to provide on-going support and advice to local communities.
- **Community Adaptation Fund** – the bid did not include any resources for funding adaptation solutions as it was felt that this might change the process and it was not possible to second guess what might be needed. However, it was subsequently felt that some funding should be available to take forward some of the practical adaptation options which emerged from the scenario planning process (e.g. start-up funding for local coastal change fora which have been established as a result of Pathfinder, feasibility studies into options for rolling back infrastructure, facilitating dialogue between key stakeholders to address issues identified during the workshops). Further information on the adaptation options generated by the workshops is given in Annex I.

Benefits to individuals and the community

5.135 The following benefits, which are linked to the project aims, were identified. Further details of the evaluation of these benefits are given below.

- **Coastal communities are better informed about coastal change (Aim 1)** – there was a demonstrable improvement in the awareness of coastal change issues among key stakeholders in the six communities (see feedback from workshop participants and exhibition attendees below) although this was not matched by a measurable increase in awareness in the wider communities of the Jurassic Coast (see residents' survey below).
- **Coastal communities are better equipped to debate coastal change (Aim 2)** – there was a significant improvement in the awareness across the public sector partners involved in the project of why and how effective stakeholder engagement could promote sustainable adaptation to coastal change. A cohort of community leaders was developed to lead and manage the debate about coastal change within their communities and a small network of trained public sector facilitators was established to better support communities in debating and addressing coastal change and other issues. The Swanage Coast Forum was established to take the Pathfinder work forward.
- **Coastal communities can play a meaningful role in decisions about coastal change (Aim 3)** – as a result of capacity building and awareness raising activities, stakeholders involved in the Pathfinder process felt better equipped to influence the decision making process (see feedback from workshop participants below).
- **Coastal communities are more resilient and well-prepared to deal with coastal emergencies as well as long-term change (Aim 4)** – the project

contributed to a growing realisation within communities that they needed to take action for themselves to increase their resilience to coastal change, irrespective of action taken by central and local Government (see feedback from workshop participants below). Four of the six case study sites were now considering community emergency resilience plans for their areas.

- **Coastal communities are supported in the testing and acceptance of practical action to adapt to coastal change (Aim 5)** – there was an obvious improvement in the dialogue between coastal management professionals and residents in the six communities (see feedback from workshop participants below). One case study community was now actively investigating the potential for roll-back of a key community building threatened by erosion.
- **Future generations of coastal communities are aware of the changes they face in the long-term and better prepared to deal with them** – the project led directly to a significantly raised profile for Geography and Coastal Change in the school curriculum locally. It also gave a cohort of the most gifted and talented students a unique opportunity to study coastal change, and in doing so potentially prepared a future generation of community leaders to deal with the issue (see evaluation below).
- **A spatial planning system which is well-equipped to reconcile the potential conflicts between a sustainable approach to coastal change on the one hand, and onshore/offshore development pressures on the other** – the project contributed to a growing awareness of the need and potential for spatial planning to better address coastal change and for local authorities across the Jurassic Coast to collaborate to ensure a consistent approach. The key findings of the report are given in Annex I.

Evaluation of the benefits

5.136 Evaluation was an integral part of many of the workstreams. Some of the key formal evaluation exercises conducted during the course of the project were based on feedback from:

- participants in the scenario planning workshops
- attendees at the public exhibitions
- participants in the education project
- residents in the wider community tracked via telephone opinion survey ‘before’ and ‘after’ the project.

Feedback from participants in the scenario planning workshops

5.137 The workshops formed the centre-piece of the project. A total of 205 people attended, of whom 102 completed evaluation forms (50%). The feedback suggested that:

- **The process significantly improved the understanding of local residents and businesses about the impacts of coastal change on their location.** While the feedback from other stakeholders (which included local authorities, statutory bodies, NGOs and community groups) was less emphatic, it was also noteworthy that they too increased their understanding of the impacts of coastal change on specific locations, suggesting that professionals benefited from such

engagement as well as communities themselves.

- **Better understanding of the impacts of coastal change perhaps inevitably led to an increase in concern among residents and businesses.** In isolation this would have been an undesirable outcome so the response to this question should be considered alongside the response to point 3 below.
- **The process did, however, leave residents and businesses feeling better prepared to deal with the impacts of coastal change.** As with point 1, there was also a positive response to this question from professionals.
- **The process gave all stakeholders a better idea of who is involved in managing coastal change and about how decisions are made.** This was an explicit objective of the project.
- **The process left residents and businesses feeling much better able to take part in decisions about coastal change.** Again, this met another stated objective of the project.
- **All stakeholders felt that the process had identified a wider range of options to adapt** – again, a key objective of the project.
- **Stakeholders felt very clearly that the process gave them a better understanding of others’ points of view.** While not an explicit aim of the project, this was one of the more powerful and positive pieces of feedback.

5.138 A detailed summary of the feedback received is given in Table 5.9.

Table 5.9: Summary of feedback from participants in scenario planning workshops.

Question	All participants (1 = disagree, 5 = agree)	Residents/ businesses only (1 = disagree, 5 =agree)
1. Overall, the workshops have improved my understanding of how coastal change may impact on [location]	3.4	3.9
2. As a result of the workshops I am less concerned about how coastal change might impact on [location]	2.5	2.2
3. The workshops have left me feeling better prepared to deal with how coastal change might impact on me	2.9	3.3
4. After the workshops I have a better idea of who is involved in managing coastal change in [location] and about how decisions are made	3.4	3.5
5. After the workshops I feel better able to take part in future decisions about how coastal change is managed in [location]	3.7	3.9
6. The workshops have helped develop a wider range of options for [location] to adapt to coastal change in future	3.8	3.9
7. As a result of the workshops I have a better understanding of other stakeholder’s point of view	3.8	4.0
8. I think the Pathfinder workshops were well organised and well run	4.4	4.5

Feedback from attendees at the public exhibitions

- 5.139 During the course of the scenario planning process, the need to engage a wider audience beyond those involved in the workshops became apparent. As a result, the Pathfinder Team organised a series of public exhibitions in Swanage, Weymouth, Charmouth and Sidmouth during June and July 2011.
- 5.140 A selection of techniques were used to advertise the exhibitions, including: a press release which led to coverage within the local press and popular websites (e.g. the BBC News website), information within the newsletters of partnerships and organisations (e.g. the Dorset Coast Forum newsletter and Parish Council newsletters), handing out leaflets and flyers and placing posters in popular community locations (e.g. post offices, restaurants and shops).
- 5.141 The exhibition content was comprised of display boards detailing the following:
- A timeline illustrating how the Jurassic Coast has changed over the last 100,000 years
 - What coastal change is, and how it impacts upon communities
 - How coastal change is managed and who makes decisions on the coast
 - Why some coastal communities need to plan for alternatives to coastal defence
 - The outcomes of the scenario planning workshops
 - The visualisations of coastal change produced for the scenario planning workshops
- 5.142 The exhibitions were viewed by a total of 602 individuals of which 84 (14%) completed evaluation feedback forms. When asked whether they felt better informed about the impacts of coastal change and how it is managed on a scale of 1 to 5 (1 = disagree, 5 = agree) the average score from exhibition attendees was 4.35. When asked whether the exhibition had improved understanding of how the coast has changed in the past and may change in the future, the average score was 4.34. A detailed summary of the feedback is given below in Table 5.10.

Table 5.10: Feedback from public exhibitions, June-July 2011,

	Swanage	Charmouth	Sidmouth	Average
Q1 Overall , the exhibition has improved my understanding of what coastal change is and how it is managed	4.30	4.52	4.23	4.35
Q2 The exhibition has improved my understanding of how the coast has changed in the past and may change in the future	4.39	4.39	4.23	4.34
Q3 As a result of the exhibition, I am more aware of how I may be personally affected by coastal change	4.20	4.10	3.90	4.07
Q4 I am now more / less concerned about how coastal change might impact upon communities on the Jurassic Coast	2.77	2.47	2.58	2.61
Q5 I think the Pathfinder exhibition	4.45	4.67	4.26	4.46

content was interesting and the event well organised				
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Feedback from Jurassic Coast Pathfinder Education Programme

5.143 Significant benefits were also generated via the educational aspects of the project. These benefits could be measured in terms of the impact within schools and pupil development as much as in terms of coastal change adaptation. Examples included:

“We want to share our experiences with other schools and are seriously looking to replicate a similar project with the next cohort of geographers’

“Students...have helped to produce a resource that will be used in the teaching of geography in future years”

“The theme of coasts in being reintegrated into the Year 7 curriculum using resources from this project to support it”

“The project has enhanced the students knowledge and appreciation of coastal processes and I will use this to kick start their learning for GCSE Geography”

Feedback from public opinion surveys

5.144 Two public opinion surveys were conducted to gather:

- Pre-project baseline data on opinions and awareness to feed into the project
- Post project data to see if there was any difference in awareness

5.145 Two telephone surveys involving over 600 adults living in the six case study areas – Charmouth, Preston, Ringstead, Seatown, Sidmouth and Swanage – were carried out in October/November 2010 and in July/August 2011.

5.146 The first wave survey produced some very useful and revealing baseline information such as:

- 24% of people had heard of the SMP, of which only 31% knew what the SMP policy was for their area – together suggesting that less than 10% of people in coastal areas were aware of one of the key policy mechanisms for deciding how their coast will be managed in future.
- 59% felt ‘not very well-informed’ or ‘not at all’ informed about the decision-making process surrounding coastal change.
- 57% felt ‘not at all’ involved in the decision-making process regarding coastal change, and a further 33% answered ‘not a great deal’.
- 37% said that they would like more involvement in the decision making process around coastal change, with a further 16% answering ‘maybe’.

5.147 However, the second survey revealed a lack of statistically significant change in awareness of and opinions about coastal change in the wider communities surveyed. The Pathfinder Team suggested that this may be explained by:

- The conscious decision within the project to focus on those with most at stake, and to do so via direct contact rather than indirectly via the local media, thereby restricting the 'reach' of the project message.
- The fact that the large size of some of the sample areas (e.g. Swanage and Sidmouth) inevitably included many people who were not directly affected by coastal change, or would not perceive themselves to be.

5.148 It was noted that the number of people who attended the public exhibitions (who gave very positive feedback) was similar to the number surveyed and so it could perhaps be concluded that the project had a positive impact on those with whom it was able to directly engage, but not on those who were only exposed to it indirectly. The Pathfinder Team commented that while it might have been possible to reach a wider audience via a more high profile project, this could have resulted in an unacceptable trade-off with both the quality of the contact they enjoyed with those who did participate in the project, and their ability to manage the engagement process without the risk of the issues being misinterpreted, misrepresented or sensationalised.

Additionality

5.149 The Pathfinder Team noted that the programme coincided with the start of a period of significant budgetary pressures within local authorities, so found it difficult to see how the project might have been kick-started in the absence of Pathfinder funding.

5.150 While it is possible that some of the individual workstreams might have gone ahead (e.g. training for facilitators, support for community leaders and perhaps some limited engagement activity), it is unlikely that such as large scale community engagement programme could have gone ahead without Pathfinder funding. In the case of 'Coastal Conflicts' educational initiative, a DVD had been prepared to send to schools highlighting issues around coastal change, but Pathfinder funding allowed a full training programme to be built around these issues for teachers, provided financial support to schools to develop their coastal change projects and learn outside the classroom, and brought it all together at the end with conference. The DVD became one of the support materials for the project but without Pathfinder funding, it would simply have been sent to schools for them to consider, greatly reducing the likely impact of the initiative.

5.151 The Pathfinder Team also pointed out that part of the power of Pathfinder was that it was interpreted positively by communities as a signal from Government that it wanted to support them in adapting to coastal change rather than ignoring the issue. As such, even if alternative sources of funding had come forward, it was felt that the process may not have been as effective, as it would not have had the explicit backing of central Government.

Less successful elements of the Pathfinder project

5.152 The Pathfinder Team identified a number of lessons learned:, including

- ***The balance between building adaptive capacity and delivering adaptation action*** – with hindsight, it was felt that the bid should have included a provision

for funding to deliver specific adaptation actions, as the perception that the project might not lead to practical outcomes was one of the obstacles to engagement at the early stages. As noted above, a Community Action Fund was subsequently set up to address this.

- **Choice of case study sites** – although reasonably content with the choice of six case study sites, which presented a diversity of issues, the Pathfinder Team wondered whether more could have been learnt from a different selection of case study sites as at one site the view that coastal defences were needed was very strong.
- **Depth versus breadth** – with hindsight, the range of activities was too wide. The central role of the scenario planning exercises in the six case study sites soon became apparent, and if doing the project over again, more attention and resources would be focused on this element and less on some of the more peripheral, coast-wide activities.
- **Earlier recruitment of dedicated project team** – the time taken to recruit and establish a dedicated team to take the project forward was underestimated.

5.153 Although not specifically mentioned by the Pathfinder Team, one of the less successful activities within the project appears to have been the Arts-Science collaboration. A contribution of £10,000 was used to part-fund a series of projects under the ExLab (Exploratory Laboratory) process, the aim of which was to increase mutual understanding of artists and scientists. Coastal change was just one of the themes being explored through these projects and, as such, may have become ‘lost’ among all the other messages.

5.154 In addition, a decision was taken early on not to involve the local media in helping to publicise the Pathfinder activities due to the risk of the ‘wrong’ messages being transmitted. Other Pathfinders have worked well with the local media (e.g. Cuckmere) and this approach may have restricted the ‘reach’ of the project beyond those most affected by coastal change as perhaps shown by the results of the follow-up public opinion survey (see paras. 5.144-148). However, much depends on the relationship a local authority has with its local media and, in this case, it was felt that the relationship was not sufficiently strong to risk involving them closely.

Risks and issues

5.155 A detailed risk register was created at the outset which identified and helped mitigate most of the key risks encountered. There were, however, some unintended consequences. While these were anticipated in general terms, they could not be entirely foreseen. For example, as the project was reaching the end, a group of residents in Sidmouth submitted a planning application to East Devon District Council for 200m of rock armour to defend Pennington Point from coastal erosion. This was interpreted by some as a failing of the Pathfinder process. While it was difficult for the Pathfinder Team to be objective about this, their conclusion was that such an application would probably have been forthcoming regardless of whether the Pathfinder process had taken place. If there was a failing, it was perhaps the inability to engage the residents who submitted the application fully in the Pathfinder process (although this was not for want of trying). Perhaps the lesson from this that statutory bodies and local authorities need to engage early with communities facing change before they have convinced themselves that defence is the only option.

Costs and type of spend

5.156 The total cost of the project was £376,500, but this does not include in kind contributions provided by Dorset County Council and other partners, which were estimated to range from £50,000 to £100,000.

5.157 Table 5.11 gives a breakdown of costs by type of spend based on information provided by the Pathfinder Team. Around one-third of the budget (£126k; 33%) was spent on workshops, publications and other communication materials, with around 17% (£62k) on consultancy support. Staff costs (£161k) represented 43% of the total budget.

Table 5.11: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs	£161,470
Consultancy and professional advice	Spatial planning report, facilitator training engagement activity	£62,262
Capital spend on delivering adaptive solutions		NA
Revenue spend on delivering adaptive solutions		£27,000
Workshops, publications and other communications materials not included above		£125,768
Small grants		NA
Other (please specify)		
Total		£376,500

Focus on adaptation compared to other priorities

5.158 Table 5.12 shows a breakdown of expenditure by objective, again based on information provided by the Pathfinder Team. By far the largest expenditure was on community engagement (86%), with significantly smaller amounts on adaptation planning (4%) and delivering adaptive solutions (7%). The latter was a new addition to the project to help fund some of the ideas generated by the scenario planning workshops. As noted for some other Pathfinders, all community engagement activity, whether it was related to coastal erosion or coastal flooding, was included under the heading of 'Engaging the community on coastal change adaptation' as in most communities both issues were relevant.

Table 5.12: Breakdown of expenditure by objective.

Category	Activity	Amount
Engaging the community on coastal change adaptation	Scenario planning workshops	£67,117

	Visualisations	£25,536
	Arts-science project	£10,000
	Coastal champions training	£5,518
	Facilitator training	£25,528
	Jurassic Coast Conversation (exchange visits)	£13,937
	Coastal Change decision-making toolkit	£10,000
	Business planning tool for SMEs	£10,000
	Coastal Conflicts educational initiative	£24,000
	Project continuation/exit strategy fund	£25,000
	Project support for these activities	£88,891
	Publicity/dissemination of findings	£10,623
		£324,810
Adaptation planning	Spatial planning research study	£14,766
Delivering adaptive solutions	Community adaptation fund	£27,000
Wider economic development not directly linked to coastal change adaptation		
Coastal protection		
Managing flood risk		
Other (please specify)	Project evaluation	£9,914
Total		£376,500

Value for money

5.159 In determining value for money, an assessment was made of the individual elements of the project and of the project as a whole. It should be noted that two of the activities (coastal change decision-making road-map and business planning tool for SMEs) have not yet been completed and so no assessment has been made.

- **Scenario planning workshops** – of the community engagement activity, the largest expenditure was on the 12 scenario planning workshops (£67k). These were highly successful events, attended by over 200 people from the six case study areas, which provided detailed feedback on which conclusions could be drawn and a set of adaptation options for further consideration. At £5.6k per

workshop, this activity represented very good value for money. four of the six case study communities were now taking forward an emergency planning exercise with the support of their local authorities giving specific consideration to coastal change risk.

- **Facilitator training** – around £25.5k was spent on training a network of 30 facilitators from county and district councils across Dorset and Devon. Some of these facilitators ran the scenario planning workshops, obtaining very positive feedback (Table 5.9), and the officers will be able to facilitate at future stakeholder engagement events on the Jurassic Coast. At £850/person, this represented good value for money.
- **Training for community leaders** – the training and support given to 13 community leaders (£5.5k; £426/person), who will be able to lead and inform the debate around coastal change in their communities,⁶⁰ also appeared to be good value for money.
- **Jurassic Coast Conversation** (£14k) – the original intention was to stage a series of events about coastal change culminating in conference in 2011 to spread best practice and promote networking between communities facing coastal change. In view of concerns over ‘event overload, an alternative approach was adopted of arranging two full-day site visits of all six case study areas. In total, 42 people went on the visits (£330/person) and, although this was a very limited number, they tended to be in leadership positions within their communities and organisations. A regional event for SW local authorities was also carried out in June 2011. Overall, this activity seems to have represented reasonable value for money.
- **‘Coastal Conflicts’ project** – this project cost £24k and aimed to expand the existing educational initiative with Jurassic Coast secondary schools, providing additional training for teachers and support for schools to study coastal change with real case studies. Seven (out of the original nine) schools participated and a conference held at the end of the initiative was attended by over 100 delegates training and facilitation costs. There appears to be a strong legacy impact as many of the schools have stated that coastal change will in future be a stronger part of their Geography teaching, that resources generated by the project will be used in future and that they will work with primary schools within their catchments to integrate coastal change into the curriculum. Without Pathfinder funding, the ‘Coastal Conflicts’ DVD, which formed the basis of the existing initiative, would simply have been sent to schools for them to consider, greatly reducing its likely impact. This activity appears to have represented very good value for money.
- **Arts-Science project** – one engagement activity that appeared to represent poorer value for money was the Arts-Science project. As noted previously (para.), the approach taken was to support a major artistic initiative within which coastal change one of a number of themes. A more targeted approach which integrated more closely with the mainstream engagement process would have been more effective.
- **Spatial planning and adaptation report** – on adaptation planning, research was commissioned into the role of the spatial planning system in addressing

⁶⁰ Feedback was sought on whether, as a result of the training, they felt better equipped to fulfil this role and the average score was 4.2 (1 = disagree; 5 = agree).

coastal change along the Jurassic Coast at a cost of just under £15k. The report examined how and where the issue of coastal change could be addressed through spatial planning, and where this might conflict with other planning objectives. It also made recommendations on how the spatial planning system can best deal with dynamic coastal change. As such, it is of relevance nationally and represents excellent value for money.

- **Community adaptation fund** – six applications have been received totalling just under £50k (compared to a budget of £27k). In addition to the applications from Charmouth and Swanage (for a Coastal Change Forum), two applications have been received from schools that were involved in the education project (one would cascade the Pathfinder learning to primary schools within its catchment, the other is a project to compare and contrast conservation approaches in coastal locations with conservation in inland locations) one from West Dorset District Council to better understand coastal processes at Ringstead with a view towards developing a new Beach Management Plan (this was agreed with the community following the dialogue initiated by Pathfinder) and one from the Jurassic Coast Trust to support publication of a Purbeck Guide which tells the story of coastal change, proceeds from the sale of which will be recycled into further educational work on the Jurassic Coast. The bids, all of which seem worthwhile projects, will be assessed against set criteria and recommendations made for funding. The fund will enable a range of adaptation options to progress further and, thus, represents very good value for money.
- **Project continuation/exit strategy fund** – using underspends from various activities within the project, £25k has been allocated to the Dorset Coast Forum to provide on-going support and advice to local communities. While no details are available on the type of support and advice to be given and the length of time it will be available, the principle of developing a phased exit seems a good one and should represent value for money.

5.160 Project management costs (staff salaries and associated costs) were around double those in other projects at 42%, but this is not surprising given the high level of involvement of the Team in preparing for and managing the community engagement events.

5.161 Overall, the project appears to have been highly focused on coastal change adaptation and represents excellent value for money.

Promising ideas

5.162 The project has produced several promising ideas, which warrant continuation and extension, particularly:

- **Scenario planning workshops** – the approach taken of using scenarios of future change to inform discussions within communities via facilitated workshops could be replicated in the other locations within Dorset and more widely. It was felt that the real value came from the process of engagement via the workshops which went on around the scenarios, rather than the scenarios *per se*. Indeed, the approach of using a mock newspaper to stimulate discussion before convening events was used in Somerset with more limited success,

- **Visualisations of coastal change** – high quality digital visualisations of change using LIDAR and aerial photography showing what the coast might look like should erosion continue to the fullest extent of the 20, 50 and 100 year risk lines identified in SMPs were used very effectively as part of the scenario planning workshops and public exhibitions and could be replicated elsewhere. Indeed, similar visualisations were also used in Cuckmere, Hampshire and Sefton. Significant economies of scale could be achieved by commissioning visualisations at a national scale.
- **Educational initiatives** – seven schools along the Jurassic Coast were given financial and practical support to mount investigations into how coastal change would affect an ‘adopted’ stretch of coast. Students conducted field trips, research and interviews with coastal stakeholders and reported their findings to a Pathfinder Schools Conference. This project could be replicated in a wide range of coastal areas for relatively limited cost and would ultimately lead to a significantly higher level of coastal literacy among the coastal residents and decision-makers of tomorrow.
- **Research into spatial planning and coastal change** – research was commissioned into the role of the spatial planning system in addressing coastal change along the Jurassic Coast. This work could be replicated elsewhere.

5.163 The view of the Pathfinder Team was that while physical adaptations such as roll-back of property could be partially self-funding, it was difficult to see how community engagement activities could be, other than in the sense that effective engagement upstream would save public money downstream as there would be more realistic expectations and a wider range of more affordable adaptation options available to reduce pressure on the public purse. In terms of who should fund this type of activity, it was felt that the benefits of stakeholder engagement arising from Pathfinder suggested that local authorities should invest in the capacity to manage this kind of dialogue as a core function. The benefits of doing so would not be restricted to coastal change, but would be of value in the growing range of areas where a more informed, less adversarial conversation is needed with communities about what central and local government can and cannot do. The costs of doing so were felt to be relatively modest.

5.164 However, while effective community engagement was considered to be a core activity for local authorities, the Pathfinder Team felt that the costs of delivering some other types of adaptation action meant that adaptation would be limited if left to local authorities to fund alone. They felt that in the short to medium term an increasing proportion of the budget for coastal defence should be diverted to support sustainable forms of adaptation. They also pointed out that if a long-term perspective was taken, they would offer better value for public money, and would often deliver additional benefits which coastal defence could not. Consequently, they felt that at some point adaptation should be able to compete for funding on a level playing field with conventional coastal defence schemes.

Improvements to the Pathfinder programme

5.165 No specific improvements were suggested in terms of the programme, with the Pathfinder Team commenting that “*Partners in the Jurassic Coast Pathfinder greatly appreciated the freedom to develop the projects without onerous guidelines or*

restrictions being imposed by Defra. The simple reporting requirements were also welcome.” However, a number of useful lessons were learned in running the project which were set out in paras. 152-154.

Retention and dissemination of knowledge and experience

5.166 The three Pathfinder Team members were all on fixed-term contracts but were led by a permanent member of staff within the County Council so knowledge and experience should be retained. Dissemination of the lessons learned from the project has been an important aspect of this Pathfinder, and has been achieved through:

- attendance at and participation in national, regional and local events to identify and share lessons learned during the course of the project;
- collaboration with other Pathfinder authorities throughout to learn from each other;
- a prominent web presence for the project and outputs from it to promote understanding of the issues to a wider audience:

<http://www.jurassiccoast.com/400/category/the-coastal-change-pathfinder-project-247.html>

- targeted promotion via the local media.

Ability of the community to adapt to coastal change

5.167 Based on the feedback from the scenario planning exercise and subsequent actions taken by the six communities, it appears that they are now better able to adapt in the following key respects:

- **Greater awareness of risk** – as well as leading to practical steps to improve resilience, heightened awareness of risk also led to better psychological preparedness to deal with it.
- **Planning for resilience** – four of the six case study communities were now taking forward an emergency planning exercise with the support of their local authorities giving specific consideration to coastal change risk.
- **Planning for long-term adaptation** – some of the case study communities were beginning to look at relocating vulnerable assets. They will need further support, however, in assessing the feasibility of different options and finding the resources to adapt.⁶¹

Community funding expectations revealed by Pathfinder

5.168 The Pathfinder Team commented that public expectations that Government should and would ‘do something’ were high, perhaps unrealistically so in some

⁶¹ The Charmouth community is looking to roll back the Charmouth Coast Heritage Centre. The Parish Council has submitted an application to the Community Adaptation Fund for a study into the options for its relocation and the feasibility of attracting funding for relocation (e.g. from HLF) as a necessary first step. Other communities that have also started to look at relocating vulnerable assets include Seatown (car park) and Sidmouth (Alma Bridge).

communities. In the areas where the project enabled concerted engagement with communities, it was possible to manage these expectations to a more realistic level. More widely, it was felt that care was needed not just to give the message to communities that 'there is not enough money to pay for defences', but to ensure that the opportunities arising from change and the alternatives on offer were explored. It was felt that this needed to be done in partnership, with both the message and the means being co-ordinated between local authorities, central government and its agencies.

Specific lessons for the planning system in terms of adaptation

5.169 As part of the project, consultants⁶² were commissioned to look into the role of the planning system in supporting coastal change adaptation. In addition to a number of specific recommendations for local planning authorities on the Jurassic Coast, (see Annex I), the following recommendations were made for central Government:

- National policy should continue to require local authorities to plan for coastal change within LDFs (or new-style local plans), and to collaborate in the production of such plans, particularly where SMP boundaries include more than one local authority.
- Defra should work closely with DCLG to ensure that the policies in the PPS25 Supplement (Development and Coastal Change) are included in the new National Planning Policy Framework (NPPF).
- The NPPF should maintain and reinforce the guidance contained in PPS25 Supplement and the accompanying practice guidance, that LPAs should take account of the evidence and policies contained in SMPs when preparing local planning policies. Local policies that do not conform with those of the SMP, should be subject to scrutiny by the Regional Flood and Coast Committee.
- Looking forward to the next round of SMPs, Government should consider how they could be given a firmer statutory basis, including an implementation plan and the funding needed to deliver this.
- Additional technical guidance is needed on the means by which adaptation measures referred to in PPS25 Supplement can be implemented (i.e. how to identify CCMA and how to facilitate rollback), including funding mechanisms, drawing on the lessons learnt through the Pathfinder projects around the country.
- Defra's flood and coastal defence funding formula should enable investment in community planning, including the relocation of at-risk properties, where this contributes to SMP policies. For example, an increasing proportion of the public funding available for coastal defence could be used to support sustainable adaptation and in particular be directed to supporting adaptation in communities where continued or new coastal defence is not an option.
- The role of Housing Associations in the implementation of rollback policies should be explored further.

⁶² Land Use Consultants (2011). *Jurassic Coast Pathfinder Spatial Planning Research Project*. Final Report. Prepared for Dorset County Council by Land Use Consultants, July 2011.

Lessons for future policy on coastal change adaptation

5.170 Views were sought on whether adaptation could work in this way, how any barriers could be removed and who should pay for adaptation. It was felt that the original aims of the Pathfinder remained valid and, indeed, had been validated by the project. The only possible question mark was over the aim of ensuring 'continuity of community' in all instances. The point was made that some existing coastal communities cannot be regarded as 'sustainable communities' in the terms defined in previous Government policy – i.e. they have limited public services, infrastructure, no public transport, etc. – and if they did not exist, it is very unlikely that they would be created in these locations again. This therefore raised the question about whether ensuring 'continuity of community' was an appropriate aim in all locations facing change, or whether the 'maintenance and/or creation of sustainable communities' should be the over-riding aim of policy in this, as in other, areas.

5.171 The key barriers to delivering adaptation were considered to be:

- Public understanding and awareness
- Funding for delivering adaptation action

5.172 In terms of addressing the issue of **public understanding and awareness**, a number of key lessons for community engagement were learned from the project and highlighted by the Pathfinder Team. These are summarised below:

- **Good process design is the key to successful engagement** – training a network of public sector facilitators not just with the functional skills to manage a group discussion, but with the planning skills to design an effective process provided invaluable.
- **An open, honest approach is needed** – the experience of the Pathfinder project suggests that, to have a sensible and constructive discussion about adaptation options, the statutory sector and coastal management professionals need to be as open and honest as possible about what they know about the risks, and about what can and cannot be done within the prevailing economic and regulatory climate. There is also role for the state in requiring the best information to be provided to would-be property owners to enable them to make informed decisions about risk.
- **There is opportunity in coastal change as well as threat** – communities facing coastal change do not instinctively associate it with opportunity, but Pathfinder demonstrated that with structured and facilitated discussion, most communities had little difficulty in identifying a range of potentially positive outcomes from coastal change.
- **An ongoing commitment to stakeholder engagement is required** – engagement must be maintained over time as a start-stop process could lose the momentum and undermine the goodwill generated to date.
- **An inclusive approach is a pre-requisite** – where there are existing conflicts or differences of opinion about future management options between communities and regulators, these are more likely to be addressed and resolved if **all** the relevant stakeholders are brought together in the same room under a

'neutral' banner.

- ***A picture speaks 1,000 words and 10,000 'high-level statistics'*** – the project invested significantly in high quality visualisations of coastal change to make the reality of change more accessible to communities and to illustrate the likely impacts of SMP policy for their areas. The feedback from participants was that these demonstrated powerfully both the implications and inevitability of change, and in doing so helped them appreciate the need to adapt, and the importance of thinking about adaptation now, even if the predicted impacts of change might be some way off. There are important lessons from this in the way that the evidence collated by the National Coastal Erosion Mapping exercise is presented to the public.
- ***Engaging those with most to lose*** – effort needs to be made to ensure that residents in properties at risk contribute to the process. Doing so as part of a well-facilitated workshop, where tensions can be managed, and where an alternative point of view is usually available to challenge preconceived ideas can provide an effective means to ensure that legitimate concerns are aired, and that the collective efforts of many stakeholders are focused on addressing them. .
- ***Engaging 'future generations' of coastal residents and decision-makers*** – the Jurassic Coast Pathfinder project sought to do so with a specific focus on secondary schools, the Geography curriculum and how young people might be better engaged in the issue of coastal change.
- ***Expectations are high but can be managed*** – expectations on the role of the state in dealing with coastal change are very high, nowhere more so than in people's perception of the 'right' to compensation for the value of property threatened by coastal change. However, a key learning point from the scenario planning workshops was that most people in property at risk were pragmatic and while there may be understandable emotional attachment to such property, very few people were unprepared to consider relocation if an appropriate package of support was available.
- ***Engaging stakeholders in coastal change who do not think they have a stake*** – in addition to the usual 'hard-to-reach' groups, there are many stakeholders who probably have an interest in coastal change but do not realise it, and they can prove difficult to engage. The main groups in these categories are (i) residents of coastal communities beyond the areas facing imminent or significant risk and (ii) visitors to coastal towns and their rural hinterland. (i) Involving these residents in the engagement process can change the character of the debate, turning the focus from the interests of a small number of individuals to those of the wider community..(ii) Engaging visitors to coastal areas can be difficult but understanding why they are attracted to the coast is clearly important as they play such an important part of the local economy and can inform future marketing and adaptation planning for the future.
- ***Persuading the silent minority to make itself heard*** – the Pathfinder Education project produced a revealing piece of anecdotal evidence in terms of the risks and costs faced by the owners of threatened properties. School children interviewed a number of property owners in their own homes and some of them said that although eventually losing their property was obviously a concern, they accepted that they could not resist natural processes and they did not really expect anything to be done about it. Hearing such views in a workshop context challenged some of the accepted wisdoms about where

responsibility for managing coastal change really sits, and illustrated how individuals and businesses can also take responsibility for themselves.

5.173 In terms of funding for adaptation, the Pathfinder Team felt that, in the short-term, Pathfinder had established momentum that it would be unfortunate to lose and that making modest and targeted Government funding available to implement adaptation actions which had emerged from the initial Pathfinder projects would be useful. However, as noted previously (para.), it was felt that in the longer term, with the exception of community engagement activity, adaptation activity should be funded by diverting an increasing proportion of the budget for coastal defence to sustainable adaptation. The point was made that, *“At the very least, proposals for adaptation should be able to compete on a level playing field with coastal defence schemes, using a revised assessment of costs and benefits which addresses the long-term.”*

5.174 While it was felt that there was undoubtedly scope for communities and individuals to take more responsibility for reducing their exposure to coastal change risks, the Pathfinder Team considered that there was an ongoing role for Government to ensure that:

- good information about risk which supports long-term decision making was made available to all
- actions taken by one community or area took account of the impacts on neighbouring communities
- sustainable adaptation was supported by a regulatory climate and fiscal mechanisms which reflected the fact that the coast was a national, not merely a local, asset
- a national planning policy framework supported sustainable adaptation to coastal change.

Summary and conclusions

5.175 This has been a highly successful project that has delivered a significant number of benefits that have been consistently evaluated throughout. Benefits have included: improved awareness of coastal change among key stakeholders in six case study communities, as well as among coastal managers and the communities themselves, increased capacity to lead and manage debate about coastal change; and increased knowledge and skills among school children to address coastal change issues. The project has also carried out a research project into how spatial planning can best support sustainable adaptation to coastal change, which has national applicability. As a result of the project, a number of communities are considering emergency resilience plans and actively looking into adaptation options identified during the scenario planning workshops. An adaptation fund has been set up to help fund some of these options. In addition, a number of very useful lessons have been learned about community engagement, which could be taken into account in revising the CAPE guidance. In delivering these benefits, the project has clearly demonstrated excellent value for money.

5.176 As with some other Pathfinders, the focus of the project has largely been on adapting to coastal change in terms of erosion and flood risk. No expenditure has been identified for managing flood risk, but this seems a reasonable approach as

the two issues need to be tackled together in developing adaptation options for the case study areas. The project has also clearly met the other three funding criteria and contributed significantly to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change (although less has been learned about the costs and benefits of different approaches) and providing practical lessons that can be shared.

Lincolnshire coastal change pathfinder

Background

Lincolnshire County Council received £810,000 to explore planning for, and managing, adaptation to coastal change for the whole coastal area of the county.

Coastal change issues

Around 40% of Lincolnshire's land base is at or below sea-level and has always been vulnerable to coastal flooding and erosion. The coastal zone comprises much of the East Lindsey District and the whole of Boston Borough and South Holland District, amounting to 220,000 people and 103,000 properties. The most vulnerable stretches of the coast are currently well protected from flooding (and have flood warning systems). However, future climate change, with a resulting sea level rise and increased storminess, could exacerbate the risk of flooding, including overtopping and inundation from the sea. At the same time, active coastal erosion processes, already necessitating high levels of protection along the east coast, are expected to intensify and spread to the north and south.

Summary of approach

- **Community engagement:** working with the local community to equip them with knowledge and information on flood risk. Undertaking a project with the community of Mablethorpe to improve involvement in adaptation planning. Improving knowledge of the "hidden" community of caravan occupants to improve ways of engaging with them in future.
- **Adaptation planning:** developing principles and potential spatial planning options through a Coastal Study. Developing comprehensive evacuation plans. Introducing a single Innovation Learning and Development programme to bring together expertise and innovation on coastal change adaptation.
- **Delivering adaptive solutions/managing flood risk:** promoting uptake of property resilience measures for future and existing development.

Main outputs and outcomes

- **Community engagement:** *Coastal awareness-raising campaign on emergency preparedness*, resulting in increased awareness of flood risk and preparedness; targeted testing of *engagement techniques* to increase flood risk awareness, resulting in increased awareness and preparedness; Mablethorpe Case Study, which will deliver a range of awareness-raising activities.
- **Adaptation planning:** *Coastal Study* completed which highlighted some significantly different contextual issues in Boston compared to the rest of the coastal zone; *mass evacuation research* project completed, resulting in improved plans for targeted evacuation of more vulnerable groups; and improved *knowledge of 'hidden' caravan community*, leading to further work to cover migrant communities in the Boston area; *delivering design solutions:* work carried out in Boston to develop a handbook of flood resilience solutions and a toolkit for developers working in flood risk areas.
- **Other activity:** *development of an economic coastal model* through the National Coastal Improvement Programme.

Delivery of activity

5.177 Details of the activities delivered, including a summary table showing what was delivered compared with the original outputs submitted in the bid, are given in Annex J. In brief, the project covered:

- **Lincolnshire Coastal Study**⁶³ – building on the findings of the Study to develop potential spatial development options and strategies for delivery.
- **Social complexity and decision making for emergencies** – using social modelling to improve emergency preparedness, resulting in improved plans for the targeted evacuation of more vulnerable groups during a major coastal inundation incident.
- **Improving information and communications with communities in the coastal area** – including increasing the awareness of the Environment Agency's Floodline service and developing improved flood warnings.
- **Local engagement and adaptation support** – engaging with coastal communities such as Sutton Bridge and Long Sutton and supporting the development of local community-based approaches to adaptation and resilience.
- **Promoting design solutions** – work carried out in the Boston area to: make current and future development more resilient in the event of flooding; develop a design manual for the Lincolnshire coast; and actively promote measures to promote flood resilience in new builds.
- **Case Study (Mablethorpe)** – a range of activities including providing a permanent community information and carrying out a 3-year awareness raising programme on coastal change.
- **Improving knowledge of the hidden coastal community** – a programme of work to provide much greater information about the characteristics of the 'hidden' community in static coastal caravans and developing more effective mechanisms to support them in the future.
- **National Coastal Innovation Programme** – a programme to help improve understanding and develop innovative responses to coastal change, including development of an economic model.

5.178 Most of the elements set out in the original bid have been achieved, or are scheduled for completion by September 2011. Significant changes were made to the following activities:

- **Lincolnshire Coastal Study** – change in Government policy towards Regional Spatial Strategies removed the main vehicle for developing principles and options into a strategy delivered through public consultation. Partners agreed to reconvene the Coastal Study steering and technical working groups to guide an agreed approach whereby the development of LDFs would take account of the

⁶³ The Lincolnshire Coastal Study was commissioned to consider the current and possible future relationship between sea level rise and coastal flooding, economic regeneration, planning and housing provision, agricultural production, tourism, social deprivation, the natural environment, transport and health. The research was commissioned at the previous Government's request in preparation for the next planned Regional Spatial Strategy review in 2011.

Coastal Study directly in the absence of regional planning policy.

- **Mablethorpe case study** – this was initially conceived as a community-based study of the impact of climate change on a particular coastal settlement. Capacity issues locally, as well as the risk of duplication with the methodology used by projects promoting better communication, led to a change in focus, although the original intended outcomes were retained. With significant opportunities emerging for linking existing initiatives on the ground, the project was developed to provide a permanent community-run information and events hub, acting as a focus for ongoing engagement and collaboration with the local community. This project is currently ongoing, with completion of the community hub facility scheduled for September 2011, after which a three year programme of coastal change awareness-raising will commence.

5.179 A substantial proportion of the funding originally allocated to the Coastal Study follow-up work was re-allocated to improve other aspects of the Pathfinder programme, including ongoing work to ensure that the legacy of the programme was embedded in community and stakeholder approaches to the coastal zone.

5.180 **Additional works** were also commissioned as a result of the changes outlined above. These projects, which are listed below, are currently in development and are scheduled to conclude before March 2012, with a key focal point being a coastal conference in November 2011, which will act as an information sharing event open to all coastal Pathfinder authorities, as well as local and regional partners in the Lincolnshire area.

- Extension of ‘hidden communities’ research to cover migrant communities in the Boston area.
- Development of policy options for future development of caravan sites by applying the research undertaken through the Pathfinder programme as formal planning policy.
- Extension of coastal communications campaign.
- Extension of coastal business model to other areas – development of the model through the Coastal Communities Alliance (CCA) for use by other coastal areas around the UK.
- Coastal Management conference to launch Pathfinder report.

Benefits to individuals and the community

5.181 The significant benefits delivered by the Pathfinder programme are summarised below, together with the relevant success measures. As a relatively strategic-level programme, the intended benefits were designed to be delivered at community level and for stakeholder partners. However individual benefit can be inferred from broader improvements such as greater public awareness and preparedness for flooding, improved engagement methods and the development of improved links with local businesses.

- **Completion of option development and implementation strategy stages of Lincolnshire Coastal Study** – a key objective was achieved with the completion of the Study. This highlighted some significantly different contextual issues in Boston compared to the rest of the coastal zone, particularly the

pressures on sustainable development arising from development restrictions. Longer term benefit will be measured in terms of the extent to which the principles developed through the Coastal Study are reflected in developing LDFs over the next two years.

- ***Mass evacuation research and improved planning*** – research report produced leading to the development of improved plans for implementation of targeted evacuation of more vulnerable groups as part of the response to an impending incident of major coastal inundation.
- ***Improved coastal awareness on emergency preparedness through a widespread campaign*** – building on existing awareness raising activity and working with partners, delivery of a high profile campaign within the coastal zone involving a wide range of materials and methods (e.g. posters, flood information packs, etc.) to increase emergency preparedness. Surveys in the highest risk coastal flood areas before and after the campaign showed that the proportion of people who felt quite or very prepared for flooding had increased from 40% to 49%, those that had completed a flood plan had increased from 16% to 31% and those registering for flood warnings through Floodline had increased from 34% to 46%. More people had also made up a flood kit and checked their insurance cover.
- ***Increased understanding from baseline market research, lessons learned on most effective form of engagement and improved awareness of flood risk in South Holland and East Lindsey Districts***
 - *Baseline market research* – provided a deeper understanding of local community perceptions in Lincolnshire, demonstrating that a high proportion of people along the coast do understand that their property is at risk of flooding, and have taken some action to prepare themselves. However, it also showed that a significant proportion of people still need to take further steps to ensure they are well prepared for a flood event (about 25% of those interviewed had not signed up to receive flood warnings or completed a household flood plan). The research also indicated problem communities where more engagement will be needed.
 - *Engagement* – learning that, overall, the most effective style of engagement was 1:1 with individual parishes rather than a more broader engagement with several parishes. Although resource intensive, it enabled the workshop to be very locally focused, allowing more specific issues to be addressed.
 - *Improved awareness and preparedness* – as a result of the project, over 1,200 properties have now signed up to receive flood warnings through Floodline Warnings Direct. In South Holland District, 54% of workshop attendees said they would take action to reduce their or their community's risk of flooding following the workshops, including creating a household flood plan and acting as a community volunteer. Another key success was in Sutton Bridge, where the community identified the issue that as a community they were unprepared for a flood event, and subsequently decided that to overcome this issue and adapt to future flood risk, they

needed to create a Community Local Emergency Planning Group.

- **Promoting sustainable design solutions** – work carried out in Boston delivered a range of benefits including:
 - development of a Handbook of flood resilience measures for existing properties with national applicability
 - development of a toolkit for developers working in flood risk areas
 - contribution towards a Supplementary Planning Document in relation to flood risk areas
 - guidance for emergency planning comments on planning applications in flood risk areas

These will be made available on the Lincolnshire County Council website, and the accrued benefit will be measured by the extent of usage within the county, and by take-up in other locations.

- **Mablethorpe case study** – a range of benefits including:
 - awareness raising exhibition based on community knowledge and developed by the local community
 - permanent community information hub building, managed by a new community association
 - exhibition space as base for community engagement into the future
 - three-year programme of community exhibitions raising awareness of coastal change
 - completion of the community hub scheduled for September 2011.

Success will be measured over the medium term including usage by the community and stakeholders .

- **Improving knowledge of the hidden coastal caravan community** – activities have included: engaging with the caravan community, gaining their trust and working with them to build an understanding of the caravan lifestyle and issues; carrying out a large scale face-to-face survey; and conducting aerial thermal surveys to give a visual insight into the potential numbers of people occupying caravans both in and out of the season. A range of benefits has been delivered including:
 - building good relationships with the caravan community
 - drawing some strategic conclusions about the population (e.g. there is a blurred distinction between ‘visitors’ and ‘residents’; awareness of flood risk is still too low, etc.), which can feed into emergency planning and future planning policy.

Further benefits will accrue from the extension of this work to cover migrant communities in the Boston area.

- **National Coastal Innovation Programme** – an economic model has been designed to test a range of ‘scenarios’ relating to economic development, inward investment, climate change adaptation and housing market changes in the coastal region, thereby informing policy makers as to various strategic options. Modelling is looking at 3 scenarios – business as usual, increased perception of

flooding and a major event (catastrophic flood) occurring. Work is still ongoing but some early findings are that:

- Business definition of 'coastal' does not align with authority or policy makers definition of 'coastal'
- Perceived threat of coastal flooding is highest in businesses most closely associated with the coast
- However, the perceived threat is not so great as to restrict investment by the business community
- Investment decisions of existing businesses) strongly linked to macro-economic conditions and especially perceptions around the 'age of austerity'.

Additionality

5.182 It was felt that Pathfinder funding had unlocked the potential for a range of initiatives to deliver more than they could have done on their own, particularly with regard to achieving an intensive, face-to-face engagement programme across the whole coastal area. For example, existing initiatives to promote the Environment Agency's Floodline service and public consultation on a review of shoreline management practices were integrated with the need to promote better public understanding of coastal flood risk for emergency planning purposes, and the need for wider engagement and consideration of the broader implications for future planning and regeneration policy arising from the coastal study. Joined together through the impetus and pump-priming resource provided the Pathfinder programme, this set of requirements could be shaped into a joint coastal communications campaign, which served to develop a more consistent partnership message as well as provide a framework and baseline for detailed face-to-face engagement with coastal communities and businesses.

5.183 It was felt that the funding had also provided the means to undertake tailored communications and research activities providing added value by joining up existing initiatives, and by establishing a lasting legacy of improved engagement between communities and agencies, with a more robust evidence base to inform policy-making now and into the future

5.184 Additionally, the Pathfinder resource had enabled the development of a range of 'one-off' outputs, such as the Handbook of Resilience Measures, the Mablethorpe Community Hub and analytical methodology for better understanding coastal businesses and the needs of vulnerable communities that will underpin strategic and local policy development throughout the coastal zone in the medium and long terms.

5.185 In summary, it was felt that the Pathfinder funding had resulted in a legacy of concrete outputs and improved ways of working that would be embedded across strategic and operational practice by partners, while raising levels of community engagement and involvement with this practice.

Less successful elements of the Pathfinder project

5.186 Several of the projects, particularly the engagement activity in Sutton Bridge and

Long Sutton and the Mablethorpe case study, were slow to start because of capacity issues in partner organisations, resulting in an over-run. The Mablethorpe case study also had to be refocused as noted above. In addition, delays were incurred by complex funding arrangements in relation to the European funding, which became essential as the scope of the project was redesigned.

Risks and issues

- 5.187 It was noted that the capacity of a number of partner organisations to engage fully in the Pathfinder programme was more restricted than had originally been foreseen when the programme was initially developed. This situation was in large part brought about by budgetary pressures within these organisations. In the case of regional bodies, particularly Government Office, and local representation on the part of bodies such as Natural England, diminution of functions and reorganisations led to reduced capacity to engage in all aspects of the Pathfinder programme.
- 5.188 The abrogation of RSSs, and the impending introduction of major changes to the spatial planning system, led to a need to rethink implementation of broader policy as originally envisaged with the Coastal Study. In particular, it created difficulties in detailed consideration of local planning issues and development of supplementary planning documents through the Sustainable Housing project undertaken in Boston. It was not possible, for example, to consider specific sites in the light of detailed policy and generic assumptions had to be made about granting of planning permission in order to further explore the issues associated with appropriate development in areas identified as at risk by current coastal hazard mapping techniques.
- 5.189 It was felt that a positive issue was the extent to which local communities demonstrated a greater receptiveness than might have been expected to communication about coastal flood risk. It was expected that the launch of the coastal communications campaign 'We're prepared for coastal flooding in Lincolnshire – are you?' might provoke an adverse reaction on the part of local residents and businesses, anxious about property values and the risk of deterring inward investment. In the event, responses to broad surveys and to more focused, face-to-face engagement elicited generally positive responses, with a particular emphasis on easier access to more information.

Costs and type of spend

- 5.190 In addition to the Pathfinder budget of £810,000 secured from Defra, there were contributions of £286,300 from Lincolnshire County Council and Coastal Study partners and £56,000 from East Lindsey District Council, as well as support in kind from the County Council and other partners (5 FTE).⁶⁴ Additional funding of £20,000 was secured from ADEPT⁶⁵ and £82,000 from the Rural Development Programme for England (RDPE). Together with the additional funding, the total

⁶⁴ 5 FTE from Lincolnshire County Council, Environment Agency, East Lindsey District Council, Boston Borough Council and South Holland District Council

⁶⁵ Formerly the County Surveyors' Society (CSS).

budget was £1,254,300. To-date, of the £810,000 provided by the Pathfinder programme, £651,290 has been spent, with the remainder (£158,710) being committed.

5.191 Table 5.13 gives a breakdown of expenditure by type of spend based on information provided by the Pathfinder Team. Over half of the total budget was/will be spent on consultancy support (56%), with a further 26% on workshops, publications, etc. and 18% on staff costs.

Table 5.13: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs in delivering activities	£102,050 [£40,000] ⁶⁶ £142,050
Consultancy and professional advice	Engagement and adaptation; Mablethorpe case study; hidden communities; design solutions; mass evacuation; Coastal Study; coastal innovation	£399,418 [£57,000] £456,418
Capital spend on delivering adaptive solutions		NA
Revenue spend on delivering adaptive solutions	Coastal Study	£2,877
Workshops, publications and other communications materials not included above	Coastal awareness campaign; engagement and adaptation; Mablethorpe case study; hidden communities; coastal innovation	£146,945 [£61,710] £208,655
		£651,290 [£158,710]
Total		£810,000

⁶⁶ Costs in square brackets indicate unspent but committed funds

Focus on adaptation compared to other priorities

5.192 Table 5.14 gives a breakdown of expenditure by objective, again based on information from the Pathfinder Team. The largest expenditure (actual and planned) was on community engagement (£292k; 36%), with 26% of the budget (£214k) being spent on adaptation planning and 20% (£163k) on flood risk management. Smaller proportions were spent on wider economic development (£80k; 10%) and on programme management (£61k; 8%). All community engagement activity was included under the heading of 'Engaging the community on coastal change adaptation', although some is likely to have been related to 'Managing flood risk'.

Table 5.14: Breakdown of expenditure by objective.

Category	Activity	Amount
Engaging the community on coastal change adaptation	Awareness raising campaign	£106,309)
	Engagement and adaptation	£49,129) £230,438
	Mablethorpe case study	£75,000)
	<i>Extension to awareness campaign</i>	£51,210)
	<i>Publications</i>	£3,000) [£61,710]
	<i>Conference</i>	£7,000)
		£292,148
Adaptation planning	Design solutions work (Boston)	£83,760)
	Mass evacuation	£90,000) £186,860
	<i>Development of policy options for caravans</i>	£25,000)
	<i>Coastal Study support</i>	£2,000) [£27,000]
		£213,860
Delivering adaptive solutions		
Wider economic development not directly	Coastal economic model	£50,000

linked to coastal change adaptation	<i>Extension of model</i>	[£30,000] £80,000
Coastal protection		
Managing flood risk	Coastal Study Hidden communities work <i>Extension to hidden communities work</i>	£17,592) £105,400) £122,992 [£40,000] £162,992
Other (project management)		£61,000
Total		£651,290 [£158,710] £810,000

Value for money

5.193 In determining value for money, an assessment was made of the individual elements of the project and of the project as a whole.

- **Coastal Study** – unforeseen changes to the regional planning system, in particular the suspension and imminent abolition of RSSs, meant that while the options were developed, the Study was completed as an extensive baseline to inform future strategy, rather than as part of a consultation draft revised RSS. At around £20k, its ultimate value will depend on the extent to which the principles will be reflected in LDFs developed over the next two years.
- **Mass evacuation research** – this study was carried out at a cost of £90k to inform emergency planning and has led to the development of improved plans for implementation of targeted evacuation of more vulnerable groups as part of the response to an impending incident of major coastal inundation. This appears to have represented very good value for money.
- **Coastal awareness campaign on emergency preparedness** – at a cost of around £106k and building on existing awareness raising activity, this project resulted in measurable improvements in emergency preparedness within the Lincolnshire coastal zone (which includes 220,000 people and 103,000 households) and represents very good value for money.

- **Local engagement and adaptation support in South Holland and East Lindsey Districts** – this project resulted in a significant number of benefits, including: providing a deeper understanding of local community perceptions in Lincolnshire; highlighting communities where more engagement would be needed; demonstrating the most effective engagement methods; and improving awareness and preparedness for flood risk. At a cost of £49k this represented very good value for money.
- **Promoting sustainable design solutions** – this project produced a number of highly useful outputs which have national applicability such as a handbook of flood resilience measures for existing properties, a toolkit for developers in flood risk areas and guidance on providing emergency planning comments on planning applications in flood risk areas. At a cost of £84k, this represents very good value for money.
- **Mablethorpe case study** – this project was re-focused during the Pathfinder programme and will now provide a permanent community information hub, which will be used as a base for a three-year programme of community exhibitions raising awareness of coastal change. However, there will also be wider economic benefits. This project has cost £75k and its value will depend on usage of the facility and the impact it has on coastal change awareness.
- **Improving knowledge of the hidden coastal caravan community** – there was very little knowledge about this population before, making evacuation planning more difficult. The project has come up with some key strategic conclusions about the population that will feed into emergency planning and future planning policy (e.g. a project is now underway to develop the policy for the future development of caravan sites) and has resulted in good relationships being developed with the caravan community. The approach is now being extended to the Boston area. At a cost of around £104k, this appears to represent very good value for money.
- **National Coastal Innovation Programme** – in this project an economic model has been designed to test a range of 'scenarios' relating to economic development, inward investment, climate and coastal change adaptation and housing market changes in the coastal region, thereby informing policy makers as to various strategic options. A project report is due shortly, but the work has already provided some useful insights. The model is being developed through the Coastal Communities' Alliance (CCA) for use by other coastal areas around the UK. Although aimed primarily at encouraging wider economic development, there are clear linkages to coastal change adaptation and, hence, the initial cost of £50,000 appears to represent good value for money.

5.194 Project management costs (staff salaries and associated costs) were around 18% of the Pathfinder programme budget of £810k, but did not include the additional staff costs (5 FTE) from partner organisations.

5.195 Overall, the programme has represented very good value for money, building on and adding value to existing activities and delivering a range of very useful outputs and outcomes, several of which have wider applicability. It has also been able to

lever in other funds, resulting in additional benefits.

Promising ideas

5.196 The Pathfinder programme has produced a number of specific outputs which were designed for wider applicability outside the Lincolnshire coastal zone. The principal outputs to emerge from the programme with this capacity include:

- Evacuation planning research methodology.
- Coastal economic model.
- Communications campaign methodology.
- Handbook of flood resilience solutions.
- Toolkit for developers in flood risk areas.
- Guidance for provision of emergency planning comments on planning applications.

5.197 The Pathfinder Team felt that some aspects of these projects could be embedded within core business of local authorities and partner organisations, such as the results from the evacuation research, the caravan project, and the engagement work. Indeed, in many ways the point of the pathfinder was to embed a different way of working between partner agencies and local communities. This was also true of the approaches to planning and working with developers that were explored in the design solutions project. The provision of the community hub at Mablethorpe was felt to be more a 'one-off' although it does provide a permanent resource to facilitate future engagement in the coastal zone that builds on the work undertaken in the Pathfinder.

5.198 It was also felt that there was scope for drawing more on the willingness of local communities to become involved and contribute. For example, the establishment of a local flood forum was given as an example of a community picking this up and taking on the awareness-raising and preparedness role for themselves, without relying on local authorities to do it for them. However, it was noted that central government funding can be critical in unlocking the potential for joining up and increasing the value of existing initiatives, not least in providing the impetus to undertake the work. More strategic level work, covering an entire section of coast and its hinterland was considered unlikely to attract funding from beneficiaries, particularly when they were often among the more deprived of coastal communities.

Improvements to the Pathfinder programme

5.199 The following comments were made on the Programme: *“The level of freedom from prescription was very welcome, and allowed a flexible approach to developing pilot ideas to be pursued more fully than would have been the case otherwise.”*

5.200 In terms of the Lincolnshire Coastal Pathfinder, the engagement of local partnerships in developing evaluation criteria was found to be helpful. However, it was felt that, with hindsight, the challenges experienced because of capacity issues within partner organisations could have been avoided by planning in greater levels of support for delivering specific projects.

Retention and dissemination of knowledge and experience

5.201 The project was managed by a permanent staff member within Lincolnshire County Council and also involved a wider team from partner organisations, so retention of knowledge and experience should not be an issue. There has been little or no dissemination of information about or findings from the programme so far (e.g. there is no dedicated website or page on the County Council website), but a major dissemination event was planned for winter 2011-2012.

Ability of the community to adapt to coastal change

5.202 Future sea level rise and increased storminess as a result of climate change will increase the risk of coastal inundation in the Lincolnshire coastal zone, as well as impacting on community viability, inward investment and business continuity. A key objective of the Lincolnshire Pathfinder was to ensure that local communities were better informed about the nature and scale of the risk, better engaged in developing policy and operational delivery in response to the risk, and more aware of the measures they can take for themselves to adapt.

5.203 The following evidence was cited as showing an increased ability within the community to adapt to coastal change:

- Increased awareness by local communities of the issues and facts around coastal inundation.
- Increased proportion of better informed community, measured by increased ability to prepare for impacts of coastal flooding.
- Doubled uptake of personal flood plans.
- Increased uptake of flood warning service.
- Improved engagement with key business sectors in the coastal zone, resulting in greater understanding and willingness to address flood risk in their forward planning (e.g. business continuity and resilience).
- Improved policy decision-making based on better communication with local communities and businesses.

5.204 Other examples given were the establishment of a Local Flood Forum in Sutton on Sea to take forward the community's own adaptation approach and the setting up of a community enterprise to manage the Mablethorpe Community Hub. In addition, it was pointed out that the development and testing of a range of communications materials and engagement and involvement methods through the Pathfinder programme had established a platform for partner organisations to build on in maintaining an ongoing engagement with local communities into the future, to support them in sustaining their own adaptation to coastal change impacts.

5.205 These examples clearly show an increased ability within the Lincolnshire coastal zone communities to adapt, but whether they are adapting to coastal change or to coastal flooding risk depends on how the term 'coastal change' is defined and interpreted. In this area, the primary impact of climate change will be increased coastal flood risk, so adapting to coastal change and managing flood risk are regarded as being the same. As noted previously, the definition of coastal change within the Coastal Change Policy consultation is '*the physical change to the*

shoreline, i.e. erosion, coastal landslip, permanent inundation and coastal accretion and thus these activities can be considered to be related to coastal change adaptation.

Community funding expectations revealed by Pathfinder

- 5.206 The Pathfinder Team commented that there was strong community expectation that a range of authorities (variously defined as Environment Agency, central Government, County or District Councils) would manage significant issues arising from coastal flood risk, including warning, response and recovery.
- 5.207 In general terms understanding of coastal flood risk was higher among those who had experienced directly previous flooding events, or were well-informed about them for other reasons, such as professional interest. These members of the community also appeared better informed about measures currently in place to prepare for a coastal event and in their expectations of what would and could be delivered by national and local authorities.
- 5.208 Evaluation of the communications campaign and associated engagement projects had indicated that community willingness to engage with the public sector and improve understanding and preparedness for coastal flooding was greater than might have been expected. It had also suggested that improved understanding was leading to greater acceptance of the need for communities and individuals to take greater local responsibility for managing flood risk. Further work was planned with local communities and businesses to build on the progress made.

Specific lessons for the planning system in terms of adaptation

- 5.209 The Pathfinder Team made the following extensive comments: *“Communities and elected members can be very wary of communicating flood risk at the coast, because of fears of increasing insurance premiums, discouraging inward investment and blighting communities. We found that it was possible to overcome these concerns by joint dialogue to establish a very clear scope for the proposed communications, and by engaging closely with communities concerned to explain fully the nature of flood risk assessment. This was greatly helped by being able to offer practical solutions as part of the engagement process – for example signing up to floodline and making a flood plan.”*
- 5.210 The Team added that, *“An important lesson to emerge was the fact that not all coastal businesses are located at the coast because they have to be. Some are there for historical reasons, rather than because their business operations absolutely require it. However, it is the case that a high proportion of those working in these businesses live locally. This leads back into the question of development, and how one can achieve sustainability for coastal businesses and people if flood risk means trying to avoid strategic housing growth in a flood risk area. The coastal economic modelling sought to delve into this in a little more detail and offer some solutions. Corroborated by the design solutions work, it appears that development*

and growth is not held back by flood risk alone, but by the overall economic structure in the area, of which flood risk is just a part. When looking at the potential for developing specific sites in Boston, it became apparent that the major problem was low land values. This meant that developers struggled to get the return on their investment once the cost of appropriate flood mitigation measures were taken into account. This also has implications for attracting development funding from Community Infrastructure Levy, or s106 agreements.”

5.211 Finally, the Team commented that greater clarity was needed from DCLG and Defra about the linkages between appropriate 'sustainable development' and the need to avoid inappropriate development in flood risk areas. It was felt that DCLG needs to define 'sustainable' if the national planning framework is to make a presumption in favour of sustainable development. This cannot be done locally, because inconsistency in the planning system can lead developers to favour one area over another if local planning authorities have different approaches. This was felt to be a serious hindrance to developing clear policies for the coastal area.

Lessons for future policy on coastal change adaptation

5.212 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. It was felt that adaptation can be successfully achieved through the methods employed in the Lincolnshire Pathfinder. One of the key barriers was considered to be maintaining the organisational and community motivation to participate and contribute and it was felt that some government funding dedicated to this purpose could assist in keeping the issue 'live'. There were also felt to be difficulties with the planning system (see above).

5.213 As noted above, it was felt that greater co-ordination between Defra and DCLG would assist in ensuring that consistent messages about adaptation to flood risk in the coastal plain were presented by Government and could be promoted by local authorities. Co-ordination was also essential between the other key players, all of which had potentially competing interests: Environment Agency with its national agenda working on coasts and main rivers; districts as planning authorities with interests in development; the County Council as Lead Local Flood Authority; Internal Drainage Boards with a focus on agriculture and land drainage (among other things); developers; local businesses; local communities; and emergency planners whose interest is primarily in raising awareness risk and planning for emergency. Because of this it was felt to be essential that partners agreed a core shared message that all could support and disseminate to avoid creating confusion, uncertainty and anxiety among local communities and to avoid the possibility that specific interest groups might take the opportunity to skew the message and take advantage of media interest to overemphasise or misrepresent any aspects of the engagement campaign.

5.214 On payment for adaptation, the view was that it depended on the nature of adaptation. The point was made that physical flood defences, and interventions in areas of coastal erosion, were often beyond the capacity of local communities to fund, and the assumption that the beneficiaries of a particular defence system were those communities directly behind it did not take into account the strategic context

of a defence, or the potential value of various coastal assets to the region or nation at large.

Summary and conclusions

- 5.215 This has been a very ambitious programme involving covering eight separate projects, with significant partner input. Despite a slow start to two of the projects, the programme has been very successful, delivering a wide range of benefits that have been consistently evaluated. Benefits have included: an increase in flood risk awareness and preparedness in the coastal zone as a result of an extensive awareness-raising campaign; improved plans for the targeted evacuation of more vulnerable groups during a series flooding incidence as a result of research into mass evacuation; improved knowledge of 'hidden' caravan community; and the development of handbook of flood resilience solutions and a toolkit for developers working in flood risk areas. Some of this work will have national applicability. In delivering these benefits, the project has clearly demonstrated very good value for money.
- 5.216 The focus of the project has largely been on coastal change and planning for and managing flood risk and, as such, it meets the first criterion set out in the Coastal Change Policy consultation. The project has clearly met the other three funding criteria and has contributed significantly to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared.

Scratby coastal pathfinder project (Great Yarmouth)

Background

Great Yarmouth Borough Council (GYBC) received £296,500 to examine how the coastal community of Scratby can best adapt in the medium and long-term (50 to 100 years) to coastal change.

Coastal change issues

The East Anglian coastline has been subject to erosion for many years with historic references to earlier settlements and properties being lost to coastal erosion. Scratby is a community settlement located on soft cliffs fronted by low dunes and in part protected by a rock berm. The SMP2 indicates that this coastline will continue to erode in all three epochs and has a policy of No Active Intervention (a change from the previous Hold the Line policy). Although only a relatively small number of properties (27) will be at risk by 2020, this will rise to a total of 251 by 2105 (if those affected by loss of the road are included). The SMP2 policy for this area is under review and is likely to be changed to Managed Realignment.

Summary of proposed approach

- **Community engagement:** this project involved working with the local community to support them in developing a medium and long term strategy for adaptation. The project was to be community led and professionally supported, with the community taking the lead in commissioning external experts and in developing options.
- **Adaptation planning:** adaptation planning would involve exploring and testing different approaches to adaptation including the feasibility of rollback, business support and buy and lease back schemes. An agreed community adaptation action plan would be developed.

Main outputs and outcomes

- **Community engagement:** development of a programme of *community education and information*.
- **Adaptation planning:** examination and testing of *equity release and equity transfer schemes* and opportunities; investigation of *sources of external and commercial funding*; exploration of *rollback options*; and development of a *Community Adaptation Management Plan*.

Delivery of activity

5.217 Details of the activities delivered, including a summary table showing what was delivered and at what cost, compared with the original outputs and budget submitted in the bid, are given in Annex K. In brief, the project covered the following tasks:

- **Community education and information programme** – to engage, inform, reassure and support communities and individuals in coming to terms with coastal change (e.g. letters, leaflets, questionnaires, website, information point).

- **Examination and testing of equity release and equity transfer schemes and opportunities** – at the request of the community, research was undertaken into options such as buy and lease back, property exchange programmes and business support programmes. This involved assessment of around 25 options suggested by the community.
- **Investigation of sources of external and commercial funding** that may be accessed to support adaptation programmes.
- **Exploration of ‘rollback’ options** – consideration of possible rollback areas and infrastructure implications.
- **Development of a Community Adaptation Management Plan** – identification of a proposed Coastal Change Management Area (CCMA) and four proposed rollback areas, development of a set of proposed policies and agreement on a Community Statement setting out community aspirations as to how the challenge of coastal change and the development that stems from it should be handled.

Benefits to individuals and the community

5.218 The following benefits were identified by the Pathfinder Team. It should be noted that most of these benefits have not been evaluated. For example, during the first phase of the project, survey work was undertaken to ascertain the level and accuracy of local knowledge relating to coastal change and the SMP, but no follow-up survey was carried out to assess whether there had been an increase in awareness within the community on completion of the project.

- **Community views on coastal change** – the project enabled a large amount of information to be gathered about the views of the community on coastal change and the misunderstandings and inconsistency that existed in terms of the level of knowledge.
- **Better informed community** – through learning about the community’s views, it was possible to reduce the level of misunderstanding about the SMP process and coastal change issues more generally, as well providing information on possible adaptation options and their associated costs.
- **Research into different adaptation options and willingness to pay** – research into different adaptation options, their costs and possible funding sources was an essential part of the project and the findings should have wider applicability. Another important part of the Pathfinder was the ‘willingness to pay’ survey, which will be useful for future adaptation work.
- **Methodological** – the process of canvassing, followed by hand delivery and collection of questionnaires, though time consuming, resulted in high response rates and gave an opportunity to further explain the project; use of the stakeholder workshop in the planning phase empowered the community to come up with solutions and make decisions.
- **Involvement of the community** – the project enabled the community to lead the process, giving them an opportunity to express their views on coastal change, decide on what additional information they wanted (e.g. on adaptation options) and work with other organisations to develop a plan for their future.
- **Community consensus on rollback areas** – there were a number of beneficiaries including:

- the whole community as it empowered them to make decisions for themselves and reduced the risk of unwanted development;
- those living in at-risk properties in Scratby as they have an option to rollback as necessary allowing them to stay in the village;
- other at-risk communities within the Borough where the Council implements the proposed policies;
- GYBC as this work can feed directly into the LDF process; and
- other communities outside the Borough through development of approaches and policies that can be replicated elsewhere

5.219 A summary of benefits, with the direct and indirect beneficiaries, is given below.

Table 5.15: Summary of benefits and beneficiaries

Benefit	Direct beneficiaries	Indirect beneficiaries
Understanding of variation in knowledge within the community	Community	Pathfinder Team
Reduction in misinformation and increased awareness of coastal change	Community (but negative effect for those at-risk)	GYBC (reduced queries and concerns) Future Scratby residents
Increased knowledge from research on adaptation options and funding opportunities	GYBC Central government	Other local authorities
Methods – use of hand delivery and collection of questionnaires to achieve high response rates	Community Pathfinder Team	GYBC Central government Other local authorities
Involvement of the community	Community	GYBC Central government Other local authorities
Community consensus on rollback areas	Community At-risk property owners GBYC	Other at-risk communities

Additionality

5.220 Views were sought on whether these benefits would have been delivered in the absence of Pathfinder funding. It was felt that the Council would not have carried out work on this scale in the absence of Pathfinder funding. The only way in which the CCMA and roll-back areas/policies could have been considered would have been as part of the LDF process, but that would have taken time.

- 5.221 It was considered that without this funding, other parts of the project would need to have been delivered as part of a scheme appraisal or through a community programme to try and reduce the negative (blighting) effects of coastal erosion. It was noted that work had been undertaken by the Borough Council and its consultants to assess the economic case for a northwards extension of the rock berm to slow down erosion to the village of Scratby. It might have been possible to include a small-scale project to look at adaptation options as part of that work. However, this would have required funding from the Environment Agency and/or the Council and, in any case, it was considered highly unlikely that the same level of community engagement and involvement would have been undertaken as was possible under the Pathfinder.
- 5.222 It was suggested that another option could be to develop some small-scale projects with the community, perhaps funded by the Borough Council in association with local charities. However, it was felt that the funding sources for this approach were too uncertain. Alternatively, it might be possible to organise a group of concerned residents to form a community group or charity. They would then be in a position to raise funds which could be used to bring people together for discussions and awareness raising. However, this would be very dependent on having some well-informed residents who would be willing to lead the group and it was considered that support from the local authority would be required if the group's activities were to progress beyond ensuring that people were well informed about the current situation.
- 5.223 It was felt that without Pathfinder funding, the process undertaken would not have been able to explore all the issues to the same depth or to provide as much community engagement and information. This could have resulted in a significant risk that key issues such as inconsistent understanding of the SMP, involvement only of the most vociferous members of the community and an inability to develop a plan that the community could sign up to would not have been appropriately managed.
- 5.224 The Pathfinder Team also commented on the need for follow-up work with the owners of at-risk properties to find out exactly what they required in the way of future help and how this could best be provided. The project considered the at-risk properties as a group rather than looking at individual houses to avoid highlighting the vulnerability of individual properties in case it blighted them. In the absence of future Pathfinder funding, this work would have to be initiated by the Council. However, the costs would be reduced as there would be opportunities to build on previous community engagement, focusing on the main results to assess the potential for tailored outcomes.

Less successful elements of the Pathfinder project

5.225 There were two areas of the project that were considered less successful:

- *low turnout at the drop-in sessions* – turn-out was only 8% of the 526 households in Scratby. However, the two hand delivered and collected questionnaires had response rates of 52% and 35%.

- *low level of interest from businesses* – a range of approaches was used to contact businesses (letters, email, phone calls and offers of visits to their premises), but very few businesses took up these opportunities. It was felt that this might be a reflection of the fact that very few businesses were at-risk from coastal change and because much of the engagement took place over the summer, when holiday businesses were at their busiest. However, even when contacted during October there was little response from businesses.

Risks and issues

5.226 A couple of unanticipated risks and issues arose during the project:

- *Planning* – adoption of the final Pathfinder report was initially delayed, pending its detailed consideration in planning terms via the LDF process. However, this has now been resolved and the report has been received by the Cabinet and will be submitted for planning consideration.
- *Overlap of tasks* – due to a delayed start and the subsequent need to compress the activity, there was an overlap of contractors working on the project which caused a few logistical problems.
- SCEG⁶⁷ meetings – it was sometimes difficult to involve SCEG as they were not able to convene meetings at the appropriate time.

Costs and type of spend

5.227 The Pathfinder was awarded a grant of £296,500 from Defra, of which £211,585 was used for the project. Of the remainder (£84,915), part was retained to pay outstanding items of the project and part was absorbed into the Council's general fund. The Pathfinder Team commented that, *"Although this money is not specifically identified within the Council's budget it may be available for other related work."* Additional in kind support of around £20,000 was provided by the Borough Council. No additional funds were secured.

5.228 Table 5.16 gives a breakdown of expenditure type of spend based on information provided by the Pathfinder Team. In terms of expenditure by type of spend, the project was largely delivered by consultants, with 82% of the budget (£173k) being used for this purpose. In addition to the three consultancy firms used, the project manager was also employed as a consultant due to resourcing difficulties within the Council. This seems a reasonable approach given the size of the Council and the fact that the community was heavily involved in selecting the contractors.

Table 5.16: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs in delivering activities	£19,951

⁶⁷ Scratby Coastal Erosion Group (SCEG), an active community group that has been campaigning for changes to the SMP 2, was part of the Scratby Coastal Pathfinder Management Group (SCPMG) that managed the project.

Consultancy and professional advice	Engagement activities; developing adaptation options; developing a CCMA with the community; project officer costs	£173,159
Capital spend on delivering adaptive solutions		NA
Revenue spend on delivering adaptive solutions		NA
Workshops, publications and other communications materials not included above		£659
Small grants		£1,809
Other (please specify)	Project support costs, beach camera maintenance, parking, conferences, etc.	£16,007
Total		£211,585

Focus on adaptation compared to other priorities

5.229 Table 5.17 shows the breakdown of expenditure by objective, based on information from the Pathfinder Team. Around 53% of the budget (£113k) was spent on adaptation planning, of which just under half was spent on investigating adaptation options such as rollback and the remainder was spent on developing a CCMA with associated policies and identifying suitable rollback areas. Around 45% (£95k) was spent on community engagement activities.

Table 5.17: Breakdown of expenditure by objective.

Category	Activity	Amount
Engaging the community on coastal change adaptation	Understand demographics, inform and communicate with community	£42,193
	Detailed engagement	£53,233
		£95,426
Adaptation planning	Facilitate the community in developing alternatives to allow adaptation to coastal change	£51,384
	Develop a CCMA with the community	£61,276

		£112,660
Delivering adaptive solutions	N/A	£0
Wider economic development not directly linked to coastal change adaptation		£0
Coastal protection	N/A	£0
Managing flood risk	N/A	£0
Other	Community engagement and information sharing	£3,500
Total		£211,585

Value for money

5.230 In determining value for money, an assessment was made of the individual elements of the project and of the project as a whole.

- **Community consultation** – this work was carried out at a cost of £42k to understand the demographics of the community, raise awareness of the Pathfinder process and gain baseline knowledge of the community's views on and knowledge about coastal change. It provided some essential baseline data that shaped the way that future engagement was carried out and highlighted where further information was needed. A survey of the 15 businesses affected by coastal erosion was also carried out, although engagement by business was generally poor, with only one of the 11 businesses that responded expressing an interest in being involved in the project. Overall, as a necessary first stage of the process, it appears to have represented good value for money.
- **Follow-up engagement and development of adaptation options** – this work used the information gained in the community consultation as the basis for engaging further with the community and exploring the options to deliver its vision for the future of the area. These options were then evaluated, shortlisted and consulted on through questionnaires, open days and workshops to produce a list of community-led options. As part of this work, research was carried out on costs and possible funding sources. It was an essential part of the project and the findings of this and other work (e.g. 'willingness to pay' survey – see Annex K) should be applicable elsewhere. At around £105k, this work represented very good value for money.
- **Developing a CCMA with the community** – this final part of project was carried out at a cost of £61k and involved working with the community to identify a proposed CCMA and four proposed rollback areas, develop a set of proposed policies and agree a Community Statement setting out community aspirations as to how the challenge of coastal change and the development that stems from it should be handled. This was an essential final stage of the project and represented very good value for money.

5.231 Overall, all elements of the project were important to the delivery of the project, were well carried out by the contractors and achieved their intended objectives.

The work on developing adaptation options, as well as other survey findings (e.g. willingness to pay) should also have wider applicability. The project findings have been adopted by the Council and are now being considered as part of the LDF process. Although a significant proportion of the original budget was not spent on the project (up to 29%), it still represents good value for money overall. However, its longer term value will depend on how it is taken forward. For example, the potential to use planning gain to help fund rollback in Scratby is likely to be limited due to the residents' concerns over expansion of the village.

Promising ideas

5.232 The project has come up with a number of promising ideas that could be replicated elsewhere:

- **Facilitation approach** – following an approach that began by identifying what the community wanted (in terms of information about the Pathfinder, but also to fill gaps in knowledge) and how they wanted to receive that information provides a strong basis for beginning discussions. This approach could be easily replicated in other areas, although it can be time consuming at the outset.
- **Adaptation options** – the project investigated many different forms that adaptation could take at Scratby. Although the local community indicated (through responses to a questionnaire) that some of these options may be acceptable to them, the major issue was the funding that would be required. Other barriers were also identified that would need to be removed if adaptation options were to be taken forward. The most promising options, and the barriers that would need to be removed, are given below:

Table 5.18: Adaptation options and barriers that would need to be removed

Option	Barrier
Purchase property: at rebuild value at value reflecting the risk of erosion compulsory purchase	funding mechanisms need to be applicable to options, this includes approaches that are currently proposed and/or at the consultation stage (e.g. Defra future funding mechanisms, Tax Increment Financing) people living in at-risk properties suggested they would prefer to stay in their homes for as long as possible restriction placed by Homes Standards requirements if properties are to be purchased by public body/for affordable housing
Purchase property: through private buyers purchasing at the value	as for purchase property, plus issue with proving that people knew (or should have known) about erosion risk even after publication of the SMP2 (especially as SMP2 has not been agreed or adopted, therefore, the policy has not officially changed). The

<p>reflecting the risk of erosion and public money</p> <p>used to make up the difference</p>	<p>SMP2 was first published in 2004, although the first version revised by GYBC was published in 2006</p>
<p>Convert to leasehold⁶⁸</p>	<p>as for purchase property, plus issue with building structure and need for a building survey prior to conversion to leasehold</p> <p>people living in freehold properties may not want their property to be converted to leasehold</p>
<p>Build new properties:</p> <p>to replace at-risk properties when they are lost to erosion</p> <p>to replace at-risk properties when they are lost to erosion for shared ownership</p>	<p>New Homes Bonus could help partially fund option, but unclear if it would be available to replace properties lost due to coastal erosion</p> <p>if new properties are to be built by a public body, there would be a need to borrow funds</p> <p>households on Local Authority housing waiting list may take priority in being offered the new homes</p> <p>planning restrictions</p> <p>people living in at-risk properties suggested they would prefer to stay in their homes for as long as possible, indicating that they may not want to move until their property is at imminent risk of loss. There was little interest in shared ownership (but this could change if it was made clear that the equity in the shared home was equal to the value of the at-risk property and if no rent was payable)</p>
<p>Option</p>	<p>Barrier</p>
<p>Build new properties:</p> <p>to replace at-risk properties when they are lost to erosion</p> <p>to replace at-risk properties when they are lost to erosion for shared ownership</p>	<p>availability of new properties may mean eligibility may have to be linked to estimated residual life (to avoid risk of over-subscription)</p>
<p>Subsidised maintenance:</p> <p>all properties shows as being at risk in SMP2</p> <p>all properties with residual life of <25 years</p>	<p>use of Town and Country Planning Act 1990 would result in charge being placed on the property which could reduce its value on being sold</p> <p>interest of those living in at-risk property in</p>

⁶⁸ The immediate advantage of converting to leasehold is to the property owner by releasing the equity of the property thereby reducing their potential losses caused by blight and erosion. In the medium to long term it may be possible for the funding body to recover this outlay by the rent income.

all properties with residual life of <10 years	<p>subsidised maintenance if a charge is placed on their property (only likely to affect those who were considering moving)</p> <p>where maintenance costs are covered by the Local Authority there may be a need to raise the rents for other tenants to cover the additional costs (if the costs are Borough-wide it may be necessary to offer subsidised maintenance to all those living in properties at-risk from coastal erosion in the Borough)</p>
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- **Community workshop** – the use of a community workshop with invited attendees that are known to have very different views can be a very useful way of bringing people together and achieving consensus. By using an approach based on active, managed debate that is designed to provide the catalyst for creative and positive thinking, this encourages individuals to moderate or change their position to help achieve consensus. This approach was used successfully in developing the Community Statement.

5.233 Views were sought from the Pathfinder Team on which, if any of these options, could be self-funding. In terms of **adaptation options** such as rollback, their ability to become self-funding depends on three factors:

- the willingness of private investors, landowners and/or developers to be involved in implementing adaptation options;
- the level of interest from those living in at-risk properties to move out before their property is lost due to coastal change; and
- the willingness of the community to accept that some change will have to happen.

5.234 In Scratby, it was shown that allowing development on small amounts of land could help cover the costs of making plots available for rollback through planning gain.⁶⁹ Granting planning permission for more open market housing could increase the amount of money that is available to support the owners of at-risk properties. However, the ability to use funding sources such as planning gain is dependent on the appetite of the community for new development. In Scratby, the community did not want the character of the village to change by accepting large amounts of new development. However, this may not be such a significant issue in other communities.

5.235 Options such as purchase and lease back, purchase and rent the property, or purchase and demolish the property and rent the land, were also considered in Scratby. Based on the project findings, the Pathfinder Team commented that: “The

⁶⁹ **Planning gain** refers primarily to the increase in the value of land which results from planning permission being granted for that land. This increase in land value mainly accrues to the owner of the land, but a levy or tax may be applied to divert some of the planning gain to the public sector. In England and Wales, such arrangements are currently negotiated between the developer and the Council, and take place under the terms of Section 106 Agreement.

main problem with these options is that they require a large initial outlay. Income from renting the property (or land) is then returned over the time period until the property (or land) is lost to due to coastal erosion. It can be very difficult for options to become self-funding because (i) the properties that are sold tend to have quite short residual lives and (ii) money is needed upfront to buy them but is only recouped on an annual basis. If there is no initial source of funding, the money to buy the properties either has to be borrowed (incurring borrowing charges) or the option only has to be open to a small number of properties (potentially reducing the time over which money can be recouped). It is difficult to increase rents (to reduce the time needed to recoup all the costs), otherwise they become unaffordable. This was a particularly sensitive issue for the Scratby community. There was also some resistance to moving from being a house owner to a tenant.”

5.236 It was felt that **methodological aspects of the study** could be self-funding or, at least, self-organised where templates, guidance and working materials were made on a website or forum to enable communities to help themselves. For example, the approach to producing a Community Statement could be developed into a guide pack that explained to communities how to work together to develop an adaptation plan. It was felt that this would require some initial funding, probably from central Government to enable access to as many communities as possible. Once set up, communities would be able to initiate development of a plan for themselves. This would save central (and local) Government money over time through reduced involvement.

Improvements to the Pathfinder programme

5.237 Views were sought on whether the programme could have been improved. It was noted that one of the major issues raised by members of the community was the need for the Pathfinder to result in a legacy. There were concerns that this project was undertaking a significant amount of analysis and research but that there would not be any money in the longer term to take any of the findings forward. It was felt that it may have been beneficial to have spread the available money over a longer time period to help communities begin to implement the Plan that they have worked on developing.

5.238 Two other useful suggestions were made:

- **greater collaboration between local authorities at the bidding stage** – there may have been opportunities for different local authorities to address different issues although some overlap is desired as it allows for comparison between communities. Consistent working approaches could also have been applied so that all the projects could feed data into the ‘overall’ project, delivering a much larger data set that could be achieved by any one Pathfinder Project on its own.
- **a staggered approach** – with some projects running in years 2009-2011, some from 2010-2012 and some from 2012-2013 may have provided greater opportunities for sequential learning. Such an approach could have allowed one project to build on the findings of a previous one, moving towards the ultimate aim of delivering a template for use once the Pathfinder scheme as a whole was complete.

Retention and dissemination of knowledge and experience

5.239 The Project Officer who managed the project was an external consultant (an ex-senior Council officer) on a fixed term contract but the key Council officer involved is still in post, ensuring retention of knowledge and experience. There was excellent on-going dissemination of the findings to the community (including community reports) and there is a comprehensive website from which all the relevant material and research reports can be accessed: <http://www.great-yarmouth.gov.uk/environment-planning/planning/coastline-protection/scratby-coastal-pathfinder-project.htm>

Ability of the community to adapt to coastal change

5.240 The Pathfinder Team felt that there was more of an understanding by those at risk and by the wider community that compensation may not be forthcoming and that they would need to consider adaptation options and alternative funding. The fact that the community has agreed a Community Statement identifying a CCMA and setting out policies for rollback demonstrates an increased ability to consider the options to adapt to the impacts of coastal change. The CCMA will ensure that future development in Scratby takes account of coastal change and the Pathfinder report has been taken as a material consideration in the on-going LDF. However, despite this, when questioned, 71% of people, including some in the high risk zones, said they would not change their future plans.

Community funding expectations revealed by Pathfinder

5.241 The Pathfinder Team commented that, at the outset, the expectations of the local community were strongly that the Government should provide support whether that is for defences or for adaptation. Many of the people who attended the drop-in sessions or completed questionnaires raised questions over the funding of rollback. There was also a strong sense of injustice over the apparent lack of public financial support. Many people felt abandoned under the current process and that, although they have not been victims of serious erosion to date, that they are victims of lines drawn on a map.

5.242 It was felt that the Pathfinder project had resulted in a greater understanding of the issues. However, the feeling remained that the system of prioritisation and allocation was unjust. In addition, when questioned about who should pay for the different adaptation options being considered, the majority of people (up to 78% depending on the option), identified that they expected central Government to pay for adaptation options as they would expect them to pay for protection works.

Specific lessons for the planning system in terms of adaptation

5.243 Somewhat surprisingly, the Pathfinder Team did not consider that the project had provided any specific lessons for the planning system in terms of adaptation. However, examination of the report by the consultants commissioned to help the community identify a CCMA and supporting policies for rollback revealed a number of decisions that were taken during the process that may be helpful to others. As

noted previously, it would be useful to distil and other material into a guidance pack for other communities to follow.

- **Coastal Change Management Area (CCMA)** – for simplicity, it was decided to recommend that the CCMA was co-located with the area identified at risk in the SMP as finally adopted, despite advice in PPS25⁷⁰ that it could be a wider or smaller area. It was also recommend that the identification of the CCMA in graphic/map form should always include the rollback areas so that the two sides of the policy – restriction and promotion of development – are seen as a single cohesive approach.
- **Choice of rollback areas** – in view of the community’s concerns about avoiding significant new development, the roll-back areas recommended to the Council were small scale incremental extensions to the village, well related to the existing built up area and easily knitted into the built form. The planned approach to roll-back recommended would enable the Council to secure substantial new planting on designation of the areas, which would be well established by the time significant building takes place further reducing any visual effect.
- **Designation of rollback areas** – it was noted by the consultants that the majority of the Pathfinder projects reviewed took the least proactive approach i.e. that favourable consideration would be given to applications from owners affected by coastal change as long as the proposed plot of land was not unacceptable in terms of established planning issues. It was clear from the outset that the Scratby Pathfinder wanted to go further than this in assisting affected households and businesses to cope with these anticipated events and actions. However, the problem with trying to provide this clearer and more helpful policy framework is the very long timescale over which the changes are predicted and the high degree of uncertainty attached to those predictions. The proposed solution was to clearly identify areas where roll back could commence while accepting that it was not sensible to try to define its ultimate outer boundaries.

5.244 Flexibility was considered to be very important in maximising the chances of a successful relocation, with the needs of individuals being taken into account as far as is possible. It was recommended that in preparing the design code, it should allow for various plot and dwelling sizes and types to be accommodated while maintaining elements of design that would retain the character of the village.

5.245 It was noted that there was flexibility in how the areas of roll-back land were formally designated. One way was to allocate an amount of land adequate for the first phase of development through an appropriate document in the LDF and rely on regular monitoring and review to maintain an appropriate amount of forward land. An alternative was to identify the land in more general terms through a policy to that effect in the Core Strategy DPD rather than as a formal allocation and assess applications against the criteria in the policies. The latter approach was adopted in this case.

⁷⁰ The process following the guidance set out in PPS 25 and its associated Development and Coastal Change Practice Guide.

Lessons for future policy on coastal change adaptation

- 5.246 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. Judging by the Scratby Pathfinder, it was felt that it could work in this way but there were numerous barriers that could affect the potential for adaptation, the most significant of which were associated with funding (see Table 5.18 above). However, in spite of these barriers, it had been possible to develop a plan that identified potential rollback areas. The main outstanding issue was how those living in at-risk properties would be able to afford to develop the plot of land that would be available for them.
- 5.247 The Pathfinder identified a wide range of possible funding sources to pay for adaptation (see Table 5.19), several of which were considered to have potential, although further work would be needed to investigate them further.

Table 5.19: Possible sources of funding for adaptation options.

Source	Possible funds	Potential for funds to be provided
Central Government	Flood and Coastal Erosion Risk Management Funding	Possible but limited funds available
	Flood and Water Management Act (through Regional Flood and Coastal Committees, RFCCs)	Possible – funds would be raised through levy set by RFCC that would require Council Tax to be raised to cover the costs
	New Homes Bonus	Possible – but this may be limited
National Lottery	Lottery grants	Unlikely - the current programmes are not relevant to coastal change ⁷¹
Dredging companies	Money from companies extracting aggregates off the Norfolk coast	Unlikely - it is highly doubtful that companies would be willing to pay towards the options as this could be interpreted as admitting responsibility for erosion
European Commission	Grants	Unlikely – no programmes at present are relevant to coastal change or adaptation to coastal change. It is currently unlikely that there are funds or grants available
	Structural Funds	
	Financial Instruments	
	Action and Operating Grants for non-governmental organisations	
Holiday Park Tax	Business Rates – through Tax Increment Financing	Possible – but the approach has only just been announced by the government as an option and it is not clear if it could be used in an

⁷¹ Since this work was carried out, the new Coastal Communities Fund has been launched (see para. 2.35).

		area where the value of businesses would not necessarily be increased as a result of the money raised (which would have to be repaid)
Local Government	Council Tax	Possible – but Localism Bill raises opportunity for local communities to hold referendum that could mean that increases in Council Tax are not permitted
	Prudential Borrowing	Unlikely – money can only be borrowed against future increases in income, which is unlikely to occur due to coastal change
	Planning gain	Possible – money could be raised by selling land for development
Community organisations	Not-for-profit organisation	Possible – but these would require the community to set up and run the organisation. Financial help may still be needed from other sources
	Trust	
	Company Infrastructure Company	
Private investors	Private landlords	Possible – but care will be needed to ensure rents have to remain affordable
	Bond financing	Unlikely – bonds have to be worth more in the future to encourage people to invest in them, this may not be the case with coastal change

5.248 The project also provided an estimate of the funding needed to pay for the adaptation options identified. In summary, the estimated total costs were:⁷²

- *options to buy all 251 at-risk properties*⁷³ now: £28 million (rebuild value) to £47 million (value if no erosion)⁷⁴ if costs of borrowing are included;
- *options to build new homes to replace those that might be lost*: £48 million; and
- *options to help people stay in their homes for as long as possible (subsidised maintenance)*: £8 million (properties with <10 years) to £48 million (all at risk properties).

5.249 However, these are the maximum estimated costs assuming that all at-risk properties are purchased or otherwise dealt with now. For example, if there was a delay before the properties were purchased (such that their residual life was less), the costs would reduce, e.g. purchasing properties with a 10 year residual life would reduce the costs of this option £13 million. Further details on the costs of each of

⁷² Given as estimated undiscounted costs over 100 years, including borrowing costs where an upfront lump sum of money is required.

⁷³ Number of at risk properties: 27 (to 2020); 32 (2021-2025); 91 (2026-2055); and 101 (2056-2105).

⁷⁴ The community wanted the consultants to consider the full range of possible purchase costs for the at-risk properties even though it is highly unlikely that they would be purchased at a value assuming that there was no erosion risk.

these options are given below:

Table 5.20: Costs of options to purchase properties.

Epoch	Purchase property at (£m):			
	Value if there was no erosion risk (£140k)	Rebuild value (£84k)	Value reflecting erosion risk ^{1,2,3}	Convert to leasehold
By 2020	3.8 (5.1) ⁴	2.3 (3.1)	9.4 (1.9)	2.4 (3.2)
By 2025	4.5 (6.0)	2.7 (3.6)	2.1 (2.8)	2.4 (3.2)
By 2055	13 (17)	7.6 (10)	9.0 (12)	3.8 (5.1)
By 2105	14 (19)	8.5 (11)	14 (19)	1.8 (2.4)
Total	35 (47)	21 (28)	26 (35)	10 (14)

Notes:

1. The epoch totals for the option of purchasing properties at the value reflecting erosion risk are based on the costs if the at-risk properties were purchased now. If there was a delay before the properties were purchased (such that their residual life was less), the costs would reduce. For example, if properties were purchased when they had a 10 year residual life, the total costs of this option would reduce to £13 million.
- 2 Assumed to include the costs of Compulsory Purchase. In fact, the negotiated costs could be lower or, when other claimable costs such as moving, etc. are added, the costs could be higher.
3. Value is calculated based on a typical depreciation curve reflecting the value of leasehold properties as the residual life of the lease declines
4. Based on borrowing at 6% over 10 years (120 months).

Table 5.21: Costs of options to provide alternative properties.

Epoch	Provide alternative property (£m):			
	Give freehold	Give leasehold	Shared ownership	Shared ownership (affordable housing)
By 2020	3.9 (5.2) ⁴	3.9 (5.2)	4.0 (5.3)	4.0 (5.3)
By 2025	4.6 (6.1)	4.6 (6.1)	4.7 (6.3)	4.7 (6.3)
By 2055	13 (17)	13 (17)	13 (17)	13 (17)
By 2105	15 (20)	15 (20)	15 (20)	15 (20)
Total	36 (48)	36 (48)	37 (49)	37 (49)

Notes:

1. Based on borrowing at 6% over 10 years (120 months)
2. Costs are calculated using a spreadsheet and reported here to a maximum of two significant figures, hence, there may be some rounding inconsistencies

Table 5.22: Costs of options to provide financial assistance (subsidised maintenance).

Epoch	Subsidised maintenance (£m):			
	Underwriting value	All properties being shown at risk in SMP 2	All properties with residual life <25 years	All properties with residual life <10 years
By 2020	3.8 (5.1) ⁴	6.3 (8.4)	1.5 (2.0)	1.1 (1.5)
By 2025	4.5 (6.0)	2.8 (3.7)	1.5 (2.0)	1.5 (2.0)
By 2055	13 (17)	14 (19)	4.6 (5.1)	1.1 (1.5)
By 2105	14 (19)	13 (17)	6.3 (8.4)	2.5 (3.1)
Total	35 (47)	36 (48)	14 (18)	6.3 (8.4)

Notes:

1. Based on borrowing at 6% over 10 years (120 months)
2. Costs are calculated using a spreadsheet and reported here to a maximum of two significant figures, hence, there may

be some rounding inconsistencies

5.250 For comparison, estimates were made of what the options might cost if the money was raised annually through an increase in Council Tax for the 46,232 households in Great Yarmouth Borough Council for the next 100 years. The table also shows how the potential increase in Council Tax could be reduced if options to recoup some of the funds are also taken forward. It can be seen that some options could be combined so they are self-funding over time.⁷⁵ By combining options, it may therefore be possible to offset some or all of these potential Council Tax rises. However, this relies on properties being purchased as soon as possible to give enough time for the money to be recouped. In Scratby, questionnaire responses suggested that most people would like to stay in their homes for as long as possible, though this may not be the case in other communities.

Table 5.23: Change in Council Tax for each household in Great Yarmouth Borough.

Increase in Council Tax to fund options (£)						
	Value of there was no erosion risk	Purchased at rebuild value	Purchased at value reflecting erosion risk	Convert to leasehold	Provide alternative property	Subsidised maintenance ²
Total payable per year (on average) ¹	12	7	9	3	12	3-11
Reduction in Council Tax due to potential to recoup funds (£)						
	Selling at the value reflecting erosion risk	Rent property (excluding costs) ³		Rent land for caravans		
Total recouped per year (on average) ¹	-7	-7		-8		

Notes:

1. Amounts payable are given to the nearest whole £ to reflect uncertainty
2. Reflects the difference in costs if only those properties with less than 10 years residual life are eligible for subsidised maintenance or if all properties shown in the SMP2 as being at risk are eligible (regardless of residual life)
3. Assumes 35% of the rental income is spent on maintaining and managing the property

5.251 The estimated increases in Council Tax were often found to exceed the amounts people suggested that they would be willing to pay (with this at around £9 per household per year for the option to purchase properties, £5 to swap properties, £5 for buy and rent back and £8 for help to continue living in the property). Thus, these charges may not be acceptable to the wider population. The option to convert to leasehold (paying property owners the difference in value between a property that is not-at-risk from erosion and the leasehold value) combined with subsidised

⁷⁵ It is important to note that these are 'cash costs' and are not discounted. Therefore, future costs are given the same 'weight' as current costs. This is different to the approach used in project appraisal, which would discount future costs at the Treasury discount rate.

maintenance when it is estimated that there is less than 10 years until the property is eroded would result in a total increase in Council Tax of £6 per household per year. This is lower than the £8 per household per year that was suggested in the questionnaire results as the willingness to pay for help to continue to live in the property.

5.252 It is important to note that any additional Council Tax charges that occur would have to be paid for across all households within Great Yarmouth Borough, but would only provide assistance to households in Scratby and California. The costs per household would increase further if other properties at risk from coastal change (e.g. in Hopton and/or Winterton) were included.

Summary and conclusions

5.253 The project has successfully delivered a CCMA and four proposed rollback areas with supporting policies, as well as a Community Statement setting out community aspirations as to how the challenge of coastal change and the development that stems from it should be handled. In doing so, the community has played the key decision-making role and has moved from an entrenched position of expecting coastal defences to be built and maintained by the state to at least considering adaptation options. The project has also delivered a number of other benefits such as research into the costs of rollback, buy and lease back and other adaptation options, as well as possible funding options, that could be useful more widely (e.g. contributing to developing future Government policy and to other local authorities considering rollback, etc.). The fact that the project considered the at-risk properties as a group rather than looking at individual houses also contrasts well with the approach taken by the Norfolk Pathfinder, but it will mean that follow-up work will be needed with individual property owners (though it can build on the results of this work).

5.254 The project was well managed, the individual elements of the project were well carried out by the contractors and achieved their intended objectives and findings have been adopted by the Council and are now being considered as part of the LDF process. Although a significant proportion of the original budget was not spent on the project (up to 29%), it still represents good value for money overall. However, its longer term value will depend on how the work is taken forward. For example, the potential to use planning gain to help fund rollback in Scratby is likely to be limited due to the residents' strong concerns over expansion of the village. This may also be a constraint in other communities.

5.255 The focus of the project has clearly been on adapting to coastal change and it has met the other three funding criteria. It has also contributed significantly to the two high level programme aims: improving understanding of how coastal communities can adapt to coastal change and the costs and benefits of these different approaches; and providing practical lessons that can be shared.

Sefton coastal change pathfinder

Background

Sefton Metropolitan Borough Council (now Sefton Council) received £337,000 to explore coastal change adaptation planning and management for the community at Formby Point.

Coastal change issues

Formby Point has been eroding since the end of the 19th century whilst the areas to the north and south are currently accreting. The erosion proceeds at an average of up to 4.5 m per year focused on the centre of Formby Point and extending over a length of 5 km coast comprising sand dunes. Sefton Council has predicted, factoring in climate change, future coastal change could result in erosion of up to 680 m over the next 100 years at Formby Point, with impacts on habitat and a valued community landscape provided by the sand dunes.

Summary of proposed approach

- **Community engagement:** helping the local community to understand coastal change and be part of adaptation planning through: a new community outreach officer; a project with schools and parents; and a project engaging with residents impacted by coastal change. Visual data showing past and future coastal change at Formby Point supports this.
- **Adaptation planning:** development of adaptation plans for the dune slacks and visitor car parking.
- **Delivering adaptive solutions:** enabling continued access to the dunes by, for example, constructing boardwalks; and creating new dune slacks to replace those lost as a result of coastal change.

Main outputs and outcomes

- **Community engagement:** Formby Point visualisation; car park study; caravan park engagement; and dissemination activity
- **Adaptation planning:** Dune Slack Study
- **Delivering adaptive solutions:** Boardwalk construction

Delivery of activity

5.256 The Pathfinder was not able to deliver all the activities set out in the original bid as, due to the budgetary pressure within Sefton Council and the lack of ring-fencing of the budget, £188,000 was re-allocated to other Council budget lines, leaving a revised budget of £149,000 (compared to the original budget of £337,000). As shown in Table 5.24 below, this impacted heavily on the overall delivery of the project, with several of the planned activities being cancelled and others being significantly reduced. Key activities that were carried out are given below and further details are provided in Annex L.

Table 5.24: Planned and revised budget for the project.

Pathfinder sub projects	Original budget (£)	Revised budget (£)
Community Outreach Officer – Revenue	50000	0
Schools and parents project – Revenue	15000	0
Caravan site residents engagement – Revenue	20000	0
Formby Point visualisation – Revenue	5000	5000
Dune Slack Study – Revenue	25000	20000
Car Park Study – Revenue	25000	5000
Boardwalk construction – Capital	105000	91000
Dune slack creation – Capital	40000	0
Dissemination outputs – Revenue	20000	20000
Conference – Revenue	12000	0
Project management – Revenue	12000	8000
Contingencies – Revenue	8000	0
Total	337000	149000

5.257 Key activities:

- **Boardwalk construction** – the problem with boardwalks in a dynamic environment is that as the sand dunes erode not only is the support for the structure undermined or lost but the loading conditions are increased as more of the structure is exposed to tidal energy. The aim of this work was to design and construct a boardwalk in such a way as to be both able to withstand short term changes without having to be closed and to be able to be adapted in a planned manner to match in with the changes in the future position of the coastline. In designing the boardwalk, it was important to understand the scale of change being faced and the time period over which it would occur. The approach followed was to build for future conditions but designing it to allow change (accepting that there may be problems), and instigating a management regime. The boardwalk has been successfully constructed, but no feedback has yet been received on its performance.
- **Dune Slack Study** – the study was intended to supplement some limited work already undertaken to identify the potential for dune slack creation. Dune slacks are a valuable wetland habitat and Sefton currently contains approximately 40% of the dune slacks in England but the rollback of the coast will destroy a number of them and also lead to fragmentation of this habitat both in terms of distance and the nature of habitat between slacks. A long term strategy is currently in development that takes account of coastal change and climate change and sets out short term actions (5 years) that will contribute to the delivery of the long term strategy. Problems have been encountered with this study as discussed below.
- **Formby Point visualisation** – this work explored the development of material that can be used on YouTube and similar media but deviated from the more traditional animation approach. Distribution to date has been limited to some

websites and YouTube but a review is underway to make better use of this material. This work has shown the importance of having an engaging narrative, making good use of images and making it interesting for a local audience especially through the use of history.

- **Car park study** (although at a reduced level) – a limited amount of work was undertaken to engage with the public which included the development of interpretation materials that explained the changing coast and the implications of change at this location.
- **Caravan park engagement** (unfunded) – members of the Pathfinder Team engaged with a caravan site at Formby Point, a community and business that are vulnerable to the impacts of coastal erosion in the relatively short term. Meetings were held between involving the National Trust (which owns the land), the caravan owners and residents. It was agreed that, while attempting to prolong the life of the site, an exit strategy was needed and Sefton Council could assist with the technical aspect of this by advising on rates of erosion. The Council also liaised with planning officers to discuss the option of ultimately moving to another location. The Council also agreed to carry out sand dune management works along with the National Trust to try to minimise erosion rates in the immediate future to allow the owners more time to plan their exit strategy. As a result of the negotiations, the National Trust is now renegotiating the lease with the site with appropriate conditions to reflect its limited life span.
- **Dissemination activity** – the contractors were involved in advising on the setting up and monitoring of projects. As the scale of this activity was reduced, some of their time was refocused into communication activities, in particular a timeline booklet and a report of the work funded by Pathfinder and IMCORE,⁷⁶ which will be disseminated to funders and made available to other practitioners.

Benefits to individuals and the community

5.258 A number of benefits were identified:

- **Caravan park engagement** – this work, which was carried out without Pathfinder funding, provided a valuable learning experience for the staff involved both in terms of communicating risk and the issues around negotiating conflicting desires. The caravan site residents of the site benefitted from assistance in understanding the need to develop an exit strategy and the residents should benefit from not having caravans trapped in the sand dunes as had happened previously. (No feedback on the process was carried out as there was concern that the site residents might feel “experimented on” and give them false hope of funding.)

⁷⁶ The Innovative Management for Europe’s Changing Coastal Resource (IMCORE) project has been operating since 2007 and is due to finish in 2011. It is an EU-funded Interreg IVB project involving Sefton and eight other partners aimed at investigating ways to develop understanding, knowledge and responses to coastal change in a changing climate. In Sefton, this has resulted in a number of outcomes such as an Adaptation Strategy for the coast, the publication of peer-reviewed conference proceedings and the production of a Key Stage 2 Education Resource Pack about coastal change and climate change.

- **Boardwalk construction** – the boardwalk will be a significant community benefit, particularly for those who are less able as it is the only all-ability access point across a 16km length of sand dunes. Benefits will also be accrued from the learning gained in designing the boardwalk: the principles learned in terms of design and construction were difficult to learn in the first instance but can be summarised for others to use in future.
- **Formby Point visualisation** – although distribution to-date has been, a review is underway to make better use of this material, so there could more benefits arising from increased awareness among the local community in future. There have also been learning benefits, with the work showing the importance of having an engaging narrative and making good use of historical and other images.
- **Dissemination activity** – there have been two main benefits of this activity: a timeline booklet which has been disseminated via local libraries; and a comprehensive report of the work funded by Pathfinder and IMCORE which included a number of Pathfinder case studies (e.g. Dune Slack Study/Wetlands Strategy, caravan park engagement and boardwalk construction).
- **Better understanding of coastal change issues by the professional community** – the Pathfinder project has given the professional community an improved understanding of the coastal change issues and has helped them to develop better communication skills, particularly in relation to communicating risk.

5.259 The main beneficiaries have been individuals (e.g. caravan park owners), the wider community (e.g. boardwalk construction and timeline) and the Council (e.g. improved communication skills).

Additionality

5.260 It is clear that these benefits would not have been delivered in the absence of Pathfinder funding. Indeed, the comment was made that the reason that the caravan park engagement went ahead without Pathfinder funding was that “*officers felt a professional obligation to deliver this element.*” Although significant funding was available as part of an EU IMCORE project (para. 264), that funding was already committed to other activities and so could not be used to fund Pathfinder work.

Less successful elements of the Pathfinder project

5.261 The choice of consultant for one element of work (Dune Slack Study) had not worked out as planned as the work had required innovation which was difficult to specify. The focus of the project had been changed and would now concentrate on producing a Wetlands Strategy and the consultant has brought in additional resources with the relevant expertise. With hindsight, it was felt that this project required a combination of skills including research and engaging with partners to better understand the problem and to identify a way forward, as well as report

writing skills, and this combination was not always found within traditional consultancy firms.

Risks and issues

5.262 As noted previously, the main issue to arise was the budgetary pressure faced by the Council, with subsequent loss of £188k from the Pathfinder budget.

Costs and type of spend

5.263 The project was awarded a grant of £333,000, of which £149,000 was spent on Pathfinder activity and to which an additional in kind contribution of £25,000 was provided by the Council.

5.264 As well as Pathfinder funding, there were two other key projects considering adaptation to coastal change: these were an EU IMCORE project (ca. £500,000) and an Environment Agency-funded project on sand dune management. Further details of the key outputs of the IMCORE project are given in Annex L.

5.265 Table 5.25 gives a breakdown of expenditure by type of spend type based on information provided by the Pathfinder Team. As shown, capital spend on delivering adaptive solutions (£91k; 61%) constituted the largest proportion followed by consultancy support (£45k; 30%). Staff costs (£13k) accounted for a further 9% of the budget.

Table 5.25: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs	£13,000
Consultancy and professional advice	Dune Slack Study; Dissemination and planning-related activity; Formby Point visualisation	£45,000
Capital spend on delivering adaptive solutions		£91,000
Revenue spend on delivering adaptive solutions	Not including small grants	
Workshops, publications and other communications materials		
Total		£149,000

Focus on adaptation compared to other priorities

5.266 Table 5.26 gives a breakdown of the expenditure by objective based on information from the Pathfinder Team. The majority of the expenditure was on delivering adaptive solutions (boardwalk - £91k; 61%), with £3k (20%) on adaptation planning and a further £20k (13%) on engagement. Project management accounted for 5% of the budget.

Table 5.26: Breakdown of expenditure by objective

Category	Activity	Amount
Engaging the community on coastal change adaptation	Car park study	£5,000
	Formby Point visualisation	£5,000
	Dissemination activity	£10,000
		£20,000
Adaptation planning	Dune Slack Study	£20,00
	Other planning-related activity	£10,00
		£30,000
Delivering adaptive solutions	Boardwalk construction	£91,000
Wider economic development not directly linked to coastal change adaptation		£0
Coastal protection	N/A	£0
Managing flood risk	N/A	£0
Other	Project management	£8,000
Total		£149,000

Value for money

5.267 In determining value for money, an assessment was made of the individual elements of the project and of the project as a whole.

- **Boardwalk construction** – the boardwalk provides the only all-ability access point across a 16km length of sand dunes and useful lessons on its design and construction will be shared. It has an expected lifespan of 25 years with low level maintenance until year 15 when there will need to be a planned rebuild of the access to the beach (costing around £5k). Low level maintenance will include maintaining the structure, sand dune management and occasional re-orientation of the access ramp to follow beach levels and is estimated at £1k every year and £3k every 5 years and 5k in year. With an initial construction cost of £91k and low on-going maintenance and re-build costs, this appears to represent very good value for money.
- **Dune Slack Study** – as noted previously, this work has not delivered the output originally intended and a significant amount of time and effort have been spent

by the Pathfinder Team in trying to ensure that both the developing strategy and the short-term actions can be taken forward. The final report has not yet been delivered, but the value for money of this work is questionable.

- **Formby Point visualisation** – there should be some longer term benefits in terms of awareness raising and learning that can be shared, but no data are yet available on how many people have viewed them. However, at only £5k, this work appears to represent good value for money.
- **Car park study** – this part of the project was cut back substantially so that it covered only a limited amount of engagement work. However, the interpretation materials explaining the changing coast and the implications of change at that location (i.e. relocation of car park) should be a useful awareness raising tool. At £5k, this appears to represent good value for money
- **Caravan park engagement** – as an activity that was not funded by Pathfinder and which delivered significant benefits to both the caravan site owners and residents and to Council officers, this clearly represents excellent value for money in terms of the project.
- **Dissemination activity** – this work covered the production of a timeline booklet (4000 copies), which was disseminated via local libraries (and will be available on-line) and has been very well received, and a comprehensive report of the work funded by Pathfinder and IMCORE which included a number of Pathfinder case studies and will be made available to practitioners. At £20k, this work represents good value for money.

5.268 Although the planned activity was significantly curtailed, the project has still managed to deliver some useful outputs such as the boardwalk, the timeline, the project report and, potentially, the visualisations. However, while most of the individual elements have demonstrated good value for money, the overall impact of the project has been less much lower than originally intended and, in terms of the Pathfinder programme, the project has not delivered value for money.

Promising ideas

5.269 Views were sought on whether there were any promising ideas arising from the project and whether they could be self-funding. The comment was made that *“The key lessons learned relate to communication and partnership working and to some extent are similar to some of the issues we are now faced in developing a coordinated approach to local flood risk management in the Borough. We need to be able to communicate clearly the issues and we need to ensure all the relevant partners understand the issues and are committed to doing their ‘bit’ when it comes to dealing with them. We also need to be able to communicate with the public and elected members. These are skills we have developed not that we have been trained in and there is limited guidance available.”*

5.270 It was felt that most of the lessons learned could be replicated in guidance and, as many relate to policy development, there would be no additional financial burden. Particularly useful would be guidance on communication, making use of examples

as case studies. Guidance on design principles, taking account of the work done to design and construct the boardwalk, would also be helpful and, if these principles were considered at the time of design would have little additional cost but substantial benefit for schemes.

- 5.271 Other promising ideas include the timeline booklet, which has been used by other Pathfinders (e.g. Slapton Line) and the visualisations, which have also been tried by a number of other projects (e.g. Cuckmere, Hampshire and Jurassic Coast).

Improvements to the Pathfinder programme

- 5.272 None were suggested.

Retention and dissemination of knowledge and experience

- 5.273 The key member of the Pathfinder Team is still working in Sefton Council so knowledge and experience should be retained. Dissemination was intended to be a key part of the project and this has been achieved through publication of 'Adaptation to Coastal Change on the Sefton Coast', which sets out the work funded by Pathfinder and IMCORE and will be made available to practitioners.

Ability of the community to adapt to coastal change

- 5.274 It was felt that Pathfinder, together with other projects such as that funded by IMCORE, had resulted in a much better understanding of the issues among the professional community and these would be embedded within policy documents so that they were carried forward and responded to appropriately. The professional community had also learned a number of lessons around communication and implementation that could be captured and shared with other professional partners.

- 5.275 However, it was felt that in terms of the general public, the achievements through this project alone had been far more limited as most of the planned engagement activity had not taken place. While there had been some limited engagement with residents over the car park which had increased their understanding of coastal change, more had been achieved through other coastal change adaptation projects

Community funding expectations revealed by Pathfinder

- 5.276 Due to the very limited community engagement activities carried out, none were revealed.

Specific lessons for the planning system in terms of adaptation

- 5.277 It was felt that there were no specific lessons arising from the Pathfinder.

Lessons for future policy on coastal change adaptation

- 5.278 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. The main barriers were considered to relate to capacity, particularly the need for training and awareness. It

was felt that the problem did not relate solely to coastal change and perhaps it needed rephrasing: *“We need to manage change and the risk of change and to do this we need to communicate the issues to a range of people and work in partnership with them to develop the optimum solution given limited options and resources.”*

5.279 In terms of paying for adaptation, it was felt that a clear separation of what the costs are, when the benefits arise and who benefits was helpful. For the Sefton Coast where planning and communication are the main issues, costs are relatively low, benefits tend to arise over the long term and there are multiple beneficiaries leading to an argument for central or local government funding. However, where there are properties at imminent risk, the timescales are different, the costs are higher and it is clearer who the beneficiaries are and it was felt that this may lead more towards external funding.

Summary and conclusions

5.280 Despite losing over half of the original budget, the project has still managed to deliver some useful outputs such as the boardwalk, which will have long-term community benefits, the timeline, which has been well received and will be available on-line and, potentially, the visualisations. There has also been useful learning about coastal change and risk communication within the Council. However, while most of the individual elements have demonstrated good value for money, the overall impact of the project has been less much lower than originally intended and, when compared with the funding originally provided, the project has not delivered value for money.

5.281 The focus of the project has clearly been on adapting to coastal change, which is one of the four key criteria for funding. The project also appears to have met the second criterion, largely through the boardwalk construction (the emphasis should be on providing benefits to the wider community where these are proportionate to the costs). However, whether it has met the remaining two criteria (focusing on the most vulnerable to coastal change and tying in with a long-term plan for change within the community supported by extensive community engagement) is less clear. It has provided a contribution to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared.

Slapton line coastal change pathfinder (East Hams)

Background

South Hams District Council received £38,000 to explore planning for and managing adaptation to coastal change for the Slapton Line community.

Coastal change issues

The Slapton Line is a shingle barrier beach dividing the largest natural freshwater lake in South West England from the sea. Potential future erosion of the shingle barrier will have impacts on a road (the A379), a number of car parks, a nature reserve and the local community. These risks were highlighted when part of the road had to be moved inland following damage caused by a storm in 2001. A subsequent study by Scott Wilson recommended that the best option was managed realignment – moving the most vulnerable sections of the road inland for as long as is practicable – but on the understanding that eventually the road would become irreparable and would close permanently, probably between 20 and 50 years from now (from 2006).

The Slapton Line Partnership was formed to co-ordinate the future management of the Line and to support the local community as it adapts to the changing coastline, including the temporary and eventually permanent loss of the road.

Summary of proposed approach

Earlier work at Slapton suggested that a better understanding of the particular coastal erosion issues would lead to a greater acceptance of the 'adaptive' solution proposed. Hence an aim of the project was to increase the information available about this and also embed it in the education process locally.

In 2001 when the road loss happened, some businesses lost revenue as a result of fewer visitors. Analysis of car park data also suggests that many visitors by car spend a relatively short time in the area. In local business forum meetings attendees supported the idea of 'making more of the area'; increasing the interpretive information (about wildlife, wartime history, as well as coastal change) which would help enrich the visitor stay, encouraging more use of the area. It was felt that this would help a future vision beyond the road.

Adaptation planning and community engagement: Developing a toolkit which maps the adaptation project measures undertaken so far which can be of use to other coastal local authorities. Further developing some of the existing adaptation measures including:

- working with local businesses (and the Field Centre) to maximise the benefit of the environmental tourism potential of the area
- working with local schools and the Slapton Ley Field Centre to incorporate additional local material into their educational resources
- capturing more of the coastal history, enhancing the story and interpretation of coastal change

Main outputs and outcomes

- Dissemination of experience gained through the **Coastal Change Adaptation Toolkit**, information exchanges and meeting
- **Timelines and the changing coast** archive of photographs, articles and videos
- Activity related to **business and tourism adaptation and resilience**, focusing on information/interpretation points
- **Schools outreach and engagement**, including development of a programme of 'Learning with a Changing Coast'

Delivery of activity

5.282 Details of the activities delivered are given in Annex M. Broadly, the activities delivered were in line with those set out in the bid and are summarised below:

- **Coastal Change Community Adaptation Toolkit** – sharing the work of the Partnership and its adaptation experience so far was delivered through development of a toolkit of initiatives, information exchanges and face-to-face meetings. The first Toolkit version was circulated to Defra and other Pathfinders in July 2010. This was followed by a series of information exchanges with other Pathfinders (e.g. on the timeliness, public opinion survey).
- **Timelines and the changing coast** – an archive was developed containing photographs, articles and videos of coastal change, as well as wartime events. A video was also produced as a means of explaining the background to the challenges faced by the Slapton Line and as a lasting legacy beyond the end of the project. In addition, the project enabled co-ordination of coast change interpretation to take place.
- **Business and tourism adaptation and resilience** – a continuation of earlier work with businesses, activity focused on developing a series of distributed information/interpretation points. Completed during the project included an enhanced wartime story panel at the Torcross Tank monument and an information point wartime archive display at the Start Bay Inn. Further interpretation points and signage were installed over the summer and the area showcase event 'Celebrate Start Bay' has continued to be provided.
- **Schools outreach and engagement** – a programme of 'Learning with a Changing Coast' was developed together with the Slapton Ley Field Centre. This is a programme to introduce primary school children to the coastal change happening on the Slapton Line at five local schools. The programme also developed a series of resources embedding the Slapton story into the education processes at the Field Centre. This included developing videos explaining the background to the formation of the Slapton Line and the position of stakeholders, which have been used more widely. Future funding of the programme will be provided in part through a visitor gifting scheme. Photo archives have also been gathered which are being used in a series of pieces of interpretation.

5.283 Some differences occurred from the original plan. For example, cross-fertilisation of ideas with other projects was found to be very useful and involved more meetings and face-to-face time than anticipated. However, this has felt to have been useful, leading to the creation of a virtual network of adaptation colleagues.

5.284 There was also more cross-linkage between the elements of the project than anticipated. For example, materials developed within the education element proved to be useful in a general education context.

Benefits to individuals and the community

5.285 The following benefits can be identified:

- **Coastal Change Community Adaptation Toolkit** – there have been benefits to other Pathfinders who have learned from the Partnership’s experience and communication tools.
- **Timelines and the changing coast** – lasting legacies have been produced in the form of the coastal change archive and Slapton Line video.
- **Business and tourism adaptation and resilience** – there have been economic benefits due to the development of information/interpretation points and the continuing support for ‘Celebrate Start Bay’.
- **Schools outreach and engagement** – an educational programme, including supporting resources have increased awareness of coastal change within schools and more widely.

5.286 Beneficiaries have included school children, local businesses and the wider community, as well as other Pathfinders and visitors to the area.

Evaluation of the benefits

5.287 A telephone survey of local residents was completed in March 2010 and compared with an earlier one in November 2007 to help inform the continued adaptation work, particularly education and awareness. In 2007, there was found to be broader support for the current policy (around 80% very or fairly supportive) than had been expected and this high level has continued. There were increased levels of awareness about the future of the road and policies associated with it. However the percentage of residents who had made plans in anticipation of future road closures was unchanged at around 12%.

5.288 As part of the continuing work to develop interpretation materials, a pilot survey of 15 visitors was carried out earlier this out and it was intended to repeat it with larger numbers later in the season. Where an opinion was expressed, most made positive comments about the current interpretation information (53%) and the same amount felt that more information would encourage them to return. The majority of people knew about the coastal erosion (60%) and felt the timeline helped explain this. Of the three who did not know about this, two had picked this up from the timeline.

Additionality

5.289 Asked whether these benefits would have been delivered in the absence of Pathfinder funding, the Pathfinder Team made the following comments: *“Pathfinder has helped sustain the adaptation process at a higher level of engagement than would otherwise have been achieved. It would have been difficult to justify this continued adaptation work which needs to keep a view to the long term issues.”*

Less successful elements of the Pathfinder project

5.290 One less successful element was felt to be the length of time taken to start the programme of tourism-related activities, which occurred due to ownership issues with tourism strategy in the area.

Risks and issues

5.291 One significant issue that arose during the Pathfinder was the development of an alternative solution to the loss of the road which came forward from a small group of business people based in the area (known as 'Shoreline'). It was felt that having the Partnership in place created a forum for negotiation and presentation which facilitated development of this alternative idea. Having carried out a significant amount of research and community consultation, the Partnership was confident in the robustness of the current solution, but its terms of reference do not preclude other solutions. The Partnership is continuing to work with this group.

Costs and type of spend

5.292 In addition to the Pathfinder funding received (£38,000), £15,000 was provided by South Hams District Council and the Slapton Line Partnership, together with an estimated £8,000 in kind support from the local authority, giving a total of £61,000.

5.293 Table 5.27 gives a breakdown of expenditure by type of spend based on information provided by the Pathfinder Team. As shown, the vast majority was spent on staff and associated costs (91%), with the remainder on workshops, publications and other communication tools.

Table 5.27: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs	£24,500
Workshops, publications and other communications materials not included above	Toolkit development, events, website improvements, newsletters, educational programme	£13,500
Total		£38,000

Focus on adaptation compared to other priorities

5.294 Table 5.28 shows the expenditure by objective, again based on information provided by the Pathfinder Team. The majority of the expenditure was on community engagement activities (83%), with the remainder being mainly on work with businesses in terms of wider economic development (16%).

Table 5.28: Breakdown of expenditure by objective.

Category	Activity	Amount
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Engaging the community on coastal change adaptation	Toolkit development and engagement with other projects	£6,000
	Research and production of interpretation	£9,800
	Production of coastal change video	£2,100
	Events	£3,200
	Website updates and improvements; newsletter	£1,700
	Education programme based at Field Studies Centre.	£8,700
		£31,500
Adaptation planning		
Delivering adaptive solutions		
Wider economic development not directly linked to coastal change adaptation	Work with businesses	£6,000
Coastal protection	N/A	£0
Managing flood risk	N/A	£0
Other	Travel costs	£500
Total		£38,000

Value for money

5.295 In view of the small size of the project, a value for money assessment was only made on the project as a whole. Building on previous funding, the key focus of the project has been on leaving a lasting legacy of adaptation activity, materials and tools and on disseminating learning and experience gained so far. This was achieved through the launch of the Coastal Change Community Adaptation Toolkit which has been shared with other Pathfinders, further development of the timeline and an educational programme, as well as work with local businesses to develop tourism through the use of information/interpretation boards. At a cost of £38k, this represents very good value for money.

Promising ideas

5.296 Both the survey and the timeline have been taken up by other Pathfinder projects. The survey was a very useful method of gaining a better understanding of the views of the 'silent majority' (also using this as an information and publicity exercise). The timeline was a good way of incorporating earlier history and coastal change into the understanding of coastal change. It was felt that both of these ideas were unlikely to be self-funding. However, publication of the timeline could perhaps be self-funding if sold to the public.

Improvements to the Pathfinder programme

5.297 It was felt that the overall programme was well directed with the right amount of support and light touch to enable people to get on with their projects without being required to be over compliant. Regionally there has been a good degree of information exchange which had helped provide additional support, largely due to the team working on the Dorset Jurassic project.

Retention and dissemination of knowledge and experience

5.298 Dissemination has been a key feature of this project, including through the website (<http://www.slaptonline.org/>). The project will continue beyond the life of the Pathfinder project for which there is a small amount of additional funding specifically to develop the business/tourism aspects (up to May 2012). During this time the additional initiatives will be recorded and updated on the Toolkit. After that point, it is unclear whether the existing team will remain in post although the Slapton Line Partnership will clearly remain.

Ability of the community to adapt to coastal change

5.299 It was unclear whether Pathfinder had increased the ability of the community to adapt but it was felt that the education work had provided another embedded process which would have long term benefits. The work with businesses and on tourism would also exist beyond the life of the project.

Community funding expectations revealed by Pathfinder

5.300 The comment was made that: *“There hasn’t been a general expectation that government would fund the support of protecting the road infrastructure. I believe that people are aware that it is the County Council’s responsibility.”*

Specific lessons for the planning system in terms of adaptation

5.301 No specific comments were made in relation to the planning system and coastal change adaptation.

Lessons for future policy on coastal change adaptation

5.302 Views were sought on whether adaptation can work in this way, how any barriers can be removed and who should pay for adaptation. It was felt that adaptation needed to be given equal weight with traditional defence methods in terms of funding. The point was also made that many of the activities employed in adaptation work are likely to build on a number of ‘softer’ measures which are likely to be under stress in the current spending regime, e.g. communication and education. In terms of funding, it was noted that adaptation is a wide-ranging process which requires a more joined up approach but, equally, that it can have additional objectives (e.g. education, tourism enhancement) and hence other possible funders/funding sources.

Summary and conclusions

- 5.303 Building on previous funding, the project has focused on leaving a lasting legacy of its earlier adaptation activity, materials and tools and on disseminating the extensive learning and experience gained so far. This has been achieved through developing and sharing the Coastal Change Community Adaptation Toolkit with Defra and other Pathfinders, further developing the timeline (which has been taken up by other Pathfinders) and developing a programme of 'Learning with a Changing Coast' for use in five local primary schools. The project has also worked with local businesses to develop tourism through the use of information/interpretation boards. At a cost of £38k, this represents very good value for money.
- 5.304 The focus of the project has clearly been on adapting to coastal change, which is one of the four key criteria for funding. The project also appears to have met the other three funding criteria and has contribution to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared.

Somerset coastal change pathfinder project

Background

Somerset County Council received £235,000 to explore planning for, and managing, adaptation to coastal change in the communities of Porlock Weir, Steart and Brean & Berrow.

Coastal change issues

Approximately one-fifth of Somerset's 114 km coastline is low-lying, and there is a history of coastal flooding in the area. In the longer term there are risks of coastal flooding and erosion.

Porlock Weir

Porlock Weir is a small hamlet containing a pub, restaurants and shops. Minor flooding occurs nearly every year but the SMP policy of No Active Intervention in the medium term will result in increased flood and erosion risk as existing defences deteriorate and fail. There will also be an increased risk of much more severe events occurring if a storm surge coincides with a high spring tide. This would result in extensive flooding, with the main access road to the village being blocked, thereby hampering the work of the emergency response services.

Steart

Some 57 properties are currently within the 1 in 200 year indicative floodplain, rising to 67 at risk in 50 years. The current defences currently offer a low standard of protection (1 in 10 years). With rising sea levels, the shoreline would naturally retreat inland. However, currently it can only retreat as far as the defence line, leading to a decrease in intertidal habitat and increased erosion risk to the defences (with a consequent rise in maintenance costs), increasing the risk of overtopping and inundation. The Environment Agency has proposed a managed realignment scheme for the area.

Brean & Berrow

The villages of Brean (population of 700) and Berrow (population of 1600) are situated behind and partially on sand dunes. The dunes form a natural flood defence for an extensive area of the Somerset Levels. In the short-term, the plan is to maintain the dunes as a natural sea defence, while continuing to monitor the accretion/erosion activity. In the longer term, there may need to be further dune management, including the possible removal of some properties. Brean & Berrow and the surrounding area are low-lying and vulnerable to flooding in the event of over-topping. Both villages are popular with tourists, many of whom stay in the 35,000 caravans within the area.

Summary of proposed approach

- **Community engagement:** developing site-specific technical scenarios to help communities understand and explore possible effects of coastal change; producing educational resources on coastal change for local communities, schools and the

tourism sector; engaging community in a study to consider opportunities associated with a managed realignment scheme.

Outputs and outcomes

- **Community engagement: *scenario tool*** – to develop scenarios of how the future may look and explore what measures may need to be taken to adapt (Porlock Weir); funding for a **community engagement officer** for one year (Stear); development of a **community coastal change monitoring initiative** (Brean & Berrow); **DVD** with people describing how they are adapting now to coastal change, and some visualisation on the evolution of the Somerset coast; an e-game for all Somerset primary schools to enable children to learn about the coast and encourage them to go out and explore.
- **Adaptation planning:** development of an **adaptation action plan** for Porlock Weir.

Delivery of activity

5.305 The activities undertaken were broadly in line with those set out in the bid. Details of the activities carried out, including a summary table showing what was delivered and at what cost, compared with the original outputs and budget submitted in the bid, are given in Annex N. In brief, the main elements were:

- ***Aim 1 – ensure coastal communities are well informed about the natural processes which will impact upon coastal change in their area and how they can participate***
 - a plausible future flood event scenario was developed for Porlock Weir, while a different longer term approach was used for Brean & Berrow focusing on monitoring and conserving the dunes
 - a coastal e-Game was developed and sent to all primary schools in Somerset to enable children to learn about the coast and encourage them to go out and explore
 - development of a Somerset Coastal Change website, with plans to develop coastal change interpretation materials at the National Trust Brean Down Café
- ***Aim 2 – to enable coastal communities to discuss the impact of coastal change and to consider the options for their area***
 - following on from the technical scenarios, a Flood Adaptation Action Plan was developed in liaison with the community
 - a DVD was produced involving people describing how they are adapting now to coastal change and including some visualisation on the evolution of the Somerset coast
 - a small grant was awarded towards some practical adaptation measures to coastal change (e.g. sand dune restoration work at Berrow)
- ***Aim 3 – to explore the additional benefits that can be gained through a managed realignment project in order to assist communities in adapting to the changes occurring***
 - a full-time Community Engagement Officer was employed at Steart
 - a 3D visualisation tool was developed
 - a Steart community subgroup was formed

- educational work involving the Wildfowl & Wetland Trust and the local primary school

5.306 The main changes from the original bid and reasons for this were:

- it was discovered that the National Trust had already produced a very comprehensive national DVD ('Living with a Changing Coastline'), which could be used as a tool by the Pathfinder and therefore attention was focused on a DVD with examples of adaptation on the Somerset coast
- one of the original aims of the project was to identify whether there was a need for a coastal forum. At the first Steering Group meeting it was decided that this was not needed and it was agreed to use the funds for website development

Benefits to individuals and the community

5.307 Benefits can be categorised by location and beneficiary as follows:

Porlock Weir

Individuals

- Good working relationship built up between the Environment Agency and the Porlock Manor Estate, allowing better understanding of roles and capabilities of both.
- Social media training for individuals has enabled them to find out wider information and contact other groups about adapting to coastal change

Community

- Residents have a better understanding of their flood risk and the scale of the event that could happen.
- Community has a Flood Adaptation Action Plan which outlines what they can do to make themselves more resilient to large scale storm events.
- Practical flood resilience kit is to be provided to the Porlock Weir community including kit for sand bags, high-visibility jackets and safety helmets.

Stear

Individuals

- Benefits for individuals include the flood resilience reports that have been produced for the Steart residents. Advice on flood protection for their homes was a specific request from them. These reports will help the community adapt to future predicted changes to flood risk.
- Meeting individuals from Porlock Weir has enabled Steart residents to hear about the changes experienced with a managed realignment project. This has been an unexpected benefit.

Community

- The Pathfinder project has brought benefits to the wider community in several ways. Through the project, a community sub-group was set up, this comprised representatives of Steart and the surrounding communities. Members of the sub-group attended site visits to other habitat creation/managed realignment sites and to visit communities at flood risk for the sea and climate change. These meetings enabled them to form relationships across the communities. This helped to form a support network for each community, and there is now discussion and ideas about coastal adaptation shared between the various communities.
- The Pathfinder funding has also resourced a full time community engagement officer for Steart. This has been beneficial to the communities as their issues and concerns have been addressed immediately through one single point of contact. Without the Pathfinder funding it would not have been possible to spend so much time with the local communities.
- The project has funded the Wildfowl & Wetlands Trust (Steart site managers) to work with the local primary school. This has been a benefit to the wider area as the children attending the school live in the surrounding communities. The project has encouraged the children to explore and learn about their local area, in particular the coast and how it has changed over the years. The children have produced a film about the area with a professional film maker and local residents have also been involved.
- As part of the project for Steart, a 3D visual model has also been created, which shows how the site will change as we set back the flood defences and allow tidal inundation. This has proved to be a valuable visual tool for the local communities.

Brean & Berrow

Individuals

- The Berrow Conservation Group has benefited from a closer working relationship with officers at the Environment Agency and the County Council. The Pathfinder Team has helped them to hone their monitoring techniques and put them in touch with the regional coastal monitoring group.

Community

- It is envisaged that by hosting information about coastal change and highlighting the importance of the local dunes as natural sea defences at the National Trust Visitor centre, the community as a whole will benefit as visitors as well as locals will be more informed about the need to conserve the dunes and will be less likely to trample and damage the dunes.
- Providing funding for further sand dune fencing and for marram grass planting will benefit the Berrow community due to restoration of the dune coastal defences.

5.308 It has also been possible to promote an understanding of coastal change with school children, working closely with them and developing tools such as an e-game. As this game is designed to encourage children to get outside and explore the coast for real, this should benefit their health and wellbeing, and that of their families, as

well as educating them through play on the computer.

5.309 Overall, it is felt that the three communities have greater recognition, knowledge and understanding of risks from coastal change and inundation. This has led to community action, self help, disparate coastal interest groups coming together and greater local coastal monitoring. Through the pathfinder website, coastal e-game and smart phone applications, inland residents and tourist visitors of all ages should be more aware of national coastal issues in the context of the Somerset Pathfinder.

Evaluation of the benefits

5.310 An evaluation of the engagement activity at Porlock Weir has been completed⁷⁷ and the following recommendations have been made based on the experience gained:

- Use of the 'engage-deliberate-decide' approach to stakeholder engagement;
- Undertaking stakeholder mapping of the community involved. This will help to gain a better understanding of the members of the community with which you are working, which in turn will enable you to communicate and work with them more effectively;
- Interviews with key stakeholders are invaluable in ensuring an understanding of the context of the history of flooding and flood policy within the community and surrounding area. It also enables you to 'ground-truth' any flood modelling work by confirming exactly which areas / properties flood in what size of event, thereby increasing the accuracy of any predictions;
- A dedicated project officer is vital in a project such as this, especially with a small close-knit community in order to gain individual's trust and encourage them to engage with the project;
- The ability of drop-in sessions to bring together and engage communities should not be underestimated. This is especially relevant where there is an elderly population that might be less receptive to other forms of communication. Individuals value highly the experience of a two-way dialogue, as well as the opportunity to ask questions and make suggestions;
- However in using drop-in sessions it is important to consider the following:
 - How to most effectively publicise the event. Consider adverts in local press; personal invitations and the assistance of proactive members of the community to promote the event;
 - Making the event accessible: consider the venue, access for disabled and/or elderly visitors; and the time of the event;
 - Offer hospitality and/or incentives: such as refreshments (tea and coffee as a minimum) and the potential use of freebies, although these need to be appropriately targeted to the audience;
 - The format of the event: i.e. try to avoid an overload of information and allow attendees the opportunity to contribute their thoughts and suggestions; and
 - Provide answers to queries. If you are undertaking more than one drop-in session providing answers to queries from previous sessions is vital to demonstrate that the project is listening to the community, and is sincere

⁷⁷ Somerset Coastal Change Pathfinder (2011). *Report on project at Porlock Weir*. Somerset Coastal Change Pathfinder, February 2011.

- in its desire to help.
- Provide a non-technical tangible output (such as the Adaptation Action Plan) that can be forward by the community at the conclusion of the project.

5.311 Regarding Brean & Berrow, the Berrow Conservation Group has been learning from the experiences of other dune restoration projects, particularly, from the work done at South Milton Sands in Devon, and will be carrying out sand fencing and marram grass planting to restore dunes at Berrow. The Groups has also set up its own blog www.berrowconservationgroup.wordpress.com/ to give updates on the work it is doing at Berrow to share with others. A link to this is being from the Somerset Coastal Change website.

5.312 Viewing figures for the website and coastal change film are given below and it is planned to send a questionnaire to primary schools on the Coastal e-Game in Spring 2012.

Content	Views/Followers
Main website	843 (523 unique - since 9 th May)
Somerset Coast blog	471
Twitter	315
Facebook	25
Pathfinder video (Vimeo.com)	415
Flickr	No stats available (for free)

Additionality

5.313 It was felt that in the absence of Pathfinder funding it may have been possible that community groups could have formed themselves into charities. From there, for example, the residents in Porlock Weir could have raised funds to put together a community flood action plan and to purchase resilience equipment for their properties. As charities they could have obtained funding from other registered grant-making charities, giving an additional income stream. However, awareness of the increased risk of extreme flooding events was low among the community and it was felt that there would have been no action until there had been a serious incident.

5.314 It was also noted that Somerset County Council Civil Contingencies Unit provides advice and support through the Local Resilience Forum to communities which are at risk of flooding, by helping them to develop community flood plans. It was awarded £267,500 under the 2009 Defra Property Level Flood Protection Grant Scheme split between Queen and West Camel and the Somerset County Council Flood Risk Management Group has been awarded £38,500 for Pitcombe under the 2011 Scheme.

5.315 In the case of Steart, the Environment Agency was already carrying out some engagement activity but the additional funding allowed more extensive engagement through a full-time Environment Agency community engagement officer and the Wildfowl and Wetlands Trust as site managers. Funding also provided a number of other benefits to the community and individuals. Both the Environment Agency and the Pathfinder Team feel that this has been a highly beneficial exercise in gaining

community support for the managed realignment scheme, but whether this would have happened with a lower level of engagement is not completely clear.

5.316 With Brean & Berrow, there was little awareness among residents and the business community of the potential vulnerability of their area and previous efforts by the Environment Agency (after the Boscastle floods) to encourage the posting of notices in caravans, warning visitors what to do in the event of a flood, had met with little take-up due to possible effect on tourism in the area. The perception of the park owners was that flooding of the type which happened at Boscastle (being in a valley) would be extremely unlikely to happen. It is therefore unlikely the communities would have taken action themselves. However, it may have been possible for the Environment Agency and/or the County Council to have carried out some limited engagement activity.

Less successful elements of the Pathfinder project

5.317 It was noted that there was initially a mix of apathy and accusation of scaremongering when the first mock newspaper was presented to the Porlock Weir Community. However by carrying out a series of drop-in sessions it was possible to overcome this and develop a relationship between the project and the community, some of whom had never experienced a severe storm event and therefore would perhaps be unprepared for such an event.

5.318 The work at Berrow has been the start of building up a relationship with the parish council and in particular the Berrow Conservation Group, supporting and encouraging them in monitoring and restoring parts of the dunes which have experienced blow-outs. It has been a little disappointing for the Pathfinder Team that more progress has not been made in this area. However it has provided the opportunity to lay the foundations for further work in the area which is now starting up. This includes a Beach and Dune Management Plan for Burnham-on-Sea to Brean, which will have a strong community input.

5.319 It was felt that the bid could have been improved if it had included a small capital sum which could have been used to deliver one or more of the small-scale actions identified during the engagement process. This would have helped to encourage members of the local community to become involved as there would have been a tangible output to the project.

5.320 It was also felt that it might have been better to have had separate Project Officers for Porlock Weir and Brean & Berrow as work was only really starting now in the latter. Finally, a learning point was that rather than having specific drop-in sessions it was often better to use existing events to promote the Pathfinder activity.

Risks and issues

5.321 Key anticipated risks were lack of buy-in (coastal flooding is less obvious than erosion, with many people feeling that it will not affect them), contacting the right people (not many established groups) and 'consultation fatigue' (significant engagement activity was already taking place, e.g. Bristol Ports, Hinkley).

5.322 It was felt that the key unanticipated risk was the financial pressure within the public sector. In common with other local authorities, all underspends were subject to intense scrutiny by senior management in the County Council. Although the Pathfinder Team had received confirmation from Defra that it could carry over the underspend of £36,000 to the 2011-2012 financial year, they had to make a strong business case to justify extending the project. After considerable deliberation, the business case was accepted.

Costs and type of spend

5.323 In addition to the Pathfinder funding received (£235,000), around £11,000 was provided by the County Council as support in kind, giving a total of around £246,000.

5.324 Table 5.29 gives a breakdown of expenditure type of spend based on information provided by the Pathfinder Team. Over half of the budget was spent on staff costs (£127k; 54%), with a further 16% (£36.5k) on revenue spend for delivering adaptive solutions at Steart (WWT Schools/community project and the house resilience surveys) and in Porlock Weir (flood adaptation action plan). Around £45k (19%) was of the budget was spent on workshops, publications and other communication materials. Consultancy support accounted for 8% (£19.5k) of the budget.

Table 5.29: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs	£126,935
Consultancy and professional advice	Porlock Weir scenario newspaper and workshops	£19,465
Capital spend on delivering adaptive solutions		
Revenue spend on delivering adaptive solutions	Steart (WWT Schools/ community project & House resilience surveys)	£30,000
	Porlock Weir Flood adaptation action plan	£6,488
		£36,488
Workshops, publications and other communications materials not included above		£45,259
Small grants		£3,800
Other (please specify)		£3,051
Total		235,000

Focus on adaptation compared to other priorities

5.325 Table 5.30 gives a breakdown of expenditure by objective, again based on information provided by the Pathfinder Team. Two-thirds of the expenditure (£157k; 67%) was on community engagement activities in Porlock Weir and Brean & Berrow, with a further 28% (£65k) on managing flood risk in Steart. Small amounts were also spent on adaptation planning (3%; development of the Porlock Weir flood adaptation action plan) and in delivering adaptive solutions (less than 2%; sand dune restoration and flood resilience kit).

Table 5.30: Breakdown of expenditure by objective.

Category	Activity	Amount
Engaging the community on adapting to coastal change (Porlock Weir and Brean & Berrow)	Scenario development (Porlock Weir)	£19,465
	e-Game	£15,135
	DVD	£10,360
	Website & Coastal Change timelines	£16,665
	Engagement activity ⁷⁸	£94,986
		£156,661
Adaptation planning	Porlock Weir drop-in sessions & adaptation planning	£6,488
Delivering adaptive solutions	Dune restoration (Berrow)	£2,000
	Flood resilience kit (Porlock Weir)	£1,800
		£3,800
Wider economic development not directly linked to coastal change adaptation		
Coastal protection		£0
Managing flood risk (Steart)	WWT schools project	£26,000
	Communications officer	£35,000
	House resilience surveys and 3D visualisation model	£4,000

⁷⁸ This includes a part time project manager, full time project officer, part time administrative support and travel (two-thirds for Porlock Weir and one-third for Brean & Berrow).

		£65,000
Other	Contribution to interpretation materials (Brean & Berrow)	£2,000
	Social media training	£1,051
		£3,051
Total		£235,000

5.326 In terms of the categorisation of activity, while the engagement work carried out in Brean & Berrow was clearly related to coastal change adaptation, whether it was in Porlock Weir is more questionable. Similarly, whether adaptation planning and delivering adaptive solutions in Porlock Weir were related to coastal change or to flood risk is also open to interpretation. On the face of it, these activities do appear to be related solely to managing flood risk. However, the increased risk of serious flooding is due to erosion of the existing defences and, thus, it seems reasonable that they are categorised as coastal change adaptation activity. All activities carried out at Steart were categorised as ‘managing flood risk’ and, indeed, this is one of the three approaches to flood defence. However, as managed realignment will result in the permanent inundation of the area, it could be argued that these activities were also related to coastal change adaptation. As noted previously, it would be helpful if Defra clearly defined what it regards as ‘coastal change’.

Value for money

5.327 In determining value for money, an assessment was made of the individual elements of the project and of the project as a whole.

- ***Engagement and adaptation planning at Porlock Weir*** – community engagement was vital in achieving the key aim of securing buy-in to the development of a Flood Adaptation Plan for Porlock Weir. This meant bringing together residents, business owners and landowners to get across the purpose of Pathfinder, and draw out their ideas for making their community more resilient. This was achieved by use of the scenario newspaper (developed with the technical assistance of consultants) and three follow-up drop-in sessions at which ideas were gathered and developed into an adaptation plan. It is unclear how much project officer time was spent on this work, but assuming that it equated to around half of the £95k given in the above table, this is more expensive than the cost of the Steart community engagement officer (£35k), although it is not known how the work of the two compared.. The cost of producing the scenario newspaper and three workshops seems to represent good value for money at £19.5k (around £6k per workshop). This was a very successful piece of work, which led to the desired outcome. The plan is intended as a community guide to “what needs to happen next” and will be a lasting legacy of the project. A Flood Action Group has been formed to

implement the actions, some of which will be for individuals to fund. Overall, therefore, it appears to represent good value for money.

- **Community engagement at Steart** – as well as having a dedicated community engagement officer (£35k), funding was given to the Wildfowl & Wetland Trust (WWT) to work with the local school (£20k), a 3D visualisation was produced and flood resilience surveys were carried out (£4k). As noted previously, it was felt by the Pathfinder Team having a full time community engagement officer at Steart had been instrumental in bringing the local communities on board with the principles and impacts of coastal change. The role was certainly appreciated by the local community, but it is unclear what would have been achieved in the absence of this level of engagement activity. The WWT's work with the local primary school encouraged the children (who were also from outside the immediate area) to learn about coastal change and also enabled them to produce a film about the area with a professional film maker and involving local residents. While this is a lasting legacy, the work centred on one local school. Thus, it appears to represent lower value for money than some of the other educational initiatives carried out. The visualisation appears to represent very good value for money; the Environment Agency regards it as a key community engagement tool and it is planned to show the animation model at a public drop-in session in autumn 2011. Finally, the flood resilience surveys were a good public relations exercise at minimum cost. Overall, there are some question marks over the value for money of this work.
- **Brean & Berrow** – the engagement effort has focused on working with local coastal community teams, monitoring and conserving the dunes, and ensuring that residents and visitors were aware of the vital role which they play as a natural sea defence. Relationships have been built with the parish council and particularly the Berrow Conservation Group, supporting and encouraging them in monitoring and restoring parts of the dunes which have experienced blow-outs. However, to-date, progress has been slow, although further work is now planned in the area which should capitalise on the project. Thus, while the work may not currently represent particularly good value for money, it may do over the longer term.
- **Other activity** – this included a Coastal Change e-game, a DVD and a website. The e-game cost £15k and was sent to all primary schools in Somerset to enable children to learn about the coast and encourage them to go out and explore. The game has yet to be evaluated and it is also questionable whether it was necessary to send it to all primary schools rather than those near the coast. However, it has the potential to be used in other coastal areas and, as such, seems to represent good value for money. The DVD will also be a lasting legacy of the project and has already had reasonable viewing figures. At £10k, this seems good value for money. Finally, the website not only achievements and progress of the Project, but in the future will: act as a voice for the communities; record their thoughts and coastal photographs; record coastal changes; and be a resource which could be owned by the communities when the Pathfinder comes to an end. Options are being explored to host the site on the County Council website to cut costs. At £17k, this appears to represent good value for money.

5.328 Project management costs (staff salaries and associated costs) accounted for over half of the budget (54%) and were more than double those in other Pathfinders.

However, this is not surprising given the high level of involvement of the Team, including one full-time project officer, in carrying out the community engagement activity.

5.329 Overall, the project has delivered a number of benefits and promising ideas (see below) that could be used elsewhere. While there is some doubt about the value for money of the work at Steart, due partly to the lack of clarity about what could have been achieved anyway, overall the project seems to have represented reasonable value for money.

Promising ideas

5.330 The Pathfinder Team put forward several ideas that could potentially be replicated elsewhere:

- **Newspaper article scenario** – this could prove a useful tool for getting people to think about how a future storm event might affect their coastal community. When used in Porlock Weir, the intention was to provide information on flood risk and to allow the community to begin discussions regarding adaptation measures. There was a mixed reaction, with some people criticising it as ‘scare-mongering’ and others commenting that many of the residents had not experienced a severe flood event and thus were unaware of the real risk. However, it clearly stimulated a debate about the issues, which enabled further engagement work to take place.
- **Dedicated project officer** – having a dedicated project officer who can spend time getting to know key stakeholders in an area, although this is fairly time consuming, builds up invaluable relationships with them to help them work on developing plans together. It was felt that at Steart, having a full time community engagement officer had been instrumental in bringing the local communities on board with the principles and impacts of coastal change.
- **Educational work** – educational work involving the Wildfowl & Wetland Trust and the local primary school, in which the children were encouraged to explore and learn about coastal change, could be replicated. The coastal e-Game could also be a useful way of getting messages over about coastal change.
- **Monitoring the effects of coastal change** – there were many opportunities for local people to be involved in monitoring/dune restoration projects at Brean & Berrow, and as the volunteers are enthusiastic, this is likely to continue with the added co-ordination help from Pathfinder. This could certainly be replicated in other areas and, indeed, was carried out in North Norfolk.

5.331 It was suggested that if other local authorities were to run similar projects, they could make use of the materials that have already been generated through this Pathfinder project, thereby reducing the costs. They could also use the examples tested by Pathfinder authorities to find out the best way to engagement with communities. However, community engagement comes at a cost – for example, funding a full time community engagement officer such as the one at Steart, would cost approximately £35,000 (including all overheads) per annum – and the point was made strongly that coastal authorities should not be expected to fund this work

without central *ring-fenced* support. It was also felt that a community engagement officer for large scale habitat creation/managed realignment schemes should be funded from flood defence Grant in Aid capital.

- 5.332 However, there is some potential for self-funding. For example, having developed a Flood Adaptation Action Plan in Porlock Weir, there are now elements of this plan which they will need to fund themselves. For example it has been suggested that they install appropriate resilience measures which could include raising electric points above the anticipated flood level, replacing wooden door frames/windows with plastic where possible, and raise floor levels.

Improvements to the Pathfinder programme

- 5.333 Asked about any improvements needed, the point was made that *“The difficulty with a project like this is that it takes a long time to build up community contacts in an area and also to gain people’s trust. When a lot of groundwork has been done a continued presence of the project is needed to encourage people to keep up the work which has been started. Perhaps if run again the Pathfinder programme could be operate over three or more years.”* There was also insufficient opportunity to network with other Pathfinders. However, on positive side, the flexibility to change tack was greatly appreciated.

Retention and dissemination of knowledge and experience

- 5.334 The Project Officer has now left, but others in the Team are still working within the County Council, so there is some continuity at least until the project comes to an end later this year. It is felt imperative that the website should continue to be supported into the future. To try to ensure this, the Pathfinder Team is exploring how the website (<http://www.somersetcoastalchange.org.uk/>) can be hosted in house at Somerset County Council to avoid the cost of commercial web-hosting companies.

Ability of the community to adapt to coastal change

- 5.335 In terms of the ability of the three communities to adapt, significant progress has been made, particularly in Porlock Weir and Steart. However, whether this is adapting to coastal change, as defined by the 2009 Coastal Change Policy consultation, or to flood risk is open to interpretation. This is discussed further below.
- 5.336 In **Porlock Weir**, in addition to a flood adaptation plan being developed, a flood resilience kit (identified as being required in the plan) was supplied to the community and training in using this kit was provided by a new Community Emergency Response Training initiative being trialled in Somerset in autumn 2011.
- 5.337 In **Steart**, the resilience reports produced through the Pathfinder project have made the residents more aware of their individual flood risk. The reports also give advice on how to protect their properties. As a result of the Environment Agency’s Steart habitat creation scheme, the surrounding area will look very different in the future. By taking residents to visit areas with similar landscapes, this has reassured them and eased their fears of living on the edge of a intertidal wetland habitat area. This in turn has helped them to embrace the change and therefore adapt more easily.

5.338 In **Brean & Berrow**, the dune system at Berrow is very dynamic and sand fencing and marram grass planting will help to restore areas of the dunes where blowouts have occurred. With local groups monitoring the dune system, this will help to ground truth the information which is being collected by the South West Coastal Monitoring Programme, in turn helping to understand how the dunes are functioning and how best to manage them into the future.

Community funding expectations revealed by Pathfinder

5.339 At Steart there was general acceptance that without a planned managed realignment/habitat creation scheme, Government funding for new flood defences will not be available in the foreseeable future. In contrast, in Brean & Berrow and in Porlock Weir, awareness of coastal flood risk was generally low. The Porlock Weir residents were initially unsure about the purpose of the Pathfinder funding. At the outset they thought the funds were to be used for funding defences. When it was explained to them that the money available through the project was not for hard flood defences but that the main purpose of the project was to help them to develop a flood adaptation action plan, they fully engaged with the process. In Brean & Berrow, individual property owners with a dune frontage tended to assume that they may need to invest more in private defences, or would benefit from publically-funded defences.

5.340 It was clear from the work at Brean & Berrow and Porlock Weir, that when initially confronted with the issue of coastal flood risk, residents expect Government and local authorities to help them out. However, it was felt that the Pathfinder work was beginning to show that with pre-planning and some Government support,⁷⁹ communities would be more willing and able to help themselves in the Big Society context.

Specific lessons for the planning system in terms of adaptation

5.341 It was felt that the Pathfinder project as well as the SMP review had helped to highlight possible challenges facing the planning community. The flood mapping work of Porlock Weir in particular had provided useful background information for planners to see the possibilities of coastal change in this area. During discussions it was suggested that Porlock Weir could be classified as a Coastal Change Management Area (CCMA) so that adaptation measures can look at the appropriate options for the area. The point was made that although planning authorities are well acquainted with coastal change issues in their areas, more joint working between coastal change and local planning officers would be beneficial.

5.342 At a national level, it was felt that there was a need for central Government to consider the possibility that for some small isolated communities that would not be

⁷⁹ For example, the project provided facilitation to help produce a flood adaptation action plan, a small grant to provide a flood resilience kit and flood risk report for properties in Steart. It also provided funding for materials for restoration work to the sand dunes at Berrow, which a local volunteer group will carry out.

defended the only adaptation to coastal change would be their eventual removal. This point was also made by the Jurassic Coast Pathfinder Team.

Lessons for future policy on coastal change adaptation

- 5.343 It was felt that greater consideration was needed on how to communicate policy changes more effectively to affected communities. The point was made that it takes both time and resources to communicate difficult policy decisions to people to help them understand and absorb the changes that are likely to happen to where they live and their livelihoods. Permanent staff dedicated to working with these communities are therefore needed and the communities need to be involved from the start in developing adaptation plans. In addition, the longer that work is done in a community on a focused activity, like managing the threat from the sea, the more effective the result and more local the solution. Small solutions may be possible using local authority, community or even private sponsorship in well developed coastal areas.
- 5.344 It was considered that the approach adopted by Pathfinder – i.e. funding from central Government being applied by local authorities – had worked because the authorities are a step closer to their communities than is practicable for central Government Departments, and are in a better position to identify individual community needs.
- 5.345 It was felt that, ideally the Pathfinder Programme should continue to be funded by central Government, and a further run announced to allow bids from other authorities. They would have the benefit of applying the findings of the first tranche of Pathfinders. However, the question was raised as to whether this would be possible in the short to medium term due to the current financial climate.
- 5.346 Some research was conducted by Pathfinder Team into other external funding options, but they were considered very limited:
- European Commission – for example funding through Interreg.
 - Local Government – Somerset County Council and its District Councils are committed to a nil rise in Council Tax, so this was not considered an option.
 - National Lottery – there are a number of Lottery Funders which can be approached, but they are mostly Arts, Heritage and Sports related programmes.⁸⁰
 - Awards for All programme – this makes small grants *“to help improve local communities and the lives of people most in need”*. As well as this criterion, applicants need to fulfil at least one of the following:
 - Be a not for profit group (including social enterprises), or a parish or town council, school or health body;
 - Have a bank account that requires two unrelated people to sign each cheque or withdrawal;
 - Have a governing body with at least three unrelated members;
 - Be able to spend the grant within one year.

⁸⁰ Since this work was carried out, the new Coastal Communities Fund has been launched (see para. 2.35).

5.347 It was felt that projects which would provide practical community help and advice on flooding would be eligible under these criteria and could be taken forward by community organisations and charities. However, these would require impetus from the community to set the charity up and run it.

Summary and conclusions

5.348 Overall, the project has delivered a range of benefits in the three case study areas such as: a Flood Adaptation Plan in Porlock Weir, which is now being taken forward by the community; the funding of a full-time engagement officer in Steart which, together with other engagement and educational activities, have been instrumental in bringing the local communities on board with the principles and impacts of coastal change according to the Pathfinder Team; and in Brean & Berrow, the building of relationships with the parish council and particularly with the Berrow Conservation Group which has been supported and encouraged in monitoring and restoring parts of the dunes which have experienced blow-outs. There have also been benefits arising from development of the Coastal Change e-game, DVD and website and a number of promising ideas that could be used elsewhere. While there are some question marks about the value for money of the work at Steart, due partly to lack of clarity about what could have been achieved anyway, overall the project seems to have represented value for money.

5.349 The focus of the project has been on adapting to coastal change and flood risk, thereby meeting one of the four key criteria for funding. The project also appears to have met the other three funding criteria and has contribution to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared.

6. Evaluation of the five larger pathfinder projects

6.1 A high level evaluation of the five larger Pathfinder projects – East Riding, North Norfolk, Scarborough, Tendring and Waveney – which received 71% of the total Pathfinder budget is given below. This is based on the key findings of a separate in-depth evaluation of these projects.

East Riding coastal change pathfinder

Background

East Riding of Yorkshire Council received £1,205,609 to explore planning for, and managing, adaptation to coastal change for their coastal communities.

Coastal change issues

The East Riding coast between Bridlington and Spurn Point has a well-recorded history of cliff erosion, driven by coastal processes and exacerbated by the effects of storm conditions and is the area most at risk from coastal erosion in the East Riding. Records suggest that, since the end of the last ice age, cliffs have eroded at a fairly constant rate of between 1.5 and 2.5 m per year, with isolated individual losses in excess of 20 m recorded in some years.

Informed by an ongoing coastal monitoring programme, the Flamborough Head to Gibraltar Point SMP identifies a number of residential properties that will at risk from coastal erosion on the East Riding coast over the three epochs. Businesses (largely caravan parks) and local transport infrastructure are also at risk.

Summary of proposed approach

- **Community engagement:** a strong focus on assisting vulnerable and isolated groups to achieve an enhanced level of quality of life and wellbeing through one-to-one engagement; ICZM adaptation communications toolkit.
- **Adaptation planning:** developing and delivering a tiered, enhanced support package for communities to adapt to coastal change, informed by existing successful adaptation measures and the emerging SMP. Embed coastal change adaptation into local ICZM structures.
- **Delivering adaptive solutions:** developing and delivering a bespoke range of adaptation measures based on priority and an assessment of residents' needs. The approach seeks to give incentives to people living with the imminent threat of losing their home to relocate to safer and more sustainable areas.

Main outputs and outcomes

- **Community engagement:** *partnership working and group structures – review of ICZM*; establishment of *coastal officers group*; development of *Coastal Partnership*; and future development of the *ICZM Adaptation Communications Toolkit*.
- **Adaptation planning:** *rollback review* and links to LDF; and *vulnerable groups priority outcome* – a process for identifying and prioritising those most at risk.

- **Delivering adaptive solutions: *enhanced assistance package*** including both relocation and adaptation support packages; investigation of ***rollback and buy and lease back***; delivery of ***small grants fund***.

Delivery of activity

6.2 The East Riding Pathfinder has delivered what was set out in the bid, but delivery has been prioritised, with support for those residents at the most imminent risk from coastal erosion being developed rapidly and others that had a more strategic role were being delivered progressively (e.g. ICZM Adaptation Communications Tool). Some elements have not been as effective as first thought such as buy and lease back. Others are considered to have achieved their objectives. These are discussed in detail in the in-depth evaluation of the five largest Pathfinders and are also set out in Annex O of this report. However, a brief summary of the Enhanced Assistance Package and the Council's consideration of rollback and buy and lease back are given below. The Pathfinder project is expected to continue until 31 March 2012.

- ***Enhanced Assistance Package (EAP)*** – this allows the Council to take a local and proactive approach to those at risk and identified as vulnerable through the Vulnerable Groups Priority Outcome process.⁸¹ It has been designed to help those at both imminent and higher risk, with properties located within the 2025 erosion line as identified by the latest Shoreline Management Plan. Each application is assessed against established criteria, based on the applicant's level of risk, and a Personal Pathfinder Plan is produced. This details the level of assistance available from either the relocation package or the adaptation package and is tailored to their needs (e.g. some may simply receive help with demolition costs). Second home owners will only receive help with demolition costs and cannot access the support below.
 - *Level 1* – the *relocation package* is available and includes demolition and site restoration costs of the curtilage; relocation costs (up to £1,000); small hardship payment (up to £200); payment of up to 50% of up to a 12 month private tenancy including bond, unless covered by Housing Benefit; payment of management/agent fees; and provision of essential second hand furnishings and white goods for a new dwelling through support from the third sector (up to £3,000)
 - *Levels 2 and 3* – it is proposed that residents in permanent dwellings at higher risk would have access to either the above relocation package or the following *adaptation package*: buy and lease back option (see below); erosion adaptation assistance grants, awarded by an ICZM panel to those residents feel they are able to adapt their living environment rather than move out of the property immediately (up to £2,000).

⁸¹ This process uses coastal monitoring data as the basis for identifying and prioritising the cases of those most at risk. There are three levels of risk: Level 1 (imminent risk – within the maximum annual loss distance for a particular location); Level 2 (higher risk – beyond the maximum annual loss distance but expected to be lost by 2025 based on SMP2); and Level 3 (expected to be lost between 2025 and 2035 based on SMP2).

A small grants fund launched in March 2011 allows the Pathfinder to include support for community groups and businesses in the coastal zone.

- **Rollback and buy and lease back** – one element of the Pathfinder bid was a review of rollback policies. In relation to delivery of the EAP, the Council envisaged considering rollback on a case-by-case basis, both for single residents or a number of residents wanting to relocate as a community. However, this did not occur in practice for a number of reasons (discussed further under ‘Lessons for future policy on coastal change adaptation’). Buy and lease back was offered to residents as part of the EAP. Three applications were received and these are currently at differing stages of completion. While it is clear that there are a number of barriers to implementing this process successfully, the Council is still working with the residents involved to try and achieve an acceptable solution. However, for a number of reasons, the buy and lease back component of the EAP has proved more difficult to test within the Council’s corporate structure and wider legislative and policy framework than had been anticipated (discussed further under ‘Less successful elements of the Pathfinder’). Other alternatives have been considered (set out in the in-depth evaluation) and one approach (removing the residential status of the property being considered)⁸² is being progressed.

Benefits to individuals and the community

- **Removal of properties at risk**
 - to-date, 12 households have accepted support for relocation via the EAP and there are three pending;
 - 17 households have received basic support for property demolition and site restoration only
 - 10 households are discussing adaptation approaches, e.g. buy and lease back, access improvement/relocation or rollback
 - in total, 43 structures have been demolished (including temporary buildings and caravans)
- **Definition of ‘imminent risk’** – one of the lasting benefits of the Pathfinder has been the development and adoption of a **consistent definition of ‘imminent risk’** established as part of the EAP assessment. This risk based approach has allowed the integration of existing coastal management mechanisms including the SMP and the Council’s coastal monitoring data. This is in line with national guidance in relation to spatial planning in the coastal zone. The process has ensured consistency and has allowed transparency, which has led to greater acceptance of decisions amongst the community. This is particularly important given the fact that this programme has not focused on a particular community. It prioritises the most vulnerable residents. This approach could easily be repeated on other stretches of coastline as long as a coastal monitoring programme is in

⁸² In this approach, the property or its land would be valued based on any commercial value it may have for temporary use (e.g. for agricultural purposes such as storage of equipment). This would provide the resident with some financial assistance and would remove the burden of demolition and land restoration costs.

place.

- **Increased knowledge and understanding of coastal change among the Council and coastal residents** – to-date, 76 households, nine businesses and one community group have been engaged in the Pathfinder. Coastal erosion datasets from regular monitoring have been used to establish a better understanding of the impacts of coastal erosion in the East Riding. Residents now understand the role of teams who are involved in coastal service delivery. There is a greater understanding of risk and the process that takes place around the serving of property demolition notices. The establishment of the Coastal Officers' Working Group has also significantly improved the transfer of coastal change information between Council service areas. This has also led to regular briefings with elected members.
- **Lessons in adaptation that can inform future programme delivery** – as well as providing valuable lessons on rollback and buy and lease back, the project has provided a template for processes which can be delivered on an ongoing basis with a modest funding injection. Significant lessons have also been learned in relation to the existing statutory and legislative tools currently available to help manage coastal change. There is a clear need for specific powers to be made available in relation to properties at risk from coastal change, to ensure that appropriate support can be provided. Further lessons have been learned in relation to the true cost of relocating people away from the risks posed by coastal change.
- **Increased adaptive capacity** – the partnership structures which have been put in place will remain following on from the Pathfinder and this provides a strong basis for a co-ordinated approach to adaptation in the future, with significant knowledge of the processes which work best. The ICZM Adaptation Communications Tool will provide resources and information which can help residents to adapt to coastal change in the future.
- **Future achievements** – funding is still available to continue the work, e.g. EAP, resulting in additional benefits. Other activities (and benefits) will include the second call period of the Small Grants Fund, the launch of an East Riding Coastal Partnership, and continued joint working through the internal Coastal Officers' Working Group.

6.3 As a result of the risk-based approach being taken, the vast majority of support and therefore benefits have fallen to individual residents or households. Residents and households facing the challenges of coastal change often live in isolated locations or form part of communities that are satellites of larger more established settlements further inland. Therefore, whilst the satellites have benefitted greatly, the impact of the Pathfinder in village centres which are not threatened by erosion in the foreseeable future (beyond SMP 100 year epoch) has been limited to enhanced awareness of erosion issues in the neighbouring satellite and elsewhere along the East Riding Coast.

6.4 The benefits of the Pathfinder in terms of the support provided have been monitored and evaluated throughout the project using the Personal Pathfinder Plans produced for each applicant. Feedback from residents to-date has reportedly been positive and it is recognised that the financial support has provided basic assistance which would otherwise be unavailable to allow relocation to a safer location. Further resident

feedback interviews are planned for Autumn 2011 and once all feedback has been gathered, the Pathfinder team will carry out a further evaluation and include the outputs in a separate Pathfinder engagement report linked to the ICZM Adaptation Communications Toolkit.

Additionality

- 6.5 According to the Pathfinder Team, funding has allowed the Council to take a more proactive and co-ordinated approach and has enabled them to trial new approaches where previously they would not have been able to afford to do so (e.g. trialling the EAP).
- 6.6 Local authorities do not have a statutory duty to provide financial support for those at risk from coastal change. Where a council has a statutory duty to serve a legal dangerous structure notice (Section 78) as a result of coastal erosion, financial responsibility for demolition lies with the property owner. If the owner is unable or unwilling to carry out the works, the council is required to carry out the demolition on their behalf and recover any associated cost from the owner. The assistance that was made available to residents through the EAP (including the small grants fund) has exceeded the standard support available through the Council, e.g. support for relocation via the Council's housing register. It was felt extremely unlikely that existing budgets would have been able to fund the work. Whilst existing budgets could be used to fund the very basic aspects of the Pathfinder, e.g. the retention of the Coastal Officers' Working Group, the incentives for residents to relocate such as funding for removals and utility disconnections would cease to exist.
- 6.7 As noted in para. 6.11, the amount allocated nationally to the Coastal Erosion Assistance Grant was found to be insufficient to meet the demolition costs of all properties removed through the project and, thus, a significant part of the EAP was used to support the removal of these structures.
- 6.8 It was felt that a review of planning policy in relation to coastal change would have been required in light of the development of the East Riding LDF. However, this would not have been as effective without the feedback and case studies which have been established. The Pathfinder has led to greater collaborative working across council services.

Less successful elements of the Pathfinder project

- 6.9 Although the Pathfinder has consistently been promoted as a time-limited, one-off project and, to a certain extent, expectations have been managed, inevitably it has **raised the expectations of residents** with regard to coastal change assistance. If the assistance packages cannot be funded in the longer term, there may be a negative perception from residents who have not yet received support but have an expectation that they will. This has highlighted a particular issue in that although the Pathfinder has provided something which was previously lacking and the Council has had no statutory requirement to provide, this has now been accepted as the 'norm'.
- 6.10 Whilst the Council has made some progress in reviewing its **rollback** policies as part of its LDF and four applications for rollback support are from the EAP are being

considered, there have been limited examples of rollback being implemented in practice. This is discussed further under 'Lessons for future policy on coastal change adaptation'.

- 6.11 A significant proportion of funding on the EAP has contributed to the **demolition and site restoration costs** for structures affected by coastal erosion and it has only been possible to recoup the Coastal Erosion Assistance Grant for demolition of properties on one occasion during the Pathfinder programme. Again, this is discussed further under 'Key lessons for policy on coastal change adaptation'.
- 6.12 Delivery of the EAP has highlighted the **lack of guidance on legislation which exists to support coastal adaptation activity** including the voluntary demolition agreements pursued by some residents (Section 80 of building control regulations). A workable definition of properties at 'imminent risk' and agreement on the use of Building Control powers was necessary due to the lack of guidance or legal framework at a national level for coastal change management. The use of Building Control statutory powers in relation to the removal of dangerous buildings (Section 78 notice) and demolitions on a voluntary basis (Section 80 notice) have been an important part of the EAP in the case of East Riding. Linked to this, there is also thought to be limited guidance / powers in relation to other council services such as housing, planning, environmental management/control.
- 6.13 With regard to **buy and lease back**, a number of issues have hindered implementation to date. For the Council to purchase a property and rent it out as part of their social housing stock it must reach minimum requirements to meet the decent homes standard. If it does not meet this minimum standard, the cost of works to achieve it will be deducted from any valuation. Due to the aging nature of much of the housing stock on the coast and the often non- standard construction used, the cost of upgrading applicants' properties to the decent homes standard has to-date been prohibitive. It is also felt that the purchase value which the Council could offer in order to make buy and lease back viable would be below that which a household could secure through a private sale. Finally, it is not appropriate to implement for individuals at high or imminent risk and the properties at imminent risk at any one time are likely to be insufficient to make this viable.
- 6.14 East Riding's approach does lead to the question of **why households at risk from coastal erosion should receive additional support** to that received by other households made homeless through other ways. It could be argued that other households are being relatively disadvantaged. However, the counter-argument is that these households are not able to receive insurance for the loss of their property and basic support is available nationally to help those who are at risk from flooding.
- 6.15 Despite the project's successes, **community engagement and communications** have remained key challenges. Although workshops held to-date have been well attended, discussions have been dominated by the most vocal residents and they have been an inappropriate forum for discussing individuals' personal requirements. A more effective one-to-one engagement process has therefore been adopted. The issue of communications should be improved once the ICZM Adaptation Communications Toolkit is launched. However, the Pathfinder could also have focused more explicitly on educating local communities and the wider public about

coastal processes and coastal change management.

Costs and type of spend

6.16 To-date (to 30 September), East Riding has spent £478,336 (40%) of its original budget of £1,205,609, the majority being on the EAP (92%). The remaining £727,273 has been allocated to continuing activities (particularly the EAP). Of the EAP (£440,555), most of the budget (79%) has been spent on demolition and site restoration costs. In addition to the Pathfinder funding, in kind support (estimated at £57,807) has been provided by the Council. The Environment Agency has also provided £22,500 for follow-up engagement which is linked to, but currently outside the remit of, the Pathfinder project.

6.17 A detailed breakdown of expenditure by type of spend is given in Table 6.1 below and is based on information provided by the Pathfinder Team on current and projected spend to 31 March 2012.

Table 6.1: Breakdown of expenditure by type of spend.

Category	Description	Amount
Staff costs	Salary and associated costs	£95,609
Consultancy and professional advice	Including external legal or engineering advice	
Capital spend on delivering adaptive solutions		£335,874
Revenue spend on delivering adaptive solutions	Not including small grants	£583,428
Workshops, publications and other communications materials not included above		£40,000
Small grants		£150,000
Total		£1,205,609

6.18 As shown, just under half (£583k; 49%) will be revenue spend on adaptive solutions, while 28% (£336k) will be capital spend. A further £150k (13%) will be spent on small grants. Staff costs (£96k) account for 8% of the budget, although there is further in kind support of £58k.

Focus on adaptation compared to other priorities

6.19 Table 6.2 gives a detailed breakdown of expenditure by objective and is based on information provided by the Pathfinder Team on current (to 31 August) and projected spend to 31 March 2012. As shown, the majority of the spend to-date (£335k; 89%) has been on delivering adaptive solutions. Assuming the remainder of the budget is spent as shown above, this will rise to £994k (83%), with lesser amounts being spent on community engagement (£172k; 14%) and adaptation planning (£40k; 3%).

Table 6.2: Breakdown of expenditure by objective.

Category	Description	Amount spent to 31 August 2011	Amount committed to 31 March 2012	Total
Engaging the community on coastal change adaptation	Workshops, consultations, education materials and publications.	£5,091	£34,909	£40,000
	1-year and 2-year officer posts			
	ICZM Adaptation Communications Toolkit and project website	£32,690	£62,919	£95,609
		£0 (4,175 hours in kind)	£36,245	£36,245
		£37,781	£134,073	£171,854
Adaptation planning	Rollback Policy review	£0	£40,000 ^a	£40,000
Delivering adaptive solutions	Production of application pack and guidance	£8,755	£0	£8,755
	Relocation package – demolition/resident support	£264,149 ^b	£134,977	£399,126
	Adaptation / resilience grants including			
	Small Grants Fund	£82,531	£167,469	£250,000
	Adaptation package – acquisition option	£0	£335,874	£335,874
		£355,434	£638,320	£993,755
Managing flood risk	Work aimed at managing flood risk, including raising awareness of current and future flood risk.	£2,000 (payment is pending)	An as yet unknown	An as yet unknown
Total		£399,522	£812,393	£1,205,609

Notes: a – £20k reallocated from acquisition feasibility study for vulnerable groups.

b – £288,149 including £24k from the Environment Agency.

Value for money

- 6.20 Full details of the value for money assessment are provided in the in-depth evaluation of the five largest Pathfinders and a summary table is given in Annex O of this report. It is important to note that, as with Jaywick in Tendring, ***the cost benefit analysis for the East Riding Pathfinder only tells part of the story***. The aim of the intervention is to remove property and individuals from the risk of coastal erosion (rather than to replace property). As such, the nature and rationale of the intervention demand that greater emphasis should be placed on more qualitative forms of analysis than is the case for other Pathfinders.
- 6.21 ***The intervention results in a negative Benefit Cost Ratio (BCR)***. This reflects the fact that the Intervention removes (and does not replace) potential income that could have been achieved if the properties were to remain. As such, whilst there is potentially a positive monetary benefit under the 'Do Nothing' scenario, under the intervention this is neutral. The scale of the negative BCR reflects the scale of the project – the project involves the demolition of ten times as many properties as Jaywick.
- 6.22 Clearly, however, the ***value for money assessment does not take into account numerous other relatively intangible impacts*** around issues of regeneration. While the aim to remove properties and individuals from risk (and to a lesser extent wider impacts such as the removal of blight and the need for regeneration) has driven the case for intervention, it has not been possible to monetise these impacts.

Promising ideas

- 6.23 The Pathfinder Team commented that the Pathfinder project had been developed based on replicable criteria (as noted previously). The Pathfinder project was designed to deliver achievable and desirable outcomes with only a modest injection of funding. Whilst there is no single solution to coastal change management issues in England, and subject to the availability of funding, it was felt that the EAP could be applied to other stretches of undefended coastline affected by similar levels of coastal erosion. Similarly, it was thought that the joined-up approach to service delivery as developed through the Coastal Officers' Working Group could be replicated in any area facing coastal change issues.

Improvements to the Pathfinder programme

- 6.24 The Pathfinder Team would have liked more opportunities for partnership working with other areas. This could have involved linking up similar Pathfinders to share more directly the ways in which they were meeting specific challenges or pairing Pathfinders that were dealing with different but complementary priorities (e.g. communications versus practical delivery). It was felt that there could also be a greater opportunity to integrate other coastal management mechanisms that have been moving forward nationally with the Pathfinders. For example the National Coastal Erosion Risk Mapping (NCERM) Project has been taking forward the mapping of coastal erosion risk and there are clear links between this and the Pathfinder that could have been explored.

Retention and dissemination of knowledge and experience

6.25 The Pathfinder Team comprises Council officers and thus, at the end of the project, retention of knowledge and experience should not be a significant issue. The internal Coastal Officers' Working Group has been retained on a permanent basis by the Council's Cabinet, so that the internal communication mechanisms developed through the Pathfinder are maintained and enhanced moving forwards. In addition, there will be a number of workshops for Council officers, local business owners and estate agents in the coming months to ensure that relevant coastal information is shared with stakeholders. The ERCCP Conference in January 2011 will result in the sharing of project outcomes with coastal stakeholders including residents and elected members, ahead of the launch of an East Riding Coastal Partnership in May 2012. All of these actions will be complemented by the launch of the ICZM Adaptation Communications Toolkit, a suite of communication measures that is set to include a website with a GIS-based mapping tool.

Ability of the community to adapt to coastal change

6.26 By engaging with coastal residents on a one-to-one basis, it was felt that Council officers had been able to raise awareness of coastal erosion risks and the statutory duties linked to the demolition of unsafe properties. They had also become far more visible to communities in coastal locations. However, it was felt that, despite this, due to the inability to insure properties at risk from coastal erosion, it was unlikely that the vulnerable, hard-to-reach and elderly sections of coastal communities in particular would be able to afford property demolitions and relocations without support from central government. In addition, they pointed to anecdotal evidence suggesting that residents consider support for adaptation to be an essential given that the East Riding Coast is largely undefended under the SMP2.

Community funding expectations revealed by Pathfinder

6.27 It was felt that there were growing signs of residents accepting the levels of risk faced to their properties, most clearly demonstrated by a significant number of households having accepted assistance to relocate from the coast to safe accommodation elsewhere in the East Riding and beyond. Whilst expectations around funding for sea defences and compensation for loss had been high, the Pathfinder had generated an understanding of coastal processes and coastal change management techniques which could be built on.

6.28 However, it was noted that as a result of communities gaining a better understanding of coastal change and associated policies, demand for adaptation assistance was growing. As noted previously, it was felt that the Pathfinder had significantly raised the expectations of residents with regards to coastal change assistance and should there be no long-term funding stream provided there could be a negative perception from residents who had not yet received support but had an expectation that they will.

Lessons for future policy on coastal change adaptation

6.29 The project has highlighted the ***benefits of partnership working*** and a joined up approach to tackling issues associated with coastal change. Through internal council departments working together, including housing, building control, planning and

coastal management, a more co-ordinated and effective result can be achieved.

- 6.30 Their experience suggests that there is a ***need for a better understanding of how existing regulations and powers can be used to support coastal adaptation*** activity and potentially changes may need to be made to provide an approach which is tailored to coastal areas. This includes building control and housing policies/regulations amongst others. It would be helpful to have national guidance for coastal areas.
- 6.31 According to the Pathfinder Team, it has only been possible to recoup the ***Coastal Erosion Assistance Grant*** for demolition of properties on one occasion during the project programme. The level of funding per property and the overall national funding pot is considered to be inadequate to fully meet the needs of residents in East Riding at risk. This is also considered to prevent a proactive approach since it is only available to those facing the immediate loss of a property. Once the project is complete, the Council plans to produce a specific report analysing the costs involved to provide a better understanding of the funding required to support this activity (which is likely to be above the Coastal Erosion Assistance Package) and to demonstrate the range of funding required.
- 6.32 The project suggests that there are ***difficulties associated with buy and lease back*** in coastal areas where properties are of a poor quality and require significant costs to bring these up to a certain standard. A number of approaches have been considered to relocate people away from risk, including changing the planning status from residential to commercial uses, which may work in practice in some locations where temporary use is required.
- 6.33 This highlights the ***importance of planning policy*** in coastal areas and the potential to use this to facilitate adaptation. In this case, planning policy has also been seen to be restrictive since in ***rollback***, only sites with a life of 100 years or more can be used. This is restrictive in some locations and the Council is considering changing this to 50-100 years. Other barriers include insufficient appropriate sites available to facilitate rollback and lack of financial capacity which is inevitably made worse when capital is lost through loss of property due to erosion. Rollback appears to work best for commercial properties such as caravan parks where owners are able to finance any move through their existing funds or a loan.
- 6.34 In East Riding, an agreed ***definition of properties at imminent risk*** has been important in prioritising individuals most at risk which is positive given that this has not occurred in all areas. It also appears that those most in need have been targeted and limited support has been available for second home owners (which has not been the case in all locations).
- 6.35 Finally, one concern is that the Pathfinder project (and programme as a whole) has significantly ***raised the expectations of residents*** with regard to coastal change assistance but there is no guarantee that funding will be available in future. This could lead to dissatisfaction by residents, particularly those who have not been supported to date.

Summary and conclusions

- 6.36 This Pathfinder project has delivered a significant number of benefits, including the removal of 43 structures at risk, the development of a consistent definition of 'imminent risk' that could easily be repeated on other stretches of coastline with a coastal monitoring programme in place and the development of a standardised methodology for providing assistance to coastal residents at risk. There has not only been an increase in the level of knowledge and understanding of coastal change among the Council and residents but also an increase in adaptive capacity through the establishment of partnership structures and the development of the ICZM Adaptation Communications Toolkit that will remain after the Pathfinder has ended. In addition, the delivery of community workshops and strong emphasis on one-to-one engagement with residents has encouraged communities to start planning for the future. Although not taken forward as quickly as anticipated, there have also been important lessons on rollback and buy and lease back that will help to inform future policy on coastal change adaptation. Most of these benefits, particularly the development of the EAP, are unlikely to have been delivered in the absence of Pathfinder funding.
- 6.37 As with Jaywick (Tendring), the aim of the EAP is to remove property and individuals from the risk of coastal erosion (and to a lesser extent wider impacts such as the removal of blight and the need for regeneration) rather than to replace property. Although efforts were made to assign a value to these less tangible benefits, this did not prove possible and the assessment of value for money resulted in a negative BCR for the intervention.
- 6.38 The EAP approach taken by East Riding does lead to the question of why households at risk from coastal erosion should receive additional support to that received by other households made homeless through other ways who could, therefore, be relatively disadvantaged. However, the counter-argument is that the households at risk from coastal erosion are not able to receive insurance for the loss of their property and basic support is available nationally to help those who are at risk from flooding.
- 6.39 The project has clearly met the first three funding criteria that 'the focus should be on adapting to coastal change', 'the emphasis should be on providing benefits to the wider community where these are proportionate to the costs' and, in particular, 'the focus should be on those sections of the community that are the most vulnerable to the impacts of coastal change'. In view of the approach taken of targeting support at those most at risk along the Holderness coastline, it is debatable whether it has met the fourth criterion that 'approaches should tie in with a long-term plan for change within the community and be supported through extensive community engagement and discussion'.
- 6.40 Overall, the project has clearly contributed to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared.

North Norfolk coastal change pathfinder

Background

North Norfolk District Council received £3,000,000 to explore planning for and managing adaptation to coastal change for the coastal infrastructure and business communities and a particular focus on the community of Happisburgh.

Coastal change issues

The East Anglian coastline has been subject to erosion for many years, with historic references to earlier settlements and properties lost to coastal erosion. Approximately half the affected coastline in North Norfolk consists of soft cliffs (clays, silts, sands and gravels) which are highly susceptible to erosion, the remainder is low-lying and susceptible to coastal flooding. Erosion rates vary from 0.4 to 2 m a year. Recent examples of the direct impacts of coastal change on Happisburgh have included the loss of 16 chalets, closure of a cafe and guest house and loss of a beach ramp.

Summary of proposed approach

- **Community engagement:** engaging with local businesses affected by coastal change impacts to provide short and long term tailored business support and advice on issues and adaptation options available to businesses. In Happisburgh, engaging with the community in a project to understand, record and manage the impacts of coastal change on their heritage.
- **Adaptation planning:** facilitating the rolling-back of businesses and community facilities by exploring spatial planning approaches such as establishment of a land bank, as well as provision of specialist planning advice to businesses.
- **Delivering adaptive solutions:** delivering a range of approaches to support continuity of community at Happisburgh and address the dereliction caused by coastal change. Approaches include establishing a 'buy to let' approach for properties at risk in the second SMP epoch; replacing damaged infrastructure such as beach access ramp; car park; cliff top paths. Elsewhere in the district projects include replacing the coastal footpath at Cromer.

Main outputs and outcomes

- **Happisburgh – *property acquisition programme*** has purchased properties; ***property acquisition for lease back scheme*** appraised but not pursued (due to very low return on investment, risk to the Council and lack of interest from Registered Social Landlords (RSLs)); ***cliff top enhancement*** project involving construction of new car park and toilets and new beach access ramp and removal of beach debris; ***rollback of the Manor caravan park*** granted an extension to enable the owner to find an alternative site; and ***Coastal Heritage project*** involving events, training and resource use completed with publication of a heritage book still outstanding but already over-subscribed.
- **Business support – *business advice project*** involving 90 businesses (advice, business grants/loans and tourism audit); ***marketing toolkit for businesses***; and study into the potential for private sector contributions towards a defence project in ***Wolferton***.

- **Infrastructure package** – development of succession strategy for *Trimingham Village Hall*; *realignment of cliff top* Runton Road to Cromer footpath; and *beach debris removal* at Beeston Regis.

Delivery of activity

6.41 The North Norfolk Pathfinder application was submitted as three packages:

- **Bid A (Happisburgh)** – interventions to manage impacts of coastal change within the community most affected (Happisburgh) to facilitate community adaptation and foster resilience.
- **Bid B (Business support)** – mitigating impacts of blight and disinvestment resulting from predictions of coastal change over the wider coast through business advice, buy and lease back options, roll back and investigation into a mechanism for securing business and private contributions towards the cost of coastal flood defence along Wolferton Creek in South Hunstanton.
- **Bid C (infrastructure works)** – safeguarding and relocating infrastructure important to viability of coastal communities.

6.42 All three packages remained intact, but elements of each were scaled back because the Pathfinder award was less than the bid. This included reductions to business support, house purchase (particularly buy and lease back), infrastructure replacement and environmental enhancement. In addition it emerged that support to any one business was limited by EU State Aid rules, reducing the support that could be offered to any one business, notably Manor Caravan Park in Happisburgh.

6.43 Full details of the activities delivered are given in the in-depth evaluation of the five largest Pathfinders and are summarised in Annex P. However, two activities – the development of a method for house purchase and implementation of rollback and consideration of buy and lease back – are set out below.

Development of methodology for housing purchase and implementation of rollback

6.44 One particular benefit of the North Norfolk Pathfinder project has been the development of the methodology for valuing and purchasing properties up to the 2025 risk epoch. It is likely this process is replicable elsewhere because of its transparency, although it is possible the scheme was more costly because it was the first of its kind. (Other approaches such as that adopted in Waveney may offer better value for money, although it is important to note that the coastal situation and circumstances are different in that location (e.g. undefended coast) and therefore the intervention may also be different.)

6.45 In North Norfolk, the projects acquisition cost per property includes three principle elements:

- *All Risks Value*: the market value of the property reflecting the 'risk' associated with coastal erosion.
- *Planning Policy Value (EN12)*: the value associated with North Norfolk Core Strategy Planning Policy EN12 relocation opportunity for obtaining planning permission on a site adjacent to a village where planning would not usually be

permitted. The policy only applies to properties with 20 years of being lost (as shown below). The figure is apportioned for the uplift in value of the relocation site between the owner of the plot (40%) and the purchaser (60%). A worked example is shown below:

- Indicative value of building plot with planning permission - £100,000
 - Hope value of site to EN12 right holder @ 90% to allow for application costs - £90,000
 - Existing use value of site without planning permission - £5,000
 - Uplift in value - £85,000
 - EN12 right holder share at 60% of uplift - £51,000
- *Pathfinder Supplemental Payment*: an additional payment based on statutory compensation rules. This payment is not available to property owners who bought property after the change in coastal policy and therefore with full knowledge of the risks now involved. This is calculated as 7.5% (for non-owner occupiers/second home owners) and 10% (for owner/occupiers) of the no risk value, discounting the payment until the end of the estimated economic life (therefore offering greater recompense to those anticipated to lose their properties first). The discount rate (3%) was taken from the Treasury Green Book.

6.46 It is worth noting that the calculation of the estimated No Risk value is used to set an upper limit for the total acquisition payment, although, in practice, all offers have been well below this level..

6.47 A number of sequential steps have been needed in implementing rollback to reduce the risk to the Council, which are in line with policy EN12 set out in the local plan.

- Hold 'without prejudice' discussions with the owner of the preferred site to solicit approval for a scheme, in principle (with an appropriate profit-share overage or partnership arrangement) and gain agreement to undertake a pre-application consultation for a scheme of nine dwellings of a suitable size, design, mix to comply with policy and site constraints. Undertake a pre-application consultation with interested parties (including consideration of alternative sites).
- Secure a suitable contract to acquire the appropriate interest in the site (with the agreed share of any uplift in value that accrues from the grant of planning permission). Any site purchase would be conditional on the grant of planning permission for the scheme proposed in the consultation (or as amended).
- Submit an outline planning application for a suitable scheme. The planning application if approved, will be subject to conditions relating to the demolition of the existing cliff top properties and restoration of the vacated sites.
- Once a suitable agreement with the landowner is in place, on the grant of planning permission the Council will demolish the dwellings, rendering the permission 'live'.
- The development site will be sold to a developer (which could be a Housing Association) and the appropriate share of the proceeds will be transferred to the interested parties, including the landowner. The Council anticipates 'recycling' its share of the proceeds of the sale to develop further coastal change

- adaptation/management projects.
- The developer will submit an application for full planning permission or approval of reserved matters. The permission will then be implemented by the developer.

Buy and lease back

6.48 Buy and lease back was considered in North Norfolk and a detailed report was completed that compared different approaches in which buy and lease back could be implemented in Happisburgh focusing on the properties with a 20-100 year lease. It was recommended that it should not be taken forward largely due to levels of risk to the Council and the key considerations are explored further below. However, the detailed work carried out in this area will be valuable for future policy and for any other local authority with properties at risk from coastal erosion or fluvial flooding considering a buy and lease back approach for their area.

- One key issue was whether any other organisations were willing to take on the management of purchased properties, thereby releasing the Council from day to day management. The authority had disposed of its housing stock and hence was no longer a housing authority. This placed limitations on its ability to manage houses it acquired.
- Registered Social Landlords (RSLs) expressed no interest in taking on purchased properties because the housing did not fit their portfolio, did not meet the decent homes standard and had a short life, therefore limiting any potential investment.
- There may be substantial breaks in the tenancies and if no tenant can be found, there may be a substantial loss.
- The maintenance of properties is a key issue. A number of the models assume that tenants would maintain the property which would be difficult to enforce and could result in the property falling into disrepair.
- Any properties purchased may already have had a reduced expenditure on maintenance and therefore considerable work may be required at the beginning of the period to ensure that it is habitable for the future lease period. This could be accounted for in the price paid but this may reduce the appeal of an owner to sell.
- Due to the limited budget of Pathfinder (£170,000), the scheme would probably only have been able to apply to one or two properties, thereby providing few lessons for others.

6.49 In terms of the financial return, if Treasury discounting is applied to the models then financially they break even at best. Other key points to note are:

- When using an investment model and without factoring in the management costs or void rental periods, when the EN12 opportunity value is applied, the model is financially self supporting
- If the EN12 value is not available, financial viability is reduced (although still viable in all but one model which is assessed).
- The best returns are generated when either the rent is 'negotiated', reviewed every three years and the tenant bears the property maintenance costs or the rent was at market rates but the Council bore the maintenance costs. However, in practice there is no guarantee that these returns would be realised.

6.50 North Norfolk District Council therefore investigated other options in which some or all of the project objectives could be achieved.

Benefits to individuals and the community

6.51 In addition to developing a methodology for valuing and purchasing properties up to the 2025 epoch, there were a significant number of other benefits:

- **Rollback/removal of properties at risk** – the residential property acquisition and replacement scheme on Beach Road will eventually enable the removal of nine properties which are at immediate risk of loss to coastal erosion. (It was planned that a second wave of removal from risk would be developed for those properties at lower risk of loss (20 to 100 year risk zones) via a buy and lease back scheme which was later not considered viable.) Although the scheme is not necessarily intended to re-home occupiers, the replacement of the nine houses on a different site in Happisburgh is intended to maintain the current level of housing in the district and consequently to preserve the character, size and viability of the community. (It should be noted, however, that Happisburgh is actually growing in size due to other development.)
- **Removal of blight** – although not all properties accepted offers and therefore did not enter into the scheme, the majority of properties along Beach Road within the 2025 erosion epoch, all of which have seen no or low investment as a result of recent coastal erosion threat, will be removed and replaced. The clearance of the old Happisburgh car park and amenities, areas which have been damaged by vandalism, will have a positive impact on the immediate vicinity of the area. The creation of new facilities will reduce further the impact of blight and reinstate the area as a coastal resort. Investment in the village is expected to have a positive effect on property values and confidence.
- **Local amenity benefits** – the reinstatement of beach access, cliff top enhancement and the realignment of Cromer footpath will improve resident and amenity perceptions and use of the coastal zone. The replacement of toilet and car parking facilities will improve scope for tourism, and encourage repeat visits, as well as improve the overall environment for residents.
- **Increased knowledge and understanding of coastal change** – awareness of the threat and impact of coastal erosion is already high in Happisburgh, but the project has been useful in stimulating and pump-priming a number of adaptation initiatives which otherwise would not have taken place. Business engagement across the whole of the risk zone has increased through the work of Business Forum. The Coastal Heritage Project has been instrumental in educating local, regional and national audiences about the importance and dangers of the erosion processes. The project serves as a useful model for community engagement, localism and volunteering.
- **Lessons in adaptation that can inform future programme delivery** – extensive use of a property consultancy to undertake property market appraisals, property valuations, project costings and planning advice has provided a robust and transparent set of transferable studies and methodologies which can be used to inform future projects elsewhere. The Coastal Heritage project has been extremely successful in engaging local interest and has been key to generating wider community buy in to the Pathfinder programme overall.
- **Increased adaptive capacity** – the North Norfolk Pathfinder was the largest and

most complex of the Pathfinder projects, generating high levels of interest and engagement from both the local community and more widely. Businesses are the most prominent beneficiary here, having benefited from access to business support, to forward planning (developing business plans) and potential roll back (caravan park) or improvement of the visitor offer more generally. The property acquisition scheme has enabled affected householders to plan more effectively for their futures, and have access to capital which would otherwise be unobtainable via property sale on the open market. Finally, the Council will realise a capital return through this scheme by implementing the rollback policy.

- **Potential to increase tourism** – a number of the Happisburgh environmental improvement projects have helped to produce attractive beach and cliff areas, with improved access and safety for residents and tourists. The replacement of the car park and toilets will enhance the visitor offer. Anecdotally, the combination of projects will serve to reinstate Happisburgh as a seaside resort in the near future.
- **Retention of local businesses** – the business support package has been successful in engaging with a significant number of businesses. While the exact breakdown of type of support and business is not yet available, the projects are considered to have been a success, with the marketing and loan/grant elements due to start in the next few months.
- **New investment attracted** – there is evidence that mainstream banks are entering into discussions with local businesses and facilitating access to loans. Although there is no evidence of increased tourism spend yet, it is anticipated that the creation of new visitor infrastructure (beach access, amenities, footpaths etc) will generate higher visitor numbers along the coastline more generally. Existing attractions in Happisburgh such as the lighthouse and caravan park are likely to benefit financially from this.
- **Retention or enhancement of wildlife habitats** – landscaping on cliff tops will enable the re-establishment of wildlife habitats.

Additionality

6.52 According to the Pathfinder Team, in the main, the projects supported under Pathfinder were those that the Council had aspired to undertake but had been unable to fund due to other priorities. There had been a programme of work with coastal communities over previous years and so Pathfinder was an opportunity to build on past work. However, the acquisition of houses for demolition or lease back could not have been undertaken without an initial injection of capital.

6.53 It was felt that the support that had been given to businesses had begun to improve versatility and renew confidence even in the present climate. This could not have been achieved in such a targeted way without funding from a source such as Pathfinder, particularly with the demise of Business Link.

6.54 Finally, the removal of old defences at Happisburgh beach would not have occurred given historic funding priorities. The Pathfinder had enabled the Trimmingham relocation fund to be set up to effect a timely relocation that could be properly planned and ensured the continued benefit to the community. Otherwise, it was likely that a rushed decision on a replacement would have occurred once the asset was lost, assuming future funds were available.

Less successful elements of the Pathfinder project

6.55 In addition to **buy and lease back**, which was not pursued for the reasons noted earlier, a number of other aspects of the project were less successful than originally hoped.

Happisburgh

6.56 The **planning policy** associated with rollback is fairly inflexible and requires a series of steps to be taken which increased the level of risk for the Council and extended the timeframes required. Using professional advice has mitigated these risks to a considerable extent, although the risk still remains that the costs of purchase will not be recouped should the proposed new housing development not take place.

6.57 The nature of the negotiation of acquisition and the absence of any degree of compulsion has meant that the price paid by the Council has had to be sufficiently attractive to encourage the vendor to sell. This may have inflated the final agreed purchase prices and prompted the use of a supplementary payment to some degree. It could be argued that this supplementary payment (to assist with removal costs and disturbance as per the compulsory purchase rules) has been compensatory. However, the Pathfinder Team has stressed that it wanted the households to move quickly and so was in a weak bargaining position and had to pay more. It has also added, "There was a significant risk that if the Council was not seen to offer a 'fair' value, or if it held back from pushing the boundaries (as an innovative approach was required for Pathfinder), far fewer offers would have been accepted and therefore the objectives of the scheme and benefits for the community may not have been realised. Furthermore if a satisfactory outcome was not achieved, it is likely that the core of the coastal community may have lost confidence in the whole Pathfinder scheme."

6.58 One of the proposals in the bid was to consider **land banking for business premises**. This has been difficult to achieve due to a reported lack of suitable sites in some situations and the timescales involved in identifying sites and obtaining consent which are beyond the project timeframes. It is also noteworthy that the specific requirements of different businesses make it difficult to bank land in advance. The reduced scale of funding from the original bid has also made it difficult to justify large capital spends on land for the future when there are a number of other pressing priorities.

Business support

6.59 Whilst the provision of support and engagement has been successful, the implementation of the loan and grant schemes has been protracted and complex and therefore considerably behind planned timescales. The link to coastal change adaptation is also tenuous in some cases, although this is acknowledged by the Pathfinder Team (see Table 6.4).

Infrastructure projects

6.60 Although this suite of projects has progressed effectively and there are benefits to the community in terms of improved access and the environment, it is not immediately

clear how the beach debris removal and footpath realignment works will increase the future adaptive capacity of residents, given that these are capital schemes which are likely only to be funded by the Council. However, as pointed out by the Pathfinder Team, these projects have dealt with immediate issues arising from coastal change and have enabled the community (including the Council) to adapt infrastructure to a changing coastline. They may also increase future tourism to the area.

Costs and type of spend

6.61 The Pathfinder project was awarded £3m and, to-date, around £1.3m has been spent on the various activities, with a further £1.7m being committed and a small amount (£36,858) being retained as a contingency fund. Of the £1.3m already spent, £759,757 (60%) was on activity in Happisburgh, £152,107 (12%) on business support and £108,835 (9%) on the infrastructure package. Additional funding of £10,000 was secured from the former East of England Development Agency. In addition, it was noted in the bid that around £190k per annum of existing technical expertise, capacity and knowledge would be used from within the Council. Based on an interview with the Pathfinder Team, this is likely to have been exceeded.

6.62 Table 6.3 gives a breakdown of estimated final project expenditure by type of spend based on information provided by the Pathfinder Team. As shown, around 63% of the whole budget (£1.87m) will be capital spend on adaptive solutions, while 15% (£455k) will be revenue spend. Consultancy support and professional advice accounts for 6% (£172k) of the budget, while business based grants (£115k) represent a further 4%. Staff costs (£352k) are around 12% of the budget.

Table 6.3: Breakdown of expenditure by type of spend.

Category	Description	Amount (£)
Staff costs	Salary and associated costs (e.g. any accommodation costs for staff)	£352,240
Consultancy and professional advice	Including external legal or engineering advice	£171,796
Capital spend on delivering adaptive solutions		£1,874,879
Revenue spend on delivering adaptive solutions	Not including small grants	£454,672
Workshops, publications and other communications materials not included above		£4,557
Small grants	Business based grants	£115,000
Total		2,973,144

Focus on adaptation compared to other priorities

6.63 Table 6.4 gives a breakdown of expenditure by objective, again based on information provided by the Pathfinder Team.

Table 6.4: Breakdown of expenditure by objective.

Category	Description	Amount spent (£)	Amount committed/ allocated (£)	Total (£)
Engaging the community on coastal change adaptation		0	0	0
Adaptation planning		28,490	11,510	40,000
	Research into buy and lease back	8,490	11,510	20,000
	Research into Wolferton private contribution for beach defence ¹	20,000	0	20,000
Delivering adaptive solutions		1,082,595	1,128,741	2,211,336
	<i>Happisburgh</i>	<i>751,267</i>	<i>870,343</i>	<i>1,621,610</i>
	Removal of dwellings at risk	641,700	214,300	856,000
	Cliff top enhancement	41,592	313,408	355,000
	Removal of beach debris	6,545	163,455	170,000
	Coastal Heritage	60,300	20,000	80,300
	Relocation of caravan site	1,130	159,180	160,310
	<i>Infrastructure package</i>	<i>108,836</i>	<i>155,596</i>	<i>264,432</i>
	Relocation of Trimmingham Village Hall	64,760	141,500	206,260
	Marram's Footpath			

	Removal of beach debris	30,904	14,096	45,000
		13,172	0	13,172
	<i>Programme management</i>			
		<i>222,492</i>	<i>102,801</i>	<i>325,292</i>
Wider economic development not directly linked to coastal change adaptation	Business support package	152,017	569,791	721,808
	Business advice			
	Business support	89,300	81,701	171,000
	E Norfolk tourism marketing	17,022	486,978	504,000
		45,695	1,112	46,807
Total		1,263,101	1,710,043	2,973,144

Note: 1: This appears to have been incorrectly allocated to adaptation planning when it should have allocated to coastal protection activity.

6.64 As shown, the majority of the spend to-date (£1m; 86%) has been on delivering adaptive solutions, of which the largest proportion has been on the property acquisition and replacement scheme at Happisburgh (60%). Assuming that the remainder of the budget is spent as shown below this will rise to around £2.2m (75% of the total). By the end of the project, wider economic development activity will have accounted for most of the remainder (£721k; 24%). It should be noted that the research work undertaken in relation to private contributions to the Wolferton beach defence has been included under 'Adaptation Planning', whereas it should perhaps have been included under 'Coastal Protection'. In addition, it is perhaps debatable whether some of the cliff enhancement work and infrastructure projects (e.g. removal of beach debris) could be regarded as 'delivering adaptive solutions'.

Value for money

6.65 Full details of the value for money assessments carried out on the Happisburgh acquisition and replacement of properties and the relocation of Trimingham Village Hall are provided in the in-depth evaluation of the five largest Pathfinder projects and summary tables are given in Annex P.

6.66 Based on the planned construction of a new development with nine replacement properties, the **public Benefit to Cost Ratio (BCR) for the Happisburgh removal and relocation scheme is negative**. However, it should be noted that this development is yet to be built and, as such, accurate information on its likely costs and value is not yet available. As a result of this, all costs and benefits in the assessment are high level estimates based on the initial scoping work done by the property consultants. It should also be noted that it has not been possible to quantify a number of benefits such as reducing blight effects and ensuring that demand for

local amenities is sustained, but it is likely that the value of these will be relatively low.⁸³ Although the BCR is negative, it is recognised that there are some strengths to this approach and that it may be possible to improve this ratio, for example by reducing the cost of purchasing properties at risk (e.g. not offering the supplementary payment) or increasing the return to the Council which would count as an additional benefit.

6.67 **The intervention to relocate Trimingham Village Hall also has a negative BCR** as the assumed benefits of the new village hall are less than the public sector contribution towards the building. It should be noted that:

- The intervention is still in its early stages – work to obtain planning consent and finalise the purchase of land for the replacement Village Hall is taking place.
- The anticipated total cost of the intervention (£324,300) includes a requirement for additional funding to be levered in on top of the funding from the Pathfinder. This additional funding is yet to be raised.

Promising ideas

6.68 A number of promising ideas were suggested by the Pathfinder Team based on their experience:

- **Replacement of infrastructure** – loss of infrastructure has an immediate economic effect that can quickly result in loss of community confidence and blight. Therefore projects that replace lost infrastructure can reverse that trend. Examples from North Norfolk included the re-establishment of the path at Cromer and access ramp in Happisburgh, the relocation of the car park and toilets in Happisburgh and the fund to relocate the village hall in Trimingham
- **Happisburgh acquisition and replacement scheme** – according to the Pathfinder Team, this had two purposes: to relocate housing that would otherwise be lost; and to improve the cliff top environment. Together these have had the effect of boosting confidence and allowing some people, blighted by the position of their houses, to move on. By using the planning framework some of the funds used initially could be recycled for use elsewhere. As noted above, the public BCR of this scheme was negative. However, there are some strengths to this approach (e.g. development of a methodology for valuing and purchasing properties up to the 2025 year epoch) and that it may be possible to improve the BCR by reducing the cost of purchasing properties at risk (e.g. not offering the supplementary payment) or increasing the return to the council which would count as an additional benefit.
- **Business support and marketing** – this is considered to have been of significant benefit, with some of these benefits likely to be felt for many years to come.

6.69 The Pathfinder Team felt that in ideal circumstances some roll-back schemes might

⁸³ It could be argued that Happisburgh is growing so demand for services will be sustained anyway. In addition, while removal of blight may be considered to be a benefit at local level, it is not considered a benefit at national level as increasing house prices does not provide any net benefit to the country.

be self-funding, or at least partially so. For example a re-sited car park (or any other infrastructure) could be funded by takings from the car park (or other facility), although the initial capital cost might need seed funding. Housing rollback could generate a return if a higher value re-development site is chosen, though this might be at the expense of community cohesion if the new site is well away from the site being lost.

Improvements to the Pathfinder programme

6.70 It was suggested that a longer lead in time might have been beneficial, thereby allowing more planning of actions, reducing risks and potentially improving outcomes. It may have also been helpful to have had access to the evaluation criteria and methods earlier in the programme to aid in collection of information.

Retention and dissemination of knowledge and experience

6.71 Retention of knowledge and experience may be an issue at the end of the Pathfinder project. Although the Team comprises largely Council staff, additional resources were arranged for delivering this project – notably programme management and legal assistance – and these will not necessarily be available once the project completes. Furthermore, due to retirements and reorganisations, the knowledge contained within retained staff cannot be guaranteed.

6.72 There has been significant dissemination throughout the Pathfinder. North Norfolk District Council hosted a Pathfinder Conference in March 2011. This involved field trips along the North Norfolk coast and show cased the projects which were being implemented. The event enabled other coastal local authorities, Government agencies and other coastal organisations to learn about the North Norfolk approach and discuss the lessons learnt.

6.73 The Pathfinder Team will be completing its own evaluation of the projects and will be seeking input from those community groups involved to assess the local perceptions of the projects and the benefits the community has felt that the projects have delivered. Through this evaluation an assessment will also be made as to any other coastal issues which have come to the fore, alternative suggested approaches and an assessment as to if and or, how initiatives can be replicated into the future.

6.74 It is intended that the North Norfolk Pathfinder website which has been live and updated throughout the Programme (www.northnorfolk.org/pathfinder) will finally host the Council evaluations of the projects and a library of relevant public documents. This resource will be available for any member of the public or organisation.

Ability of the community to adapt to coastal change

6.75 It was felt that the Pathfinder project had increased the ability of the community to adapt to a certain extent. Notwithstanding the Council's efforts to support them, prior to the award coastal communities had felt abandoned. For the time being, at least, the coastal communities felt less vulnerable. It was also clear that that an essential element in enabling communities to adapt to coastal change was to ensure that the correct information was made available and that it was provided in a way which was conducive to developing coastal literacy. The point was made that through

knowledge and understanding communities and individuals can make better decisions and choices and so therefore are better prepared for changes which will occur in the future.

Community funding expectations revealed by Pathfinder

6.76 In North Norfolk pressure for support for coastal change was brought about by the publication of a draft SMP that promoted policies of No Active Intervention or Managed Realignment where previously the policy had been to Hold the Line. It was felt that the Pathfinder had, if anything, confirmed the views of the communities concerned that coastal change resulting from a change of FCERM policy could not go ahead without substantial additional ongoing support. However, coastal change resulting from natural processes on an undefended coast may and should require less support. It had also been recognised that, in some cases, adaptation could occur with relatively small funds, essentially pump priming the adaptation.

Specific lessons for the planning system in terms of adaptation

6.77 The **use of existing planning and other policy** to embed the activity of the project has been beneficial and has enhanced the support provided to communities. This has included Planning Policy EN12 (in the 2008 North Norfolk Core Strategy), the use of the social housing register to help relocate residents from Beach Road where eligible and the reduction of Council Tax for affected properties. It is felt that without a suitable planning framework and pre-planning attempts at coastal adaptation will fail.

6.78 It is possible however that if the **planning framework** is altered substantially and it became significantly easier to obtain planning consents for residential properties, this may have the effect of undermining the value which can be attributed to at risk coastal properties in areas where a rollback policy is in operation. Conversely there may be benefits to individuals seeking to effect their own relocation as the land values would be depressed.

6.79 In particular, the **use of Planning Policy EN12**, which enables the use of land which otherwise would not be granted planning permission for dwellings, gives rise to an uplift in the value of the properties which are at risk (a replacement opportunity value), a value which was able to be included in the offers made to owners of the nine Beach Road properties. With a property acquisition scheme, it should be noted that a development site via which to exercise EN12 rights should be secured prior to acquiring sites for removal from risk. This reduces the risk of losing costs already outlaid in the event that a development does not go ahead due to unavailability of land.

Lessons for future policy on coastal change adaptation

6.80 North Norfolk's use of external consultants to undertake and produce an auditable suite of feasibility and valuation studies has been a key factor in securing buy in from the majority of approached property owners and subsequent housing acquisitions. This highlights the value of developing a **methodical and objective approach to valuation** in the context of a negotiation which has considerable social and personal nuances.

- 6.81 The Pathfinder Team reiterated the **challenging nature of the short programme timeframe** in terms of securing community buy in, ensuring planning and other pertinent policy was in place or could be developed. To some extent, North Norfolk is ahead of other Pathfinder areas because it had begun a process of adaptation in response to the changed SMP policy. Conversely, it is vital that any process of acquisition is underway quickly to reduce risk of asset value being lost to erosion prior to the negotiation and acquisition (and demolition) taking place. In the North Norfolk planning Policy context, relocation and planning permission able to be given only if property exists and is at risk within 20 years.
- 6.82 Although **buy and lease back** did not work in practice in North Norfolk, the extensive work carried out and lessons learned will be valuable for future policy (paras). Such a scheme may be viable if delivered through a different organisation and/or if it was completed on a larger scale.
- 6.83 Fit with corporate priorities is useful and vital in developing relationships across Council teams and departments. The suite of projects and necessity for **joint working** have been influential in helping to make the way for collaboration and closer working across teams such as engineering, planning and legal.
- 6.84 As might be expected with any non-ring fenced funded programme, there is some blurring of the **boundaries between regeneration/economic development and genuine adaptation activity**. There needs to be a clear distinction between these discrete but related activities. In North Norfolk, while the business support scheme was clearly considered to be wider economic development activity (Table 6.4), it is debatable whether some of the cliff enhancement and infrastructure projects could be regarded as delivering adaptive solutions.

Summary and conclusions

- 6.85 This Pathfinder project has successfully delivered a significant number of benefits, including the development of a methodology for valuing and purchasing properties in the 5-10 year risk of loss period and the rollback/removal of nine properties at risk, with the subsequent removal of blight, together with local amenity, tourism and business benefits. There has not only been an increase in knowledge and understanding of coastal change, but also an increase in adaptive capacity. In addition, there have been valuable lessons for future policy not just in terms of rollback but also in terms of buy and lease back. It is unlikely that these benefits would have been possible without Pathfinder funding.
- 6.86 While the public BCR for the Happisburgh acquisition and replacement scheme is negative, there are some strengths to this approach and it may be possible to improve the BCR, for example by reducing the cost of purchasing properties at risk (e.g. by not offering the supplementary payment, which could be regarded as compensatory) or increasing the return to the Council which would count as an additional benefit.
- 6.87 As might be expected with any non-ring fenced funded programme, there is some blurring of the boundaries between regeneration/economic development and genuine adaptation activity. In North Norfolk, while the business support scheme was clearly considered to be wider economic development activity, there is it less clear whether

all of the cliff enhancement and infrastructure projects could be regarded as adaptation activity. However, as pointed out by the Pathfinder Team, these projects did deal with immediate issues arising from coastal change and so enabled the community (including the Council) to adapt infrastructure to a changing coastline.

6.88 Overall, the project has clearly met the first funding criterion that ‘the focus should be on adapting to coastal change’, together with the other three (‘approaches should tie in with a long-term plan for change within the community and be supported through extensive community engagement and discussion’, ‘the emphasis should be on providing benefits to the wider community where these are proportionate to the costs’ and ‘the focus should be on those sections of the community that are the most vulnerable to the impacts of coastal change’). It is also clear that the project has contributed significantly to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared.

Scarborough coastal change pathfinder

Background

Scarborough Borough Council received £1,022,500 to explore planning for, and managing, adaptation to coastal change for the Knipe Point community.

Coastal change issues

Knipe Point is a development of 56 properties on the top of Clayton Cliffs, just to the south of Scarborough. The cliffs have been subject to significant landslips as a result of the combined effects of coastal erosion and the underlying instability of the coastal slopes. The remobilisation of this landslide in 2008 has resulted in the loss to date of private land and the enforced demolition of three properties. Further properties are considered to be at risk over the next five years, together with part of the old A165 and properties beyond this. The land affected is privately owned by the National Trust and Knipe Point Freeholders Ltd.

Summary of proposed approach

- **Community engagement:** consultation with affected community including regular meetings.
- **Adaptation planning:** developing an adaptation action plan for Knipe Point.
- **Delivering adaptive solutions:** purchasing nearby land not at risk of coastal erosion or land instability. Knipe Point property owners who lose their home as a result of coastal erosion would be given the opportunity to rebuild on the purchased land subject to conditions to be determined as part of the project.

Main outputs and outcomes

- **Community engagement:** extensive community engagement focusing on the 15 properties at immediate risk, resulting in 12 out of 14 residents confirming that they wished to participate in the Pathfinder project and all preferring the Council to purchase a communal plot.
- **Site appraisal:** site appraisal carried out in April 2011, with Muston Road, Filey, being recommended as the preferred site. Initial discussions suggest that the residents are not happy with this site.

Delivery of activity

Community engagement

6.89 The project has progressed at a slower pace than originally planned. To-date the project has focused on engagement with the community and a review of possible options for their relocation. The support is targeted at 15 properties at immediate risk (initially 0-1 year), 11 of which are second homes (which were originally considered ineligible).

6.90 There has been extensive community engagement throughout the lifetime of the

project from both officers and members. This has included meetings and one to one discussions with residents as well as dealing with interviews which have resulted from the significant interest in Knipe Point from the press.

- 6.91 Originally, the eligibility criteria excluded second home owners. However, following consultation with residents, the criteria were amended by the Council to include second home owners on the basis that the Pathfinder project was seeking to assist residents adapt to coastal change where no coastal protection scheme was feasible but that if such a scheme had been possible this would have provided protection for these residents.
- 6.92 At an early stage in the project, residents were reportedly asked whether they would be willing to source their own land up to the value of £50,000 (includes £5,000 demolition costs). This was based on an independent valuation of the land carried out which valued the land at £45,000 per plot (below the £75,000 identified in the bid). However none of the residents accepted this offer.
- 6.93 In December 2010 a letter was issued to affected residents to seek their feedback on their needs and requirements. They were asked whether they wished to participate in the Pathfinder project and if they had a preference for either a communal plot of land or their own individual plot. Twelve (out of 14) responses were received and all confirmed that they wished to participate in the Pathfinder project and preferred the Council to purchase a communal plot.

Site appraisal

- 6.94 A site option appraisal study, which aimed to identify a suitable site was completed on 30 April 2011. The Council carried out the assessment and each site was assessed against key criteria which included suitability (considering the likelihood of securing planning permission, relocation timescales, delivery risks, proximity to Knipe Point and other factors) (60% weighting) and cost (40% weighting).
- 6.95 A first stage screening was carried out of all of the sites allocated for residential development identified in the DPD (49 sites in total). Only two sites were identified as being suitable, with many being too small or not for sale. A third site was also identified which had already reached Outline Planning consent. The three sites which were considered in more detail were: Middle Deepdale; West Garth; and Muston Road. Three additional sites were identified by residents: Rosedale Caravan Park; Saxon Park; and land adjacent to Knipe Point, Filey Road. Of these, the study recommended Muston Road, Filey, as the preferred site for relocation.
- 6.96 Initial discussions have indicated that residents are not happy with Muston Road for a number of reasons (e.g. they do not wish to be part of a larger housing development) and would prefer to be located at a site such as Saxon Park which would offer them a similar location to their current place of residence. Residents have agreed to apply (at their own expense) to vary the planning constraints on the Saxon Park site and have engaged planning consultants to do this on their own behalf.

Future delivery

6.97 At this stage, it is not clear how the project will be delivered in the future and the conflicts resolved. One option is that residents will be offered space at Muston Road and that some will accept this. Others may wish to accept the payment and use this to purchase a house elsewhere. Alternatively, the residents may be successful in securing a change to planning policy at Saxon Park which will allow them to relocate to their preferred site. The Council has indicated that it is not opposed to giving the money back to Defra if an acceptable solution for all parties involved cannot be found.

Benefits to individuals and the community

6.98 To-date, the project has not achieved what it set out to do and so it is difficult to point to clear and measurable achievements. However, there are two:

- ***Increased knowledge and understanding of coastal change*** – there has been significant exposure of Knipe Point in the press which it is believed has led to increased knowledge and understanding of coastal change. This has led to an increase in the number of enquiries to the Council about levels of risk associated with properties. However, this is likely to be due also to the landslide itself and the subsequent issues rather than just the Pathfinder itself. Another positive outcome of the Pathfinder has been the production of an emergency evacuation plan. This plan is currently the only one in existence along the coastline in Scarborough.
- ***Lessons in adaptation which can inform delivery*** – while the project has encountered a number of difficulties which have hindered the potential to demonstrate clear outcomes, it has clearly shown the difficulties of gaining community buy-in to a rollback scheme and the time taken to gain consensus. These lessons should inform other programmes.

6.99 There also appear to have been some ***negative impacts***:

- ***Relationships between residents and the Council*** – despite extensive community engagement by officers and members, there have been particular difficulties between residents at Knipe Point and the Council, with residents reportedly unhappy with the slow progress made by the Pathfinder and their perception that it is not delivering their desired outcome.
- ***Lack of community cohesion*** – the project appeared to seek to keep the community together and ensure community cohesion (stronger and more positive communities). However, for the majority of households these are second homes and not the primary place of residence which would suggest that the community cohesion benefits would be lower compared to other locations.

Future benefits to individuals and the community

6.100 The possible benefits of the project if successfully implemented in the future might be as follows (though it needs to be recognised that it is not clear at this stage whether this will in fact be implemented).

- ***Rollback/removal of properties at risk*** – it is proposed that the main benefit

which will result from the project if successfully delivered is that 15 residential properties will be removed from risk.

- **Environmental benefits** – this area is a SSSI and there are positive environmental benefits associated with moving people away from the area.

Additionality

6.101 A significant amount was already being done to support the community at Knipe Point. For example, the Environment Agency funded studies to examine in more detail the potential risks to the area and the National Trust was providing funding to monitor the situation. In addition, stakeholder liaison with residents was already being carried out and an emergency planning group had been set up.

6.102 Due to the nature of the community (including that the majority are second home owners) and the fact that these individuals will receive insurance payments to support future plans, it has been suggested that a number of these individuals may have purchased another property anyway. It is also reported that some may have done this more quickly since many have been waiting to see what solution Pathfinder might provide. Since some are second home owners anyway, some may not have needed or wished to purchase another property.

Less successful elements of the Pathfinder project

6.103 The project has demonstrated that the problems facing residents at risk are complex and varied and that there is no one size fits all approach. Support needs to be tailored to the requirements of the community.

6.104 **It has taken longer than originally expected by residents (and the Council) to remove them from risk.** Since 11 out of the 15 residents are second home owners, there does not appear to have been an urgency to move away from risk and residents appear to have been waiting for the most desirable solution to be found. Scarborough Borough Council considers that, with hindsight, it would have been better to have selected the land without any consultation and to have then offered it to residents on a take it or leave it basis and to have drawn down the funding following on from this (residents are reported to have seen the fund as their money). This would have removed the element of doubt and reduced protracted negotiations.

6.105 The **extent to which this approach can be applied to other coastal areas is limited** since these areas will not receive insurance payments. This could however be replicated where individuals have the ability to pay themselves.

6.106 There has been **no means testing** as part of the programme. The criteria which were put in place did not include any means testing and did not take into account the fact that beneficiaries have a range of financial circumstances, with many second home owners. Some residents are reported to have viewed the Pathfinder as a means of recompense not as a mechanism to establish their lives and some are reported to have already bought a second home to allow relocation once their Knipe Point property is lost but still wish to receive some land. It is questionable whether the eligibility criteria should have been changed and whether there is in fact

a market failure argument for the intervention (particularly when they will be receiving insurance payments). It is possible that this approach is **compensatory** if the land cost is not being recouped elsewhere.

- 6.107 The **different agendas and needs** between primary and second home owners may not have provided the best result and this has meant that those vulnerable residents have not been supported as quickly as they should.
- 6.108 There have been more difficulties than first thought with **payments from insurance companies** and the approach taken by companies has not been consistent. For example, some companies will only pay out on actual loss whereas others have paid out in advance of loss. The effect of not paying out until the loss occurs has had the effect of trapping residents who are at risk and made relocation impossible until the property is actually at risk.
- 6.109 In the early stages of the project, the Knipe Point residents and the Council did not fully appreciate the **difficulties in finding a suitable site**. It has been difficult to find a site which is of a suitable size for all 15 properties, which is located away from coastal erosion/flooding risk and which is allocated for housing in the core strategy. A number of other factors have also contributed to the delay in finding a suitable site including difficulties in encouraging residents to reach agreement or compromise given that they are making a financial contribution themselves.
- 6.110 It is taking longer than expected to gain consensus from residents and **community engagement** does not appear to have been a particular strength of the project. There has been some concern throughout the project over whether the views of the community representative are the same as the community as a whole. The result is an extremely strained relationship between the Council and residents at Knipe Point and this has not been helped by negative press attention.
- 6.111 The Pathfinder project has not **sought external support throughout**. One area where this may have been beneficial was the site appraisal study. If this had been commissioned independently, it could have given the recommendations the necessary authority and independence required to carry weight with the community. There could also be some benefit in appointing an independent mediator to work with the community and the Council to resolve the situation.

Costs

- 6.112 To-date, only £16,900 has been spent on project management, with a further £5,600 projected. It is expected that the future costs of purchasing a site will be below that originally expected (£750,000). Scarborough Borough Council received £1,022,500 from the Pathfinder project and it is not clear at this stage how the remaining money will be spent.

Focus on adaptation compared to other priorities

- 6.113 Assuming that the project does go ahead and based on the estimated costs of purchasing a suitable site, around 75% of the original budget could be spent on adapting to coastal change.

Value for money

6.114 Full details of the value for money assessment are given in the in-depth evaluation of the five largest Pathfinders and a summary table is given in Annex Q of this report. In brief, the assessment considered the impacts of the project (net present value) against what would have happened in the absence of the project (again, net present value). The project achieved **a Benefit to Cost Ratio (BCR) of 0.1:1**.⁸⁴ However, it is important to bear in mind the points above regarding the additionality of the project. This suggests that the property owners may have used their insurance money from the loss of property to rebuild a house elsewhere in any case.

Ability of the community to adapt to coastal change

6.115 Despite the slower than expected progress made in this Pathfinder project and the uncertainty about what will ultimately be delivered, it is clear that the community is willing to adapt to coastal change.

Lessons for future policy on coastal change adaptation

6.116 The extent to which this solution can be **replicated elsewhere is limited** because individuals affected by coastal erosion do not receive insurance payments. It can work where individuals can afford to pay for rebuilding their property.

6.117 In the future, Scarborough Council has indicated that they would prefer to **plan ahead** when dealing with coastal erosion. A key priority is to make people fully aware of the risks of coastal erosion so that when individuals do purchase a property they do so with a full understanding of the potential threat that they may lose their home.

6.118 Planning needs to ensure that individuals are not able to develop on sites which are identified as being at risk. Scarborough Borough Council is planning to allocate land for individuals at risk from coastal erosion and discussions are underway with planners to find ways of providing land for properties at future risk of loss. **Land banking** needs to look at future needs based on monitoring data, the availability and cost of land. Purchasing land today may well prove more cost effective than delaying purchase. A key issue in considering rollback in the future is affordability; it would not be feasible for the Council to purchase sites unless Council Tax could be increased to raise funds locally to cover this cost.

6.119 The issue of **second home owners** has been a difficult one to deal with throughout many of the Pathfinder projects and how/the extent to which they benefit has been a question which has not always been resolved. In addition, unlike those suffering from coastal erosion they will receive an insurance payment. This reinforces the

⁸⁴ To compare the Pathfinder public BCR with that for a traditional (fully publically-funded) defence scheme, 1 needs to be added to the former. Hence the public BCR of the proposed rollback scheme would be 1.1:1.

need for eligibility testing where the Government intervenes, since there does not appear to be a strong market failure argument in these cases.

6.120 A final lesson is the ***time it takes to gain consensus*** from the community and to implement rollback schemes such as this. Independent support (such was the case in Waveney, which commissioned planning consultants to consult with some individuals to select a preferred site) may have been beneficial in this case.

Summary and conclusions

6.121 While the project has encountered a number of difficulties which have hindered the potential to demonstrate clear outcomes, it has clearly shown the difficulties of gaining community buy-in to a rollback scheme and the time taken to gain consensus and these lessons should inform other programmes. There has also been an increase in knowledge and understanding of coastal change, though this has also been due to the landslide in 2008 and resulting publicity. If successfully implemented in the future (and this is by no means certain), the project will result in the removal of 15 properties at risk from coastal erosion, which it has been shown should represent a BCR of 0.1:1.⁸⁵

6.122 However, it is important to bear in mind the points above regarding the additionality of the project, which suggest that the property owners would have used their insurance money from the loss of property to rebuild a house elsewhere in any case. This also limits the extent to which this solution can be replicated elsewhere since individuals affected by coastal erosion do not receive insurance payments, although it can work where individuals can afford to pay for rebuilding their property.

6.123 If ultimately successful, the project should meet the funding criteria that ‘the focus should be on adapting to coastal change’, ‘approaches should tie in with a long-term plan for change within the community and be supported through extensive community engagement and discussion’ and ‘the emphasis should be on providing benefits to the wider community where these are proportionate to the costs’. While the project aimed to meet the criterion that ‘the focus should be on those sections of the community that are the most vulnerable to the impacts of coastal change’ at the outset, it could be argued that the decision to extend the eligibility criteria to include second home owners means that it has not been achieved in full.

6.124 Irrespective of its ultimate success, the project has contributed to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared.

⁸⁵ To compare the Pathfinder public BCR with that for a traditional (fully publically-funded) defence scheme, 1 needs to be added to the former. Hence the public BCR of the proposed rollback scheme would be 1.1:1.

Tendring coastal change pathfinder

Background

Tendring District Council received £1m to explore planning for, and managing, adaptation to coastal change for the Tendring Peninsular, Jaywick, and Walton-on-the Naze communities. Tendring District Council worked in partnership with Essex County Council, especially in Jaywick where the County Council took the lead on the acquisition and demolition programme.

Coastal change and other issues

The Tendring coastline and its communities face a number of significant challenges associated with climate change, emphasised as a result of its fragile, changing coastline and significant areas of high value agricultural land and rare habitats vulnerable to flooding and salting. Much of the area is below sea level and there is a history of flooding and erosion which is exacerbated by exposure to heavy wave action and North Sea surges.

Tendring is also host to a number of severely deprived areas, including the Brooklands and Grasslands area of Jaywick which is the most deprived area in the country (2010 IMD, using Lower Super Output Area), and suffers from some of the negative issues associated with tourism economies.

Summary of proposed approach

- **Community engagement:** building understanding of coastal change with communities and embedding this in wider engagement activity surrounding the project and regeneration programme.
- **Adaptation planning:** developing an adaptation strategy to consider possible opportunities, particularly for tourism, and risks associated with different adaptation scenarios. Supporting communities with the transition associated with coastal change e.g. through contributing to the demolition of derelict properties in at risk areas as part of the Jaywick regeneration programme.
- **Delivering adaptive solutions:** building a viewing platform as part of the Crag Walk scheme at Walton-on-the-Naze, to enable visitors and schools to see and understand the erosion processes affecting the coast. The project is part of wider plans for educational facilities to help inform the community and others about coastal change and other environmental issues.

Main outputs and outcomes

- **Jaywick: acquisition of four properties** which were demolished (the acquisition programme was halted in September 2010 following a budget review); support for the construction of a **community garden at Brooklands Gardens**; recruitment of **Community Development Worker**; introduction of an interim **planning policy** to prevent development at Jaywick (subsequently rescinded on the basis of a lack of sufficient consultation with local people); consideration of **buy and lease back** scheme (not pursued).
- **Crag Walk:** viewing platform built as part of the Crag Walk scheme at Walton-on-the-Naze, to enable visitors and schools to see and understand the erosion processes

affecting the coast.

- **Tendring Peninsula:** tourism study not yet commissioned.

Delivery of activity

Jaywick

- 6.125 Pathfinder funding was used to **acquire four properties at Jaywick** and these were subsequently demolished at the expense of Essex County Council.⁸⁶ The acquisition programme was halted in September 2010 following a budget review by Essex County Council and a recognition that without significant additional finance from the County Council and other sources the overall impact of acquisitions would be minimal. The Council favoured an approach of increasing the use of enforcement powers to deal with sub-standard properties.
- 6.126 The Pathfinder project also supported the **construction of a community garden at Brooklands Gardens** on a former brownfield area approximately 25m from the sea defences in Jaywick (this was not part of the original bid). It was originally constructed as part of a community safety project which aimed to widen and make safer the alleyway through the centre of Brooklands. The area had been derelict for a number of years as it was not possible to redevelop the land for residential uses under PPS 25. As such the scheme represented a way of bringing land into a use that was compatible with local planning policy and flood risk management.
- 6.127 A **Community Development Worker** was recruited within the Jaywick Neighbourhood Team to advise residents on coastal adaptation and flood risk issues associated with the area and to help educate the community on coastal change issues as well as supporting them through the transition of coastal change.
- 6.128 Through the project, an **interim planning policy** was introduced to prevent development in Jaywick. This was adopted by Cabinet in December 2010 but rescinded in January 2011 on the basis of a lack of sufficient consultation with local people following political representation on their behalf. The interim policy was needed as the Council does not yet have an LDF and its existing planning policy pre-dated PPS 25 and the development restrictions which this affects.
- 6.129 The project also considered a **buy and lease back scheme** but this did not proceed for a number of reasons, the main barrier being the poor standard of housing which led to a lack of interest from Registered Social Landlords (RSLs).

Crag Walk

- 6.130 Crag walk is a 150m long rock revetment in front of the cliffs adjacent to the Naze Tower. It forms a viewing platform and includes interpretation boards to educate

⁸⁶ Flood risk is preventing development of new homes at Jaywick (as a result of PPS 25) and hence a programme of buy to demolish was adopted. This was part of a wider initiative supported by Essex County Council to reduce the number of derelict, empty and sub-standard properties in the core regeneration area and therefore help to improve economic wellbeing and reduce crime. The programme was also intended to slow the transition of dwellings from owner occupation to private rented and remove poor quality housing that contributes to poor health.

visitors and school parties on the impact of coastal erosion. Crag Walk provides a safe walkway from which the public can view the geological features of the SSSI cliffs and through the illustrations and information on the interpretation boards learn about coastal erosion processes and the environmental changes occurring in the area. Crag Walk construction began in November 2010 and was opened in April 2011, with an official opening in June 2011.

- 6.131 Pathfinder funding was originally intended to support the educational elements of the scheme but, in reality, the funding was used to support other elements of the scheme including defence. The walkway does however allow the process of coastal erosion to be viewed close at hand and in this respect the Pathfinder funding is being used to support awareness raising. The interpretation boards which have also been supported (but with other funding) are aimed at increasing awareness of the site's heritage, geology and ecology as well as coastal erosion issues. The scheme has led to the protection of a number of assets from coastal erosion including the Naze Tower, a local tourist attraction.

Tendring peninsula

- 6.132 This project was not delivered through the Pathfinder programme. The proposal was to commission a tourism study for the area. However, Tendring District Council is currently awaiting the publication of the SMP and is also reviewing its draft LDF, (including local planning policy for areas threatened with erosion and of high flood risk before commissioning this study). When this is complete, it is expected that the study may be commissioned, though this does not appear to be as high a priority for the Council.

Benefits to individuals and the community

- ***Removal of properties at risk*** – Four households in Jaywick have been removed from risk of coastal erosion and flooding.
- ***Protection of properties at risk*** – the Crag Walk project has prevented the imminent loss of the grade II listed Naze Tower, which stands only 60m from a cliff edge which prior to the revetment was eroding at a rate of approximately 2m every year. In addition, the lifespan of a cafe and car park have been prolonged as well as residential properties (which have a life beyond 100 years). The nature of the walkway is such that it can be extended over time in line with future erosion.
- ***Removal of blight*** – two of the properties which were demolished had been burnt down. Their removal has had a positive impact on the visual amenity of the area but it is not clear whether this has led to an increase in property prices in the area. Due to the fact that the acquisition and demolition programme has targeted a small proportion of the properties overall this is unlikely.
- ***Local amenity benefits*** – the creation of Brooklands Gardens has contributed to the provision of greenspace locally and forms part of a greenspace strategy for Jaywick.
- ***Community cohesion*** – it is reported that the Community Development Worker (CDW) has been well accepted within the community and that this has helped to strengthen community cohesion. For example, the CDW has established the Home Owner- Occupiers' Group (HOO) enabling coastal adaptation and flood

risk issues to be discussed with residents on an ongoing basis.

- **Increased knowledge and understanding of coastal change** – over 700 people attended the opening event for Crag Walk and participated in educational walks in July 2011. The interpretation boards provide the potential to continue educating visitors on coastal erosion. There are plans for Phase II of the project which will include a Visitor Centre and more signage which will further increase the potential for increased knowledge and understanding.
- **Potential to increase tourism** – through protecting the Naze Tower and prolonging the life of the cafe and car park, there is potential for Crag Walk to continue to attract visitors to the area. The improvements may also help to increase levels of tourism locally. If Phase II of the project goes ahead, this will further increase the potential to attract visitors to the area.

Additionality

6.133 It is likely that the demolition and acquisition programme would have been implemented even in the absence of the Pathfinder programme since this was a key objective of the partnership relating the regeneration aspirations for Jaywick.

6.134 The Pathfinder Team considered that Pathfinder funding had been critical to the successful implementation of Crag Walk. However, it should also be recognised that the project was successful in raising significant amounts of funds through other sources. It is not clear whether a smaller scale/lower cost scheme could have been delivered.

Less successful elements of the Pathfinder project

6.135 Unlike other Pathfinder projects, the Jaywick project was focused on the purchase and demolition of properties which are **not at imminent risk of loss** and the primary objective appears to have been linked to achieving regeneration objectives. This does therefore raise the question of whether Defra should be supporting this programme and whether instead the money should have been targeted at properties elsewhere which are at greater risk of coastal erosion. It is also possible that households are being compensated for the loss of their property since the money being paid to households is not being recouped elsewhere.

6.136 The **acquisition and demolition programme** did not progress as well as expected and only four properties were purchased and demolished (out of 293 properties or plots in Jaywick which were identified for a first phase of regeneration, and these households remain). There are a number of reasons for this:

- There was reported to be a large number of landlords at Jaywick who benefit financially from these properties and who opposed the acquisition and subsequent demolition of the derelict properties. There was significant competition for the cheaper properties due to landlord interest.
- Unrealistically high values were placed on properties by the property owners and there was a mismatch between real and hope values (particularly when people recognised the programme was being funded by the public sector). This resulted in the majority of residents not wishing to take part in the acquisition and demolition programme.

- The process of purchasing properties was slow, with prolonged negotiations which impacted on the willingness of the local authority to take this forward (though funding was the primary reason for ceasing the programme).
- An extremely low awareness of (or willingness to accept) the benefits of adaptation and threats of coastal change/flooding. This was heightened by a lack of financial means to adapt.

- 6.137 Once purchased, properties were vandalised and subject to metal theft, despite increased security measures. Claims of damage to neighbouring property were made during and following demolition, though these were unsubstantiated and as a result no payment was made. The **cost of demolition** was also higher than first thought due to unforeseen costs and the fact that a preferred contractor was used.
- 6.138 The **interim planning policy** that sought to address the adaptation issues facing Jaywick was adopted by the Council but then rescinded after local representations, citing a lack of local consultation. Early involvement of the Community Development worker may have prevented this.
- 6.139 The Council wanted to consider **buy and lease back**. However, the existing housing stock proved to be of too poor quality. Negotiations with housing associations started but did not progress because the prospect was not considered financially viable. With a property purchase price of between £30-50k combined with £10k for improvements the cost was considered prohibitive and the risk to the Council too significant.
- 6.140 Whilst education can raise awareness of the need for coastal change, unless the erosion/climate change effects are apparent and immediate it is **very difficult to persuade residents to accept that they are at risk** and need to accommodate change especially as the effects are not likely to happen in their lifetime.
- 6.141 The **Brooklands Gardens** project was not originally planned in the bid. The project involved creating a community garden on the former site of a community centre. It was aimed at helping to implement positive land use strategies for areas not suitable for development due to coastal flood risk. Again, the question needs to be asked whether the funding could have been used to support other projects to help communities to better adapt to coastal change (e.g. rollback schemes), though it should be recognised that Essex County Council did consult with Defra on whether to fund this project.

Costs and type of spend

- 6.142 Tendring District Council was awarded £1m to deliver its Pathfinder programme, comprising £853,598 for capital expenditure and £146,402 for revenue spend. An additional £641,711 was contributed by other funders, most of which was for Crag Walk (£415,476 from Essex County Council, £193,118 from the Naze Protection Society, £13,143 from Tendring District Council, £9,975 from Frinton & Walton Borough Council and £10,000 from Haven Gateway Partnership).
- 6.143 There is currently an unspent balance of £258,056 (£100,000 revenue) and it is proposed that this will be used in regeneration projects in the Grasslands and

Brooklands communities within Jaywick. It was originally proposed that Pathfinder funding would be used to support the educational elements of Crag Walk but it appears to have also been used to support coastal defence works.

6.144 Table 6.5 gives a breakdown of expenditure by type of spend using information provided by the Pathfinder Team. As shown, around 70% of the original budget (£695k) has been capital spend. Staff costs were given as £46k (around 5% of the budget), but these relate only to the Community Development Worker. The remaining staff costs for the Pathfinder Team were not recorded but are likely to have been significant.

Table 6.5: Breakdown of expenditure by type of spend

Category	Description	Amount
Staff costs (revenue)	Salary and associated costs (e.g. any accommodation costs for staff)	£46,402
Capital spend	Crag Walk construction and property acquisition in Jaywick	£695,542
Other (please specify)	Unspent balance	£258,056
Total		£1,000,000

Focus on adaptation compared to other priorities

6.145 Table 6.6 gives a breakdown of expenditure by objective based on information provided by the Pathfinder Team. As shown, just over half of the original budget (£520k; 52%) has so far been spent on coastal protection, with around £175k (17%) being used to deliver adaptive solutions (although some of that funding appears to have been spent on the construction of the community garden at Brooklands Gardens which, it could be argued, is regeneration activity). A further £46k was spent on managing flood risk (£23k) and engaging the community on coastal change adaptation (£23k) through the appointment of the Community Development Worker. If the unspent funds are to be used for wider regeneration projects, then less than 20% of the total budget will have been spent on delivering coastal change adaptation.

Table 6.6: Breakdown of expenditure by objective.

Category	Description	Amount
Engaging the community on coastal change adaptation	Community Development Worker	£23,201
Adaptation planning		0
Delivering adaptive solutions	Purchase of properties	£116,000
	Green Spines (Brooklands Garden)	£50,000
	Other costs (studies)	£9,542
		£175,542
Wider economic		0

development not directly linked to coastal change adaptation		
Coastal protection	Crag Walk construction works	£520,000
Managing flood risk	Community Development Worker	£23,201
Other (please specify)	Unspent balance	£258,056
Total		£1,000,000

Value for money

- 6.146 Full details of the value for money assessment carried out on the Jaywick property removal and Crag Walk are provided in the in-depth evaluation of the five largest Pathfinders and the summary tables are given in Annex R of this report.
- 6.147 In the case of **Jaywick, the intervention results in a negative BCR**, reflecting the fact that the Intervention removes (and does not replace) potential income that could have been achieved if the properties were to remain. As such, whilst there is potentially a positive monetary benefit under the 'Do Nothing' scenario, under the intervention this is neutral.
- 6.148 Clearly, however, the value for money model does not take into account numerous other, relatively intangible impacts around issues of regeneration. Whilst impacts such as the removal of blight and the need for regeneration have largely driven the case for intervention, it has not been possible to monetise these impacts. It is also important to note that in the case of Jaywick, the cost benefit analysis only tells part of the story – the nature and rationale of the intervention (the aim of the intervention is to remove property rather than to replace it) demand that greater emphasis should be placed on more qualitative forms of analysis than is the case for other Pathfinders.
- 6.149 While there is negative BCR, the intervention has led to some benefits, for example one elderly owner is using the income received to support them in a residential home. One property owner however was located overseas and so the income is not going to lead to economic benefits for the UK economy. Another owner relocated to another property in Brooklands and, as such, has not been reduced from risk (although the total number of households at risk has reduced slightly as a result of the project).
- 6.150 At **Crag Walk, the project achieves a negative BCR**. This reflects the relatively high cost of intervention and the design life of the intervention of 50 years (the BCR would be stronger if the project lasted for a longer time period). However, the overall BCR of the project is likely to be stronger, given the presence of a number of benefits which it is not possible to quantify, including the likely positive impacts on tourism numbers.

Promising ideas

- 6.151 The following comment was made: *“By not being too prescriptive the Pathfinder has enabled local people and agencies to deliver what they see as the true local need. This aspect of the programme should not be underestimated.”*

Improvements to the Pathfinder programme

6.152 The Pathfinder Team felt that while the construction of the Crag Walk revetment itself would not be replicated elsewhere the process could be: *“The Pathfinder money enabled a latent, but not fully funded, scheme to be delivered, through a committed local partnership that is now seeking to deliver the next phase of Crag Walk. The commitment to raising awareness of coastal processes has also proved successful.”* It was felt that a mixture of funding sources would be needed but Government funding can be a useful catalyst or a gap funder.

Retention and dissemination of knowledge and experience

6.153 Not all of the officers involved in the Pathfinder project are leaving the Councils concerned (Tendring District Council and Essex County Council) and some will be retained in similar roles in the new Council structures. Officers of the Pathfinder Team had other concomitant roles in their respective, meaning that the (Pathfinder) knowledge and experience has been retained and is being disseminated via the work/projects that they are now involved in, e.g.:

- Continuing work with residents and community groups to identify a viable future for Jaywick.
- Crag Walk Phase 2 (visitor centre).
- Developing the LDF policies for the Tendring District.
- Emerging Delivery Plans for the Regeneration and Tourism Strategies.

6.154 There is currently no information about the Pathfinder project on Tendring District Council’s website. The Council has just started a major overhaul of its website to make it more user-friendly and reflect the significant restructuring it has undertaken. It is therefore planned to include information about the Pathfinder initiative and, particularly, Crag Walk, on the relaunched website early next year.

6.155 Activity at Jaywick is being deliberately kept low key at the moment because Essex Council is no longer purchasing and demolishing properties and a new planning policy (for the LDF) is being drawn up and agreed with local people (taking into account the new National Planning Policy Framework and the change of stance on PPS25 by the Environment Agency). However, the Community Development Worker is working up a communications strategy with the Environment Agency that will highlight coastal adaptation/SMP and flood risk and this will tie in with the launch of the SMP.

Ability of the community to adapt to coastal change

6.156 The Pathfinder Team commented that *“The activities of the Community Development Worker to date have raised awareness of the issues amongst community groups and residents alike. This has established a platform that will enable future discussions and consultations on the issues in the emerging SMP and the planning policies that follow.”* However, as noted previously, there is a very low awareness of (or willingness to accept) the benefits of adaptation and threats of coastal change/flooding and this is heightened by a lack of financial means to adapt. The Community Development Worker found that residents do not accept the

need to adapt to coastal change because of existing works by the Environment Agency, the misunderstanding of a 1 in 200 year flood and the lack of flood or sea level rise in their lifetime. The fact people are unable to move out of the area is also likely to have driven them to ignore or deny the risk.

Community funding expectations revealed by Pathfinder

- 6.157 It was felt that at **Jaywick** because people in the main will not (openly) accept the risk – due in part to their lack of money to relocate to alternative housing elsewhere – the issues around adaptation are difficult to discuss. The Pathfinder Team made the point that, *“Local people see the sea wall and expect it to be maintained (at public expense), particularly given the amount of work that the Environment Agency has done recently recharging the beach, etc. It comes back to the fact that the erosion at Jaywick is not so obvious to them as a house going over a cliff.”* It was felt that the Pathfinder project was unlikely to have changed their expectations. However, this was something that the SMP communications strategy would try to address.
- 6.158 At **Walton**, the local community is grateful for Crag Walk as the Pathfinder project has unlocked a stalled project. The Naze Protection Society (NPS) has been active (lobbying and fund raising) for many years and contributed over £160k to the project so it is assumed that they realised they could not rely wholly on the public purse.

Lessons for future policy on coastal change adaptation

- 6.159 There are a number of lessons from Tending’s experience that are important. The first is that people will tend to ignore or deny coastal risk if they do not have an option to reduce risk (which is the case in Tending since they have no financial means or more pressing priorities linked to deprivation), though this in part reflects the fact that the threat to households is less imminent than in other locations.
- 6.160 It is vital that the **political and social context of areas** are taken into account, with Tendring District Council’s response reflecting their own unique circumstances. Jaywick has socio-economic and regeneration issues that are considered more deep seated and urgent (at least by residents) than coastal flooding issues. The problem is perceived to be mainly a housing problem which is compounded by a coastal change issue, although in reality the latter significantly perpetuates these wider problems. Inadvertently, the project has highlighted the benefit there might be in linking housing benefit assessment to housing condition for communities such as Jaywick.
- 6.161 There are **difficulties in implementing rollback and buy and lease back in areas where property values are low**. It is difficult to fund an alternative site and provide an affordable alternative for residents in these locations. In the case of Jaywick, public subsidy will be required.
- 6.162 There **does not appear to be a clear economic rationale behind the buy to demolish scheme** and there appear to be limited benefits for the community particularly as it was not carried out in a planned and co-ordinated way. Furthermore, there was no means testing or eligibility criteria for beneficiaries and some second home owners have benefitted as well as those whose homes were

burnt down anyway (though the purchase price did reflect this).

- 6.163 Though not within the remit of the Pathfinder programme, the **social and regeneration issues** at Jaywick are extremely complex. The acquisition and demolition of only four properties is likely to have made very little impact in tackling these issues. Essex County Council and Tendring District Council recognise the need to work together to tackle the issues but this must be done in a planned and co-ordinated way.

Summary and conclusions

- 6.164 This Pathfinder project has delivered a number of benefits, including increased knowledge and understanding of coastal change through the construction of Crag Walk and its associated interpretation boards and the potential to increase tourism through protecting the Naze Tower, prolonging the life of the car park and cafe and, if it goes ahead, though Phase II of the project, which will include a visitor centre and more signage. There have also been local amenity benefits through the creation of a community garden at Brooklands Gardens.
- 6.165 However, the acquisition and demolition programme at Jaywick did not progress as well as expected, with only four properties being purchased and demolished, and it was not targeted at those properties at imminent risk of loss, with the primary objective appearing to be linked to social and regeneration objectives. This does therefore raise the question of whether Defra should have been supporting this programme and whether instead the money should have been targeted at properties elsewhere which are at greater risk of coastal erosion. It is also possible that households were being compensated for the loss of their property to coastal erosion and flooding since the money being paid to households was not being recouped elsewhere.
- 6.166 Similarly, with the Brooklands Gardens project, which was aimed at helping to implement positive land use strategies for areas not suitable for development due to coastal flood risk, it is questionable whether the funding could have been used to support other projects to help communities to better adapt to coastal change (e.g. rollback schemes). (However, it should be noted that Essex County Council did consult with Defra on whether to fund this project.)
- 6.167 If the remaining unspent funds are used for wider regeneration projects at Brooklands and Grasslands, then less than 20% of the total budget will have been spent on delivering coastal change adaptation. As such, the project does not appear to have met the first funding criterion that 'the focus should be on **adapting to coastal change** (although approaches that additionally support adaptation to coastal flooding risk could also be explored)'. While it appears to have met the criterion that 'approaches should tie in with a long-term plan for change within the community and be supported through extensive community engagement and discussion', it is debatable whether it has met the other two criteria that 'the emphasis should be on providing benefits to the wider community where these are proportionate to the costs' (although it could be argued that the Crag Walk project does this) and 'the focus should be on those sections of the community that are the most vulnerable to the impacts of coastal change'.

- 6.168 Value for money assessments carried out on the acquisition and demolition programme at Jaywick and the Crag Walk project result in negative BCRs. However, for Jaywick, the cost benefit analysis only tells part of the story as the overall aim of the intervention – to remove property rather than to replace it – demands that greater emphasis should be placed on more qualitative forms of analysis than is the case for other Pathfinders. In the case of Crag Walk, the overall BCR of the project is likely to be stronger, given the presence of a number of benefits which it is not possible to quantify, including the likely positive impacts on tourism numbers.
- 6.169 Overall, the project has contributed to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change (although less has been learned about the costs and benefits of different approaches) and providing practical lessons that can be shared.

Waveney coastal change pathfinder

Background

Waveney District Council received £1,534,555 to explore planning for and managing adaptation to coastal change for the Easton Bavents and Corton Village communities.

Coastal change issues

East Anglia has the fastest eroding coastline in Europe. Over 50% of the Suffolk coast is eroding, more than any other county. Coastal cliff erosion poses risks to properties and businesses in the short and medium term. Beach erosion and associated loss of beach access is also having an impact on the local tourism industry in Corton which is at risk from erosion. Easton Bavents is built on soft cliffs which are eroding at 2.6 m a year.

Summary of proposed approach

- **Community engagement:** engaging with the community, with a bespoke approach for those parts of the community most directly at risk, to consider risks and opportunities associated with adaptation. Establishing business, resident and service provider sub-groups and workshops to investigate different adaptation options, including relocation to council owned land and feasibility of a buy to let programme.
- **Adaptation planning:** developing an adaptation plan, including a beach strategy for Corton, and assisting with adaptation business plans. Close links will be made throughout the project with local spatial strategies to ensure these are compatible with adaptation plans.
- **Delivering adaptive solutions:** implementation of beach strategy at Corton e.g. improving beach access and infrastructure damaged by coastal change. Delivering practical support to facilitate relocation of those at risk e.g. through discussions with utilities and other service providers, and identification of possible sites for relocation.

Main outputs and outcomes

- **Corton:** development and implementation of a **beach strategy** including works to beaches, improved beach access, footpaths and signage.
- **Easton Bavents:** testing of **rollback** of nine households most at risk; **workshops** with utility providers; and **review of rollback policy**.

Delivery of activity

Corton

- 6.170 The bid document proposed the implementation of a beach strategy in Corton, which included (amongst other projects), works to beaches, improved beach access, footpaths and signage. The bid also proposed development of an adaptation plan which would include business consultation on relocation/adaptation, and trial of rollback/buy and lease back schemes.
- 6.171 Delivery to date has been focused on the beach strategy projects, though these differ from those which were set out in the original bid to reflect the priorities of local

residents (which focused on wider economic development rather than adaptation objectives). Following consultation with residents, there was a clear preference for providing an economic stimulus at Corton and maintaining/increasing levels of tourism to counteract the blighting effect as a result of SMP.

6.172 The key projects which have been delivered and which are planned for implementation by Autumn 2011 are:

- Improving access at Corton.
- Tramps Alley – improved beach access.
- CCTV to improve beach safety.
- Cliff top erosion study.
- Corton Woods.
- Improved beach quality.
- Public relations and tourism campaign.
- Protection/removal of properties at risk.
- Corton Primary School Arts Project.

6.173 The bid originally proposed significant business engagement and the potential to encourage their relocation. However, the workshops were not well attended and businesses were difficult to engage.

Easton Bavents

6.174 A key project involved testing of the rollback of nine households most at risk. A planning firm was commissioned to oversee and implement the process. Further details are provided in the in-depth evaluation and a full report is also available.⁸⁷

6.175 In brief, each of the residents was met individually and then invited to attend a workshop to discuss possible sites. Six sites for relocation were identified by the property owners at the workshop and priority themes were then identified to assess each of the sites. A site appraisal was carried out and two sites were identified as scoring joint highest, with Wangford Road (north) being the preferred site. The planning consultants have been in touch with the landowners and they are willing to enter discussions about the site.

6.176 A number of meetings have taken place with the local planning authority and with highways in order to inform the process and secure their support. The preferred site is supported in general terms by the local planning authority as being in accordance with LDF policies.

6.177 There are now ongoing discussions regarding purchase of this site and the Council is considering the exact delivery model (which could involve a 999 year lease). The legal team within the council is also considering the conditions associated with the provision of the site, e.g. homes must be environmentally friendly and if they sell their property, there will be some claw-back. The council may look at delivering

⁸⁷ Easton Bavents Pathfinder Project, Phase 1 Completion Report by Pellings (September 2011).

some market houses to cross-fund the purchase of the site. The households will not receive any insurance money for their homes and so many of these will need to request a loan from their bank. It is likely that some households will move now and others in say 25 years time.

6.178 Workshops have been held with services/utilities providers to make them aware of the impacts of coastal erosion, to educate them on the risks and to consider their role. However, these have not been as successful as hoped as explained in more detail below.

6.179 The Pathfinder project has also helped to fund a review of rollback policy, particularly focusing on the ownership rights of those at risk of losing their home.

Benefits to individuals and the community

6.180 A significant number of benefits can be highlighted resulting from the project. In Corton, these have fallen to the community, while in Easton Bavents there have been benefits to both individuals and the wider community.

- **Removal of properties at risk** – nine properties will be removed from risk through a rollback scheme.
- **Process adopted** – the process for securing a site at Easton Bavents appeared to work well (despite some criticism from the community about the timescales involved), with planning consultants being engaged to find a suitable site and to secure planning permission. This led to an open and transparent process which has resulted in a preferred site being identified which has received in principle agreement from the Council and agreement from residents. As well as identifying a suitable site, this work resulted in amendments to planning policy and clarification of rights associated with properties lost due to relocation (rights can be transferred to another property). The loss of property and planning rights as a result of coastal erosion was a key issue for the residents and property owners at Easton Bavents and this is a major step forward, both for this community and others in a similar position.
- **Lessons in adaptation that can inform future programme delivery such as ESCROW legal work** – as well as the above methodological and planning lessons, the Council has developed a contractual arrangement between Waveney Council and home owners at Easton Bavents, which sets out the rights and responsibilities of each party, and this will help other Pathfinder areas potentially leading to a reduced cost for them to replicate. There are also lessons to be learned on the community engagement activity at Corton.
- **Removal of blight** – it is envisaged that the removal of the nine properties at Easton Bavents will reduce blight within the wider environment. It is also expected that the projects at Corton will result in a positive impact in terms of reducing blight which is reported to have resulted from the SMP which has led to a change in the management policy from Hold the Line to No Active Intervention. It is hoped that the range of projects delivered will improve the perception of Corton to visitors and residents alike.
- **Local amenity benefits** – the range of projects at Corton (including improved access to the beach, new facilities such as cafe and parking) are expected to have a positive impact in terms of improving local amenity for residents and

businesses alike.

- **Community cohesion** – the rollback project at Easton Bavents which will provide a site for residents to relocate to is expected to result in a positive contribution to community cohesion through maintaining the community. However, this does not appear to be a primary driver and the focus has been on finding the most cost effective solution. There does not appear to have been an increase in community cohesion in Corton.
- **Increased knowledge and understanding of coastal change** – the schools project in Corton is a particularly good example of how the project has raised knowledge and understanding of coastal change. Whilst in Easton Bavents, it appears that there was a reasonably good understanding of coastal change and its impacts, in Corton this was not the case at the start of the project. There appears to be a better understanding amongst some residents but this is not universally accepted amongst all.
- **Potential to increase tourism** – the wide range of projects at Corton which will improve the resident and visitor experience has the potential to at least maintain tourism if not increase levels of tourism. However, this is difficult to quantify.

Additionality

- 6.181 The Pathfinder Team felt that few, if any, of the benefits would have been achieved without the Pathfinder funding to support this intensive engagement and associated actions.
- 6.182 At Corton, there are no sources of funding available for the improvements proposed. It is difficult to envisage how the local authority or local businesses could have achieved consensus on what is needed and find the funds necessary to lead to community benefits.
- 6.183 At Easton Bavents, according to the Pathfinder Team, the benefits associated with planning policy and sites may have been achieved but would have taken longer and would have resulted in individual not community solutions. Pathfinder funding has been the catalyst to explore other funding sources and mechanisms.

Less successful elements of the Pathfinder

- 6.184 The Pathfinder Board has had a number of changes in personnel and elected membership during the programme which has resulted in some difficulties in terms of ensuring continuity. The role and constitution of the Board could also have been improved to make better use of existing skills/contacts and to invite suitable community members to be part of this decision making body.

Corton

- 6.185 The bid originally proposed the consideration of rollback but the community wanted shorter-term measures such as the improvement of the environment and beach access/facilities. As a consequence, the proportion of the Pathfinder project directly related to **adaptation activity was relatively low** (see Table 6.8 and para. 6.200).

- 6.186 **Business relocation discussions at Corton did not work as well as expected.** It was difficult to engage businesses, particularly where they were part of a larger organisation where it was difficult to speak to the main decision maker. These firms did not appear to want to make their plans known or they found it difficult to be clear about what their plans might be in, say, 20 years time. Many had already achieved a return on their investment and were not too concerned if they were to lose their assets. The Pathfinder could perhaps have gone a bit further, for example in identifying suitable sites for businesses, though it is difficult as they will have specific needs.
- 6.187 There were a number of issues around **community engagement**, which proved to be more challenging than envisaged and illustrated that specialist skills and a flexible approach are required. Residents at risk workshops received little or no response and it is clear that a long time is required to build relationships in areas where there has been little previous dialogue around coastal issues. At the outset, there was significant negativity towards funding being spent on adaptation rather than defence or compensation. The project helped a shift towards acceptance but it has not changed this fundamental view. This shift has taken considerable time and resources to achieve and has been a key difficulty for the Pathfinder project.
- 6.188 It was difficult to encourage the community to consider **long-term plans** to sustain the economic viability of Corton and, particularly, the rollback of properties and infrastructure. The community members who engaged with the process generally wanted shorter term measures such as the improvement of the local environment and beach access/facilities.
- 6.189 There was a **lack of agreement** among the community at Corton which resulted in difficulties in discussing a long-term vision for the area. A lack of consensus between those that were at immediate risk and those that were not presented a major problem in identifying where the Pathfinder funds should be best spent.
- 6.190 The Pathfinder project did not anticipate the **level of resource and range of skills required** within Waveney District Council and other partners for appropriate engagement in the project. With hindsight the project manager needed much greater support to deal with the level of administration and daily communication with the communities that the Pathfinder project generated. The Pathfinder Team felt that initial funding is required from Government to support community engagement in areas suffering from coastal erosion (particularly in those locations where there is a change in SMP policy which affects communities new to risk).
- 6.191 The Council's **procurement process** for procuring the services of consultants to carry out community engagement did not work well. Whilst seven bids were received, only one was compliant due to the tight and restrictive processes which were difficult for smaller firms to follow. This resulted in a large engineering consultancy with less experience of community engagement being awarded the contract. The Pathfinder Team and the community were of the view that a smaller consultancy from Suffolk may have been more appropriate to carry out the work.

Easton Bavents

- 6.192 There is a frustration that the **process has taken longer than expected** and an expectation among some that the Pathfinder will ultimately fail to deliver. During the lifetime of the project, properties were lost at Easton Bavents and it was therefore necessary to develop a new policy for the protection of property rights. This took time which led to frustrations from the community. There has been adverse publicity due to these frustrations and concerns from the residents over how the rollback of properties might be funded.
- 6.193 One of the unexpected challenges was finding **community representatives** willing and able to represent the range of views (particularly in Easton Bavents where concerns were immediate for some). The Pathfinder Team has questioned whether it would have been better to have had a local resident on the Project Board or more involved in the project.
- 6.194 **Difficulties that remain to be resolved** include how to deal with properties that are not a primary residence and how to ensure that individuals are helped but do not benefit financially from publically funded adaptation measures. There may be difficulties in negotiating with land owners. Now that a preferred site has been identified, the owner may feel in a strong bargaining position over the cost of the land.
- 6.195 The Pathfinder Team tried to engage with **utilities providers** but there is a lack of understanding about how coastal erosion affects them and their assets. These providers require better information on annual predictions for coastal erosion which can make them aware of the potential risks and enable them to plan more effectively.

Costs and type of spend

- 6.196 To-date, only £330,352 has been spent of the original budget of £1,534,555, with the remaining amount (£1,203,798) having been committed to a number of key projects in Corton and in Easton Bavents and a contingency fund of £100,750.
- 6.197 Waveney District Council has contributed significant in-kind contributions, estimated at £53,152. There has also been significant input from a Pathfinder Board and partners such as Suffolk County Council and the Environment Agency. It is envisaged that this will increase before the project ends. There may also be some private sector funding from Warner Leisure.
- 6.198 There are some potential income streams, which will result from the project including car parking (the Wildlife Trust will receive this income) and from the cafe. This will be run by Centrino Leisure.
- 6.199 A detailed breakdown of the expenditure (spent and committed) by type of spend is given in Table 6.7 using information provided by the Pathfinder Team. As shown, around 63% of the original budget (£971k) has been capital spend, with around 13% (£204k) being spent on consultancy and professional support and a further 12% (£175k) on salary costs (which is broadly consistent with other Pathfinders).

Around £145k (10%) has been earmarked for land purchase and funding on-going engagement, though this amount will decrease if the final costs of the intervention works increase significantly.

Table 6.7: Breakdown of expenditure by type of spend.

Category	Description	Sub Category	Amount
Staff Costs	Salaries & Associated Costs	Officer Pay	£175,204
		Officer Accommodation	
Consultancy & Professional advice	Inclusive of external legal and engineering advice	Engagement	£204,172
		Engineering	
		Legal	
Capital spend on delivering adaptive solutions		Capital Works	£970,608
		Demolitions	
Revenue spend	Not including Small grants	Transport	£3738
		Administration	
Workshops Publications & Communication Materials		Comms materials	£5564
		Website	
Grants	Corton Woods Fence	Grant	£30,000
Other earmarked funding for residue of grant ¹	Land purchase if approved & Funding Ongoing Engagement	Capital & Revenue	£144,864
Total			£1,534,150

¹This amount will decrease if the final costs of the intervention increase beyond optimum bias allowance.

Focus on adaptation compared to other priorities

6.200 Table 6.8 gives a breakdown of expenditure (spent and committed) by objective based on information provided by the Pathfinder Team. As shown, over one-third of the original budget (£577k; 38%) has been spent on wider economic development activities at Corton, with a further £300k (20%) being on coastal protection and £224k (15%) on community engagement. Only £49k (3%) has so far been spent on delivering adaptive solutions, but this should rise to £159k (10%) once the land has been purchased. Salary costs (£175k; 11%) have been provided separately rather than being allocated to the different objectives. A further £111k (7%) is being held back as a contingency in case additional expenditure is needed at Corton.

Table 6.8: Breakdown of expenditure by objective.

Total			£1,534,150

Value for money

6.201 Full details of the value for money assessment carried out on the Easton Bavents rollback scheme are provided in the in-depth evaluation and a summary table is given in Annex S of this report. It is estimated that the ***scheme will perform better in terms of costs and benefits than other projects for which costs and benefits were quantified (with a public BCR of 1.9:1)***.⁸⁸ This reflects the fact that the public sector cost of the intervention is relatively low, largely due to the fact the Council does not need to purchase the existing properties to facilitate rollback (as was the case in North Norfolk). The Council also hopes to recoup the cost of the land in future years and, if successful, this will further strengthen the BCR associated with the project. The scheme has not yet been implemented and there is potential that the costs could be greater than anticipated, particularly if households require support to develop new homes. However, if successful, the Waveney scheme could be replicated at other locations.

Promising ideas

6.202 The Pathfinder Team highlighted three ideas in particular that could be replicated elsewhere.

- ***Working with the community*** – as well as using specialists in community engagement, it is worth considering undertaking projects that help to gain community trust, understanding and engagement, e.g. working with schools to raise awareness, practical improvements to beach access and facilities and enhancement of local environment and promotion of shoreline tourism/economy. All these activities help to build relationships both within the community and with the local authority and other organisations.
- ***Special rights to rebuild*** – the loss of property and planning rights as a result of coastal erosion was a key issue for the residents and property owners at Easton Bavents in Waveney. To assist in minimising the blighting effects resulting from the SMP and to assist people who are at risk of losing their homes to coastal erosion, Waveney District Council has formulated and adopted planning policies to allow for the replacement and relocation of ‘at risk’ properties to land safe from erosion. If a similar planning policy framework does not exist or is going through an examination process a local authority can provide a legal agreement between individuals and the authority that should they lose their land and/or home as result of coastal erosion they have special rights to rebuild elsewhere. This approach can be easily replicated elsewhere.
- ***Facilitating the relocation of properties at risk*** – whilst adopted planning policy established a principle to allow for the relocation of properties, property owners as a collective did not have the resources to successfully get a

⁸⁸ To compare the Pathfinder public BCR with that for a traditional (fully publically-funded) defence scheme, 1 needs to be added to the former. Hence the public BCR for the proposed rollback scheme would be 2.9:1.

proposal for relocation through the planning system. In Easton Bavents Pathfinder provided funds to bring in specialist planning consultants to help the residents locate a suitable site and obtain outline planning for the relocation for properties that were at risk from coastal erosion. Support of this type would assist both residents at risk and the planning authority.

6.203 The Pathfinder Team felt that without initial funding to catalyse community engagement and the resulting agreed actions it is unlikely that anything would get 'off the ground'. The most crucial role for Government was considered to be ensuring that local government and the Environment Agency had the specialist skills and funds to undertake this important task. Once a community reaches a certain stage this support is likely to become less crucial but there will be ongoing demands on local authorities to provide continuity of resource.

Improvements to the Pathfinder programme

6.204 None were suggested in terms of the programme as a whole though there were lessons learned within the Pathfinder project, most of which have been mentioned earlier under 'Less successful elements of the Pathfinder'.

Retention and dissemination of knowledge and experience

6.205 The Pathfinder Team comprises Council officers and thus retention of knowledge and experience at the end of the project should not be a significant issue. In terms of dissemination activity, most of the reports and key findings have been placed on the Pathfinder website (<http://waveney-pathfinder.com/>). As this will close next year, it is likely that the material will be transferred to the local authority Communities of Practice site. There are also likely to be several exhibitions at the end of the project to show what was achieved through the Pathfinder and what was learned.

6.206 Additionally, the Waveney Pathfinder Project is being used by Halcrow, the consultants engaged to carry out the community engagement activity, as a case study to the United Nations (UN) on adaptation to climate change. The UN is launching an online database of good practice, profitable adaptation activities undertaken by private sector companies in the run up to a conference on climate change and would like to use Waveney as an example.

Ability of the community to adapt to coastal change

6.207 It was felt that whilst the Pathfinder project had been generally received well by the communities, there had been some issues and concerns with the project, which had prevented the community from adapting to the impacts of coastal change as quickly or effectively as desirable.

6.208 In Easton Bavents, due to the urgency of the problem, the project has had the greatest impact. However, the whole issue of funding relocation has still to be resolved so it is too early to judge the full effect of the project. During the lifetime of the project, a property on the cliff edge had to be demolished in Easton Bavents. The resulting positive publicity demonstrated a clear understanding of the difficult

issues involved. It was felt that this would not have happened before the project involvement.

6.209 In Corton the current activities will help to sustain the economy in the short-term and the visible changes resulting should encourage ongoing engagement by residents and businesses. There is undoubtedly much more work to be done with this community with regard to long-term planning to cope with coastal change.

6.210 In order to understand how well Pathfinder had been received within the two communities, as part of this evaluation process, the Pathfinder team asked community representatives for their views on this question. An edited sample of these is given below:

Corton

"I think that the most important achievement of the Pathfinder scheme is the increased awareness of that fact that any additional physical schemes to restrict erosion are unlikely to be funded centrally, this view is far from universally accepted. However it is my view that the community is still not interested in anything other than physical intervention. There is still a strong believe that the government will not allow the loss of property.

From a personal business point, involvement with the Pathfinder scheme has highlighted the risks to the business from continued erosion and has focused our minds to taking the risk into account with business planning. We have carried out very limited work in looking at business rollback or relocation, our initial conclusions are that these options are not financially feasible."

Easton Bavents

"Yes: Pathfinder has frustratingly but eventually increased ability of the community to adapt to the impacts of coastal change in the future."

"No. Theoretically some way forward has come out of it, but relies on all sorts of bodies working together. We will have to wait and see if any actual progress and this may be many years in the future."

"I'd say "yes" in a partial way to date but with the potential of being extremely successful in providing significant assistance to affected communities if current approaches can be developed into practical adaptation measures. However, if that potential is not fulfilled, then I will ultimately view the whole Pathfinder project as being of very limited value to Easton Bavents residents."

Community funding expectations revealed by Pathfinder

6.211 The Pathfinder project revealed a number of expectations around Government funding and support for coastal change adaptation as well as support in general for communities at risk from coastal erosion.

Coastal change adaptation

- 6.212 As noted previously, there was an expectation at the outset that the level of Pathfinder funding could not add any real value to the communities. While the project has gone some way to change the views of the Easton Bavents community by enabling it to consider rollback and secure outline planning for relocation, there is still a concern over the funding needed to facilitate relocation if planning permission is achieved. As such, the community's view that the Pathfinder project has not delivered the whole package for relocation.
- 6.213 With central Government policy encouraging a shift to localism, there is an ever-increasing onus on communities to help themselves to become more resilient and Pathfinder encouraged both communities to take ownership in identifying adaptation projects. However, in Corton a lack of awareness of the impacts and what actions are needed, has caused apathy towards Pathfinder type initiatives and has not been entirely dispelled by this project.
- 6.214 In Corton expectations for Pathfinder were initially rather negative and there was a general view that the funding would be spent on engagement rather than adaptation. Over the course of the Pathfinder programme support for the project steadily increased. However, a lack of community cohesion may mean that expectations will only be improved once the projects that have been identified for the area are in place.

Coastal defence

- 6.215 Regardless of the funding and support for adaptation a large percentage of the community felt that Government should continue to protect and defend the coastline from any threat or, where not possible, compensate those affected.
- 6.216 In Corton and Easton Bavents expectations around Pathfinder and adaptation will always be in conflict with the communities' desire for either compensation for loss of land and/or property and an even greater desire for coastal defences. Pathfinder has helped a shift towards acceptance for adaptation but has not changed the communities' fundamental view on where Government funding should be directed.

Lessons for future policy on coastal change adaptation

- 6.217 The **ESCROW legal work** which Waveney District Council has carried out to provide clarification of rights associated with properties affected by coastal erosion could be replicated elsewhere, potentially at a low cost. An agreement between individuals and the local authority has been developed which ensures that households receive their planning rights should they lose their home due to coastal erosion.
- 6.218 The **approach to rollback offers the highest BCR (1.9:1)**⁸⁹ compared to all other

⁸⁹ To compare the Pathfinder public BCR with that for a traditional (fully publically-funded) defence scheme, 1 needs to be added to the former. Hence the public BCR would be 2.9:1.

projects. This reflects the fact that the public sector cost of the intervention is relatively low, largely due to the fact the **Council did not need to purchase the existing properties to facilitate rollback**. This approach could be replicated elsewhere. However, it is important to recognise that the project has not been fully implemented to-date and therefore it is not yet known whether the full project can be delivered with the anticipated costs.

Summary and conclusions

- 6.219 This Pathfinder project has delivered a number of benefits which it is unlikely would have been delivered in the absence of Pathfinder funding. These have included the ESCROW legal work which could be replicated elsewhere, the significant local amenity and potential tourism benefits at Corton and an increased knowledge and understanding of coastal change in both communities. There have also been a number of lessons for future policy programmes in terms of the approach adopted for rollback at Easton Bavents, community engagement and planning policy. The approach to rollback, in particular, which represented the best value for money of all such schemes due to the fact that the Council did not need to purchase the existing properties, is a model that could potentially be replicated elsewhere.
- 6.220 However, there have been frustrations over the length of time taken on developing rollback at Easton Bavents and there are still several issues to resolve (e.g. how to deal with second homes and ensure that individuals do not benefit financially). There may also be difficulties in negotiating with the land owner now that a preferred site has been identified. In addition, it is not yet known whether the full project can be delivered with the anticipated costs.
- 6.221 Business relocation discussions and community engagement activities generally did not work as well as expected in Corton and it was difficult to encourage both groups to consider long term plans. Similarly, efforts to engage with utilities providers at Easton Bavents proved challenging as there was a lack of understanding about how coastal erosion affected them and their assets. Consequently, a higher than expected level of resource and range of skills were required to progress these activities.
- 6.222 While the bid originally proposed the consideration of rollback at Corton, the community wanted shorter term measures such as the improvement of the environment and beach access/facilities. As a consequence, the proportion of the Pathfinder project budget directly related to adaptation activity (delivering adaptive solutions) is very low at 3% currently and rising to only 10%. If community engagement activity is included this rises to 25%. In contrast, the proportions of the original budget devoted to wider economic development and coastal protection are 38% and 20% respectively. As such, the project does not appear to have met the first funding criterion that 'the focus should be on adapting to coastal change'.
-

6.223 The project has met the other three funding criteria ('approaches should tie in with a long-term plan for change within the community and be supported through extensive community engagement and discussion'; 'the emphasis should be on providing benefits to the wider community where these are proportionate to the costs'; and 'the focus should be on those sections of the community that are the most vulnerable to the impacts of coastal change'). It has also clearly contributed to the two high level programme aims of improving understanding of how coastal communities can adapt to coastal change and providing practical lessons that can be shared

Annex A: Initial guidance and ideas for pathfinders to consider

In the June 2009 Coastal Change Policy Consultation, the following guidance and ideas were set out for Pathfinders to consider in developing their bids:

- **Preparing and planning for change** – considering how coastal communities can plan for coastal change, and how to ensure that communities are at the centre of any discussions:
 - **Community adaptation and planning** – ensuring that communities are supported to understand and be part of the process, and to be involved in the outcomes that will shape the future of their community. This involves a long-term engagement process that builds on existing work carried out (if any) and takes account of the community’s knowledge and views on coastal change. This area of activity was subsequently supported by Community Adaptation Planning and Engagement (CAPE) guidance⁹⁰ developed by Scott Wilson which considered how local authorities can involve communities in planning for coastal change.
 - **Creating capacity for change** – recognising that for communities to be closely engaged in any discussions about adapting to coastal change they need both the skills and resources which, in turn, require training and support.
 - **The spatial planning system’s role in responding to coastal change** – ensuring that spatial planning policies, at both the regional and local level shape sustainable communities that are resilient to the risks presented by coastal change. Coastal change, as exacerbated by climate change, has implications for development on the coast and is therefore a major consideration for spatial planning in shaping places that are resilient to climate change. Positive planning has an important role in helping communities to manage risk and adapt to an ever changing coastline.

- **Managing change** – to ensure that areas affected by coastal change are able to remain places that people want to live in and visit; so that adapting to coastal change and continuation of vibrant communities are able to go hand in hand. All parts of communities – people, businesses, infrastructure and assets – need to be engaged in the community adaptation planning and engagement and considered in any resulting activity to manage change, including through spatial planning strategies.
 - **Regeneration** – in planning for and managing change with and for the community, there are also potential connections to be made with wider regeneration activities.
 - **Local buildings and properties** – as well as the threat of a building eventually being lost as a result of coastal erosion, the prospect of loss can have wider consequences for communities. For example, in some situations, properties facing an erosion risk can become neglected. This in turn can have wider impacts on a community’s vitality, potentially contributing to blight and wider

⁹⁰ Scott Wilson (2009). *Guidance for Community Adaptation Planning and Engagement (CAPE) on the Coast*. A report by Scott Wilson for Defra, October 2009.

http://randd.defra.gov.uk/Document.aspx?Document=FD2624_8901_FRP.pdf

socio-economic problems. Possible approaches to tackle this issue could range from simple maintenance and upkeep measures such as painting and decorating, to more complicated approaches such as 'buy and lease back' and facilitating relocation of facilities or businesses at risk, for example through their planning strategies.

- **Business** – ensuring that businesses are able to adapt to coastal change; that they plan for it and are supported in identifying the new opportunities that it could bring them and their local community. As well as facilitating rollback, options could include tailored advice and support and ensuring that they are part of the wider thinking on adaptation options and opportunities for a community.
- **Local and community infrastructure** – infrastructure can be vital to the viability and sustainability of a community, with its damage or loss as a result of coastal change often having wider consequences such as reducing access, use or enjoyment of local assets. It therefore needs to be a key part of community adaptation planning and engagement.
- **Natural environment** – managing changing coastal environments is complex; whilst there is a good understanding of the natural processes that can occur, there needs to be better understanding of how to manage these environments with the support of local communities and how to identify and unlock associated potential benefits to communities. This involves two key challenges:
 - securing widespread buy-in from local communities and landowners for changes to treasured landscapes in specific locations, and
 - establishing processes that facilitate managed change from vulnerability to coastlines that are more resilient, in which local communities have trust and confidence.
- **Historic environment** – wherever practicable, local communities should be involved in decisions on local heritage assets, and this should be part of community adaptation planning and engagement. Consideration could also be given to exploring approaches to the adaptation of heritage assets in partnership with English Heritage and others. This could include exploring other ways to conserve the asset *in situ* (e.g. by making it more resilient to flooding) or recording the asset to secure the evidence it represents before it is eroded or inundated, and publishing the advances in understanding this brings.

Annex B: Questionnaire sent to all pathfinders

Coastal Change Pathfinder: Questions to guide the evaluation

Pathfinder schemes

1. Were you able to deliver everything set out in your original bid? What differed from your original plan and why? Were any elements less successful than you had hoped and why?
2. Did risks and issues arise during the course of the Pathfinder that you had not anticipated?
3. What were the benefits (obvious/expected and otherwise)? Please refer to any formal evaluation of benefits you have made, and comment on how far the benefits fell to individuals and how far to the wider community.
4. Would you have been able to achieve these benefits without the Pathfinder funding? If not, why not?
5. Has the Pathfinder project increased the ability of the community to adapt to the impacts of coastal change in future? Please explain how.
6. What were the costs, including any not covered by your original bid (including for example local authority staff time)? Were you able to bring in additional funding? Please provide a breakdown using the following tables.

Total funding for scheme:

Pathfinder funding received	Additional local authority funding	Additional local authority support in kind (e.g. staff resource)	Other funding	TOTAL

Breakdown of expenditure by objective

Please provide a breakdown to show how the funding you received under the Pathfinder scheme was used. Please do not include other sources of funding in this table.

Category	Description	Amount
Engaging the community on coastal change adaptation	Work aimed at explaining coastal change and possible adaptive responses to the community, including workshops, consultations, education materials and publications.	
Adaptation planning	Drawing up policies and strategies to adapt to coastal change. Also research and studies aimed at future adaptation	
Delivering adaptive solutions	Delivering solutions on the ground, including maintaining and improving assets damaged by erosion, rollback schemes and buy and lease back schemes	
Wider economic development not directly linked to coastal change adaptation	Broader economic development in areas affected by coastal change, but not directly linked to coastal change adaptation.	
Coastal protection	Maintaining or construct coastal protection measures, including setting up mechanisms to fund coastal	

	protection in future and engaging the public on coastal protection.	
Managing flood risk	Work aimed at managing flood risk, including raising awareness of current and future flood risk.	
Other (please specify)	Any work not directly related to flooding & coastal erosion.	
Total		

Breakdown of expenditure by type of spend

Please provide a second breakdown showing the type of expenditure, again, only including Pathfinder funding.

Category	Description	Amount
Staff costs	Salary & associated costs (e.g. any accommodation costs)	
Consultancy and professional advice	Including external legal or engineering advice	
Capital spend on delivering adaptive solutions		
Revenue spend on delivering adaptive solutions	Not including small grants	
Workshops, publications and other communications materials not included above		
Small grants		
Other (please specify)		
Total		

7. What if anything did the Pathfinder reveal about expectations around Government support and funding for adaptation, and has the Pathfinder changed these expectations at all?
8. Were there lessons about the planning framework, and how planning policy can support adaptation?
9. Has the scheme come up with outcomes or promising ideas that should be continued or replicated elsewhere? Which case studies do you think have the greatest replicability?
10. For any projects/ideas worth continuing or replicating - could they be self funding? Could/should they be funded by beneficiaries, the local community, or central government?
11. How would you have run the pathfinder scheme? What would you have done differently?

Lessons for policy making

12. Looking back to the original aims of the pathfinder, can adaptation work in this way or are there barriers?
13. How can the barriers be overcome and who needs to do this?

14. Who should pay for adaptation to coastal change? What are the external funding options?

Annex C: List of interviewees

Chichester Coastal Change Pathfinder Project

Julie Whitney – Coastal Change Project Manager

Cuckmere Pathfinder Project (East Sussex)

Andy Arnold – Team Manager, Environmental Advice, East Sussex County Council

Hampshire Coastal Pathfinder (CCATCH the Solent)

Jo Hale – Strategic Development Manager, Hampshire County Council

Hastings Coastal Change Pathfinder

Joy Collins – Neighbourhood Manager, Hastings Borough Council

Chantal Lass – Sustainability Officer, Hastings Borough Council

Nick Sangster – Resort Services Manager, Hastings Borough Council

Yasmin Ornsby – Stade Partnership

Jurassic Coast Pathfinder (Dorset)

Henry Aron – Coastal Change Pathfinder Officer, Dorset County Council

Rupert Lloyd – Coastal Change Pathfinder Coordinator, Dorset County Council

Peter Moore – Environment Policy Group Manager, Dorset County Council

Alex Potter – Coastal Change Pathfinder Officer, Dorset County Council

Lincolnshire Coastal Change Pathfinder

David Hickman – Strategic Partnerships Manager, Lincolnshire County Council

Scratby Coastal Pathfinder Project

Bernard Harris – Service Development Manager, Great Yarmouth Borough Council

John Hemsworth – Scratby Coastal Pathfinder Project Leader

Sefton Coastal Change Pathfinder

Graham Lymbery – Project Leader Coastal Defence, Sefton Metropolitan Borough Council

Slapton Line Coastal Change Pathfinder

Alan Denbigh – Business and Community Development Manager, Slapton Line Partnership

Somerset Coastal Change Pathfinder Project

Paul Jones – Pathfinder Project Officer, Somerset County Council

Vanessa Leavy – Environment Agency

Rebecca Seaman – Project Officer, Coast, Catchments, Levels & Moors, Somerset County Council

East Riding Coastal Change Pathfinder

Paul Bell – Head of Economic Development, East Riding of Yorkshire Council (ERYC)

Chris Ducker – Building Control Manager, ERYC

Jennifer Kippax – Coastal Officer, ERYC

Edwin Maund – Development Services Manager (East), ERYC

Alan Menzies – Director of Planning and Economic Regeneration, ERYC

Jeremy Pickles – Senior Sustainable Community and Coast Officer, ERYC
Cllr Jane Evison – Cabinet Portfolio Holder for Rural Issues and Cultural Services
Cllr Jonathan Owen – Cabinet Portfolio Holder for Performance Improvement and Partnerships

North Norfolk Coastal Change Pathfinder

Brian Farrow – Principal Coastal Engineer, North Norfolk District Council (NNDC)
Jill Fisher – Coastal, Localities and Assets Manager, NNDCI
Peter Frew – Consultant and former Head of Coastal Management, NNDC
Rob Goodliffe – North Norfolk Coastal Pathfinder Programme Manager
Dr. Richard Hogget – Historic Environment Service, Norfolk County Council
Peter Jermany – Principal Planner LDF & Water Management Officer, Kings Lynn and West Norfolk Borough Council
Jose Socao – Economic Development and Tourism Officer, NNDC
Nigel Tompkins & Ian Groves – North Norfolk Business Forum
Rob Young – Coast and Communities Manager, NNDC
Cllr Angie Fitch-Tillett – Coastal Portfolio Holder, NNDC

Scarborough Coastal Change Adaptation Pathfinder

Kate Masser – Coastal Officer, Scarborough Borough Council
Stewart Rowe – Principal Coastal Officer, Scarborough Borough Council
Cllr Andrew Backhouse – Cabinet Member for Environment
Mal Pirks – Residents' representative

Tendring Coastal Change Pathfinder

Karl Randall – Acting Regeneration Manager, Tendring District Council
Hilary Rowlands – Regeneration Project Officer (Jaywick), Essex County Council
John Russel – Senior Engineer, Technical & Procurement Services, Tendring District Council

Waveney Coastal Change Pathfinder

Jane Burch – Flood & Coastal Manager, Suffolk County Council
David Gallagher – Waveney District Council
Steve Hayman – Environment Agency
David McGinnis MBE – Pathfinder Project Officer
Bill Parker – Suffolk Coastal ICZM Initiatives Officer, Waveney District Council
Cllr Sue Allen – Ward Councillor for Easton Bavents
Cllr David Ritchie – Portfolio Holder and Chair of the Board
Cllr Mary Rudd – Ward Councillor for Corton

Key stakeholders

Alison Baptiste – Environment Agency
Jon Curson – Natural England
Phil Dyke – National Trust
Malcolm Kerby – National Voice of Coastal Communities (NVCC), Coastal Concern Action Group (CCAG) and member of North Norfolk Coastal Change Pathfinder Reference Group
Alex Midlen – CoastNet
Peter Murphy – English Heritage
Rob Wise – Country, Land and Business Association (CLA)

Annex D: Membership of coastal change pathfinder evaluation steering group

Claire Wilding, Floods and Coastal Erosion Risk Management, Defra (Chair)

Paul Barrett, Floods and Coastal Erosion Risk Management, Defra

Peter Bide, DCLG

Ann Davies, In House Policy Resource (IHPR), Defra

Nick Haigh, Natural Environment Economics, Defra

Katy Huyerman, Floods and Coastal Erosion Risk Management, Defra

Paul Murby, Floods and Coastal Erosion Risk Management, Defra

Annex E: Chichester coastal change pathfinder project

The following information is taken from the Chichester Coastal Change Pathfinder Project Final Report to Defra. Further information on the Pathfinder and various reports can be found at: <http://peninsulapartnership.org.uk/projects/coastal-change-pathfinder-project/>.

Delivery of activity

The Pathfinder involved the following projects:

The Manhood Peninsula Partnership Projects:

Integrated Coastal Zone Management (ICZM)

The Manhood Peninsula Partnership (MPP) was formed in 2001 at the instigation of two local residents who were concerned over what they saw as a lack of integration between the public agencies responsible for planning and water management. Over the last ten years the partnership has strived to raise the profile of its aspirations. It has run two successful workshop events, with the assistance of NIROV (the Dutch Institute for Physical Planning and Housing), participated in a European project addressing climate change and produced a Climate Change Adaptation Action Plan for the Peninsula. The timing of the Pathfinder award, coupled with legislative changes and the emerging Local Development Framework (LDF) for the Chichester District enabled the opportunity to progress ICZM that the MPP had been seeking for so long.

The first step was the creation of a document that captured the knowledge gained from ten years spent working in partnership and engaging with the community on the Manhood Peninsula. This approach was employed as the Pathfinder team were given a very clear message from the community and Parish Councils that there had been 'too much talking' over the years. The aim of compiling 'Towards ICZM on the Manhood Peninsula' was to consolidate all the results and findings from previous consultation exercises into a single format and then to use that knowledge to inform and influence the development of spatial policy within the LDF.

'Towards ICZM' is therefore an emerging spatial plan which suggests management options for the coastal zone from a number of perspectives. It is similar in principle to a Village Design Statement / Neighbourhood Plan for the peninsula, and comments on how the coastal zone affects/is affected by life there. Subject themes within the document are based on the Local Strategic Partnership's Sustainable Community Strategy entitled 'Chichester, A Very Special Place'. It provides a summary of local opinion and expectation as depicted in Parish Plans, Village Design Statements, Conservation Area Character Appraisals (CACAs), and a number of other documents on which consultation has already taken place including the Pagham- East Head Coastal Defence Strategy and the North Solent Shoreline Management Plan.

Towards ICZM has been through an extensive consultation process and as part of that process a workshop was held in April 2011 and attracted nearly 60 participants. The event was organised by the Pathfinder team and facilitated by CoastNet.

The plan, which includes an ICZM policy for inclusion within the LDF, was adopted as an aspirational plan and material planning consideration at the September meeting of the District Council's Cabinet.

The plan [Towards ICZM](#) can be accessed via this link to the MPP's website. The accompanying report and annexes on the workshop can be found [here](#)

Destination Management Study

The Peninsula's beaches and unspoilt natural environment attract huge numbers of visitors (mainly day trips) over a very short summer season. The last census recorded the peninsula's population as 24,700. However, each year, Bunn Leisure's caravan park at Selsey alone says it can attract around 388,000 holidaymakers. On the other side of the Peninsula, between May and July last year it is estimated that more than 320,000 people visited West Wittering beach.

The Peninsula's beaches are undoubtedly a huge draw, but the area also contains several internationally important nature conservation areas including Chichester and Pagham Harbours, both designated as Special Areas for Conservation (SACs) under the EU Habitats Directive; and as Sites of Special Scientific Interest (SSSIs) under UK legislation. Chichester Harbour has also been designated as an Area of Outstanding Natural Beauty (AONB).

The MPP felt that the large-scale coastal managed realignment (flood defence) scheme that is being progressed at Medmerry could afford a unique opportunity to protect the natural environment by treating it as an asset to attract a different kind of visitor outside of the congested peak season. Gently extending the holiday season to a different kind of tourist market would have obvious benefits for the local economy which is heavily dependent upon tourism.

For several years there was widespread local opposition to the managed realignment scheme with campaigns and protests reaching central government level. After extensive consultation and engagement there is now recognition that making room for water as flood defence is not 'second best' to hard engineering and could also bring huge benefits in terms of recreation, climate adaptation and the local economy.

The new intertidal salt marsh area that will be created includes provision for footpaths, bridleways and cycle routes, and for the first time; connectivity between the communities on the two sides of the peninsula. The aspiration is for the scheme to become multi-functional, with this infrastructure enabling a diversification and extension of the tourism product from beach day trips into outdoor activities and eco-tourism.

In association with Visit Chichester, the public/private tourism partnership for the area, funding was used to commission the University of Chichester to develop the Destination Management Plan, the aim of which is to set out, at a strategic level, the aspirations, key issues and actions for stakeholders with a responsibility or interest in local visitor economy. A number of economic studies and visitor surveys were also carried out that indicated that tourism on the peninsula counts for approximately half the value of the

tourism product for the whole district. Before these studies were commissioned there was an assumption that the theatre, racing, events at Goodwood and Chichester drove tourism. This work refined the thinking around the Coastal Trust concept and opportunities for public access that have arisen from the managed coastal realignment scheme to explore how tourists could be attracted to the rural towns and villages (as opposed to just the beaches) to try to retain their spend in local businesses and shops.

The working group that oversaw the Destination Management workstream comprised local tourism operators, Parish Councillors, the University of Chichester, the RSPB and other environmental representatives. Additional financial contributions were pledged by private sector businesses and the working group progressed beyond its remit of researching opportunities to produce a full Destination Management Plan. This workstream links with both the ICZM plan and the Selsey Coastal Trust project.

The Destination Management Plan and accompanying statistical studies can be accessed via the MPP website at [Destination Management](#).

Unfortunately, due to cuts in public spending, the District Council last year made the decision to withdraw staff and financial support for Visit Chichester. This means that the plan has not been adopted. At the time of writing, the Visit Chichester partnership was reviewing priorities, but indicated that should external grant funding be secured, it would consider ring fencing subscriptions from its members who operate tourism businesses on the Peninsula, to help fund a dedicated co-ordinator to take the plan forward to implementation.

Coastal Change Grant Fund

The MPP was keen to create a small grants fund for residents and community groups with ideas and projects relating to coastal change. It foresaw a need to engage local people at a grass roots level in an area, and on a subject, that is somewhat fatigued through extensive consultation. Experience had taught the group that whilst strategic policy development such as ICZM and Destination Management is vital, in general the public relate more easily to tangible community based initiatives as a method of raising awareness.

A multi-agency grants panel was put together, criteria, guidance and a publicity strategy was devised which included creating reciprocal referrals with existing community grant providers from all sectors within the area. Grants up to a maximum of £5,000 were made available and 12 projects were supported. The Coastal Change Grants Fund originally contained £40k. Of this, just over £36k was awarded leaving a balance of around £4k that was subsequently reallocated within the Pathfinder Project. The Grants Fund ceased on 30 April 2011.

The main outcomes for the community and the environment were increased awareness of coastal and climate change issues, expressed as projects to help communities understand and mitigate the effects of these changes. For example, a shingle movement study provided, and will continue to provide information, and understanding for local schools, local residents, and local government on how shingle from beach replenishment schemes moves – and where it goes. The coastal environment and educational resources provided a platform for the intergenerational days out. These resulted in increased understanding

between young and elderly, who benefit from each other's experiences of life and coastal change.

Other projects included providing the local archaeological society with essential equipment to survey the land that will be lost to the sea as part of the managed realignment scheme, assisting the diving club to complete a survey of the sea bed and funding a section of coastal path that now enables wheelchair and mobility scooter users to access the harbour edge.

Coastal Literacy

There is a growing appreciation that meaningful stakeholder engagement is vital for good decision making in all areas of governance. This has proved to be a particularly emotive and controversial process in the case of coastal management and climate change adaptation on the Peninsula. Government and its agencies are responding with new guidance for engagement, but CoastNet was keen to address what it saw as a fundamental gap of understanding that cannot be solved by ad hoc consultation exercises.

Given the long history of lively and controversial engagement on the Peninsula, Chichester was keen to share its experiences to help inform the development of Coastal Literacy.

To provide a baseline of public knowledge and perceptions of coastal issues, CoastNet carried out a survey in different locations across the Peninsula. The findings point to a historic lack of consistency in the communication of coastal issues and risk that has left a legacy of some confusion in the local population. The report accompanying the survey can be accessed at www.coastalliteracy.wordpress.com

With assistance from the Pathfinder Team, CoastNet put together an Expert Panel of representatives from various agencies and organisations to assist with the identification of key concepts or principles that encompass the views, values and beliefs that people hold about the coast. This panel also advised on the development of an information leaflet and a series of short films. In addition to producing four short films exploring young people's views of the coast, a further three films were commissioned:

Film 1 was designed to illustrate the strength of coastal identity and the strong sense of value and belonging shared by residents. It is aimed at those who make decisions but may not fully appreciate the influence that the coastal way of life has on the well-being, lifestyle and economy of those who live, work and visit the coast.

Film 2 explores public perceptions of risk relating to coastal flooding and erosion. It covers the complexity of coastal protection responsibilities and funding.

Film 3 offers a case study from the Manhood Peninsula. It tells the story of consultation processes and communication between the community and the organisations responsible for coastal decision making over the last ten years.

Chichester District Council and the MPP were keen that these films should enable other areas and organisations to learn from our experiences, and to encourage residents and community groups to become involved in coastal decision making in their area from the earliest opportunity.

The information leaflet, the films, the final report on coastal literacy and the report on the evaluation work that took place in the schools in our area were delivered in July and August 2011. The leaflet can be found at:

<http://peninsulapartnership.org.uk/files/2011/10/Coastal-Literacy-Leaflet.pdf>

The films can be viewed at:

<http://peninsulapartnership.org.uk/projects/coastal-change-pathfinder-project/coastal-literacy/coastal-change-films/>

As noted in the Chichester Pathfinder Final Report, *“Those stakeholders who were engaged in the early stages of this work have commented that they do not fully identify with the final report on the Coastal Literacy framework. The leaflets have been distributed to the Local Nature Reserves and other venues. There are no plans to repeat the print run.*

“As it was understood that this was part of a wider CoastNet programme, the District Council and the MPP anticipated more practical outputs in the form of training and education materials. Stakeholders and elected members have expressed disappointment with overall outcomes given the amount of money that was allocated to it. There are no plans to take this work further.”

The Pre-Trust Group Projects:

Selsey Coastal Trust

The idea of creating a community owned trust came from local people, Councillors and members of the Manhood Peninsula Steering Group (MPSG). The idea is to revitalise Selsey by creating a partnership between the Council and the community that can share the long-term responsibility for Selsey’s coastal defences. The vision is for a series of connected regeneration schemes utilising publicly owned sites that are managed by a community trust or social enterprise with surplus profits being redirected into a delivery partnership of the authorities responsible for coastal defence. The Pathfinder funding was used to investigate whether this innovative idea is feasible.

A series of public workshops were held in Selsey, including one with young people from the local Community College. The workshops were facilitated by the South Coast Design Forum and formed the basis of a prospectus for the Trust project that will be used to illustrate the vision to prospective funders.

The Trust project was awarded “emerging trust status” by the (then) Development Trusts Association and is actively seeking funding. Selsey Town Council has since put together a working group to consider the implications of precepting for contributions.

‘Living by and working with the sea’ which forms the prospectus for the Trust can be accessed via www.selseycoastaltrust.org.uk or clicking [here](#).

Re-instatement of beach access ramps

Part of the Pathfinder funding was allocated towards the cost of reinstating the fishermen’s

and public access ramps at East Beach, Selsey. These ramps were built approximately 50 years ago, but coastal change means that most of the structures are buried under six metres of shingle.

The Pre Trust Group was keen to take responsibility for a tangible, capital project that would demonstrate their capacity to deliver a community project. A working group was put together comprising representatives from the fishing and diving industries in addition to Pre Trust Group members. This group set about determining and consulting on the needs of users of the two proposed ramps, commissioning detailed designs and obtaining all the necessary permissions, statutory agency consultations and licences required to proceed to construction. Furthermore this group secured in the region of £136,260 worth of match funding needed to complete both ramps and the required landward works.

Until Spring 2011, the project continued on the basis of delivering two ramps. Despite close involvement with the project since inception, including input into the design, Selsey Fishermen's Association took the decision at a late stage to withdraw their support for the project. The construction of a ramp at this location threatened to split the fishermen and there were overriding concerns with access, launch rights and responsibilities that could not readily be resolved.

The contract for the reinstatement of the public ramp was awarded and construction began in September so as not to disrupt the tourist season.

Annex F: Cuckmere estuary pathfinder project (East Sussex)

The following information is taken from the Cuckmere Estuary Pathfinder Project Final Report to Defra (July 2011). The report can be found at:

<http://cuckmerepathfinder.org.uk/Escck.CuckmerePathfinder/media/Cuckmere-Images/Content/Coastal-Change-Pathfinder---Cuckmere-Estuary-Project---final-report---August-2011-a.pdf>. Further information on the Pathfinder and other reports can be found at: <http://cuckmerepathfinder.org.uk/>.

Delivery of activity

Background

The focus of the Pathfinder Project has been a series of engagement events at which members of the community⁹¹ worked alongside East Sussex County Council, landowners and various statutory bodies to identify different options, and together come up with a preferred approach for the future of the Cuckmere Estuary. To support this work, new research was commissioned on the economy, visitors, landscape and heritage of the Estuary, and new visual modelling has been produced.

The Project involved the following steps:

Sharing understanding

Stage 1 was to give those involved in the project the chance to learn more about the reasons for the EA's decision to withdraw flood maintenance and present evidence for alternative options. The EA presented their evidence at the first workshop 'Sharing the EA's Understanding' held on 22 April 2010. At this workshop participants requested a second event at which members of the community could be given a similar platform to present the evidence for alternative management options for the Estuary. This workshop, 'Sharing Community Understanding', was held on 3 June 2010.

Agreeing the options

Stage 2 was to agree a shortlist of possible options for the future management of the estuary, in the light of the EA's decision. Members of the Cuckmere Community Forum prepared a report on options and these were discussed at an intensive workshop held on 14 December 2010. It was agreed, at the workshop, to assess seven options.

- Baseline
- Option A: Partial breach managed realignment (EA)

⁹¹ The Cuckmere Community Forum was established in December 2009 to work alongside the Pathfinder project, notably in identifying the management options that the community wished the project to assess. The Forum involved around 60 local people of differing backgrounds and views on the options and these were divided into a number of sub-groups covering Options, Tourism, Heritage, Landscape, etc.

- Option B: Full breach managed realignment (EA)
- Option C: Engineered reactivation of meanders & meandering creeks
- Option D: Maintain the existing defences (EA Option 2a)
- Option E: Sustain the existing defences – long term (EA Option 2b)
- Option F: Sustain the existing defences – short term

Reviewing the evidence

Stage 3 was to fill gaps in knowledge about the Cuckmere and to commission four new research studies, on the economy, landscape, visitors and heritage. The research was carried out in two phases: Phase 1 looked at the current situation, and was presented for discussion by members of the community at an evidence event on 8 February 2011; and Phase 2 looked at what might happen in future, under each of the seven options agreed in Stage 2. This second phase of the research, which includes technical and visual modelling, was presented to the public for discussion on 5 April 2011.

Setting the assessment criteria

Stage 4 was to agree the criteria against which the different options for the future should be assessed. The criteria were discussed and assessed at an intensive workshop held on 8 March 2011 and are as follows:

- Sustain the A259
- Maintain the current level of access for all in the Estuary
- No overall detrimental effect to ecology, ideally an enhancement
- Potential for improved education & better interpretation of the Estuary
- No increase in flood risk upstream of the A259
- Protection of existing properties
- Sustain the historic environment
- Sustain the high quality of the landscape character
- To minimise long-term maintenance requirements
- Encourage tourism & local businesses

Testing and piloting

Stage 5 tested the seven options against the criteria, using the evidence from the modelling and the research studies. This took place in an intensive workshop held on 12 April 2011.

Agreeing the approach

Stage 6 was a major public meeting, held on 7 June, at which members of the community had the chance to assess the seven options against the criteria⁹² and to share their views on the best approach to planning for change at the Cuckmere.

⁹² Each delegate was asked to rank each option against the criteria, from zero to five.

At that meeting, broad consensus⁹³ was reached about the future of the Estuary. The preferred option was to ***maintain the existing defences for the time being***, and there was a feeling that this could be done more cost-effectively than had been achieved in the past. There was also a strong consensus that the meanders are the most important feature of the Estuary, and that any long-term solution should seek to retain or enhance them. The community therefore decided to explore further the option of **reactivating the meanders as a longer-term solution**.

Options and scores

Option D:	Maintain the existing defences	3159
Option C:	Engineered reactivation of meanders	2953
Option E:	Sustain the existing defences - longer term	2852
Option F:	Sustain the existing defences - shorter term	2766
Baseline	Do the minimum	2638
Option A:	Partial breach managed realignment	2315
Option B:	Full breach managed realignment	2274

Next Steps

A legacy of the Pathfinder is the development of the new 'Friends of Cuckmere' to which over 70 people have already joined. This group will aim to take forward the decision reached by the community on 7 June, supported by the partnership of organisations that have worked together on the Pathfinder project. A first step will be to understand the engineering requirements and costs of maintaining the existing defences, and how this work might be funded; then, to explore further the possibility of reactivating the meanders. East Sussex County Council will continue to support and work with the Friends of Cuckmere and, in the short term, the Pathfinder Project Board will continue to meet until the Friends of Cuckmere is firmly established.

Table F1 below provides a summary of what was delivered and at what cost, compared with the original outputs and budget submitted in the bid to Defra.

⁹³ It should be noted that written representations have recently been received indicating that not everyone within the community is in agreement with this view.

Table F1: Summary of planned vs actual outputs and budget.

Outputs planned in the bid	Pathfinder budget (£)	Actual outputs	Actual spend
Project Officer: Coordination of Partnership and stakeholder groups; project management; coordination and dissemination of key studies to fill evidence gaps; development of feasibility study and project plan to form the basis for a planning application.	£48,997	A Project Officer was employed from 19/4/10 – 31/3/11. The project ran from December 2010 – June 2011, therefore ESCC used existing staff and the community engagement consultants to deliver the work programme before the Project Officer started with ESCC and after he left.	£41,068
Historic environment study: Geoarchaeological/paleoenvironmental borehole/geophysical survey, data analysis and modelling; historic environment survey; production of technical report.	£27,000	<u>Stage 1:</u> Oxford Archaeology prepared a list of the heritage assets in the Estuary, and carried out geoarchaeological and palaeoenvironmental surveys, and a targeted borehole, to characterise below ground Archaeological potential. <u>Stage 2:</u> The County Archaeologist carried out an assessment of the potential effects of the 7 management options on the heritage of the Estuary.	£27,697
Visitor survey: Improved understanding of the current use and appeal of the estuary by the local community and visitors from further afield and the contribution to the local economy. Winter and summer surveys.	£20,000	<u>Stage 1:</u> Tourism South East surveyed 693 visitors to Cuckmere over the summer & winter of 2010 to find out the purpose of their trip, their opinions and expenditure. <u>Stage 2:</u> Following community feedback, an additional survey of 815 people was carried out by Tourism South East in February 2011 (74 from the stage 1 survey and 744 as a 'control group' drawn from a wider audience). They were shown images of how the estuary might develop in future, as predicted from the modelling of the 7 management options, and asked whether they would be more or less likely to visit the estuary and why.	£15,918
Economic Impact Study: Improved understanding of the potential impacts of a change in management of	£10,000	<u>Stage 1:</u> Eftec carried out an assessment of the current economic contribution made by the Cuckmere Estuary to the local area, using the	£27,900

the Estuary on the local economy, drawing from visitor surveys and other sites.		<p>visitor survey results (above) and a survey of local tourism-related businesses.</p> <p><u>Stage 2:</u> Eftec used the results of the two Tourism SE follow-up surveys to assess which features visitors and potential visitors value most, and how the outcome of the 7 management options might impact on future visitor numbers and, therefore, the local economy.</p>	
Outputs planned in the bid	Pathfinder budget (£)	Actual outputs	Actual spend
Landscape character study: Review of current landscape character including landscape quality, value and sensitivity; impact assessment of the various options of the visual amenity of the valley and landscape character; illustration of potential future design solutions which could result from different management approaches.	£14,000	<p><u>Stage 1:</u> David Huskisson Associates updated and extended a report on the landscape of the Estuary prepared for the Environment Agency in 2006, to include the Coastguards Cottages and the Cable House.</p> <p><u>Stage 2:</u> David Huskisson Associates carried out an assessment of the potential effects of the 7 management options on the landscape of the Estuary.</p>	£18,228
Option feasibility study: ranked priorities for future management; costed options.	£20,000	Capita Symonds carried out a hydraulic study, and a geomorphological and ecological review, of the short, medium and long term impacts of the 7 management options. The modelling assessed the likely changes to the estuary morphology, and the subsequent changes to flooding, vegetation, habitats and assets in the estuary, as well as a cost comparison of construction and maintenance of each option.	£49,473
Communication tools: Website (£20K) (as a	£53,000	1) Rhoden Green developed & delivered a communications strategy	£16,223

<p>principle source of information about the Estuary, a means of widely dissemination the work of the Partnership and providing an interactive forum for wide stakeholder engagement); interactive 3D models (c. £20K);</p> <p>illustrative reconstructions (£3K); historic re-enactments (£5K); printed materials (£5K).</p>		<p>alongside the community engagement programme, which included printed materials.</p> <p>2) project website was developed (www.cuckmerepathfinder.org.uk).</p> <p>3) Static images and 'fly throughs' were developed by Capita Symonds to illustrate how the estuary might look in future under the 7 different management options (NB: these costs are included in 'option feasibility study' above).</p> <p>Only the historic re-enactments were not carried out.</p>	
<p>Community engagement: Established stakeholder forum/fora; focused working groups (e.g. natural processes); ongoing engagement through events, media activity and speaking opportunities.</p>	£50,000	<p>Hopkins Van Mil developed a stakeholder map & designed and delivered the engagement plan. Initially 3 events were proposed, building on 2 that were held in May and July 2010 on <i>Sharing Understanding</i>. The Project Board decided that 6 events were required for an effective delivery against the outcomes (i.e. a total of 8 community engagement events were delivered).</p>	£65,267
<p>Outputs planned in the bid</p>	<p>Pathfinder budget (£)</p>	<p>Actual outputs</p>	<p>Actual spend</p>
<p>Anglo-French exchange visit (to Saône Estuary): Identification of potential partners for future funding bids for implementation (e.g. Interreg).</p>	£5,000	<p>Until a decision was made on the preferred management option it was not possible to develop a funding strategy to deliver the agreed aims & objectives.</p> <p>Support provided from External Funding Officer.</p>	£0
<p>Financial management</p>	£2,000	<p>Standard ESCC monthly financial management of external grants</p>	£2,000
<p>Total</p>	£249,997		£263,774

Annex G: Hampshire coastal pathfinder (CCATCH the Solent)

The following information is taken from the CCATCH the Solent Hampshire Pathfinder Final Report to Defra (August 2011). Further information on the Pathfinder and the various resources mentioned can be found at: <http://www3.hants.gov.uk/countryside/ccatch.htm>

Project objectives

The objectives from original bid were identified as:

- To engage the local community in all aspects of coastal change and how it will impact on existing residents, businesses and visitors.
- To provide an economically and environmentally sustainable adaptation strategy to safeguard the long term future of Lepe Country Park and to integrate the strategy into a wider plan for this stretch of coastline.
- To bring together different concerns and priorities into a shared understanding which will form the basis for agreeing joint action.
- To provide educational and interpretational opportunities that can communicate coastal change and build a high level of understanding within the local community. This is seen as a key deliverable in terms, not only of the local messages, but also to the wider coastal perspective. It is key to the future development of coastal strategic planning and implementation to engage and gain ownership of the local and wider communities. Lepe is uniquely placed in the West of Hampshire, in the New Forest National Park, to be able to tell this story on a site which is manifestly changing as a result of the dynamic coastal processes.

Delivery of activity

Community engagement

Proposed approach (taken from original bid)

“Consultation and engagement with all sectors of the community is integral to this project. The process will start with a comprehensive stakeholder analysis to ensure that all relevant sectors will be included. Once all stakeholders have been identified, the approach will be to ‘embed’ stakeholder participation throughout the process and this will be achieved through a range of methods.”

CCATCH delivery

A CCATCH Community Engagement Strategy, produced by Resources for Change in June 2010, identified the key stakeholders and methods to engage with different sectors of the community. The document set out the aim of the community strategy which was ‘To initiate an engagement process that involves stakeholders in understanding the process of coastal change and through this to engage them in developing strategies that enable adaptation and increase resilience.’

The Community Engagement Strategy explained that the engagement process requires

people to be drawn in, to want to think about the topic, so initially there was a broad and light consultation. This gave a 'feel' for the topic and the level of concern or interest. The second stage was to draw out more in depth information, engaging people in the topic through 'coastal change conversations'. The third stage was using in-depth discussion to gain commitment and engender long-term engagement, buy-in; turning 'attitude' into 'action'.

The Community Engagement Strategy was implemented by Resources for Change during the summer and autumn 2010 (Phase 1) and the process and results were reported in the CCATCH the Solent Community Engagement Final Report Jan 2011.

The approach by Resources for Change was not to arrange workshops and invite stakeholders as this tends to be self selecting and focussed. Their approach was a mosaic of different activities including; having stands and activities at existing events such as Marine Week, face to face interviews, drop in sessions, going into local community meetings and activities. Guidance for engaging people in coastal change discussions July 2010 was produced and 12 volunteers trained to assist with engagement activities. The Friends were vital in the process and held tea and cake afternoons and assisted at events and activities. All the phase 1 engagement was around the theme of '*Coastal Change – past, present and future*'.

Several techniques were used to help people consider how important the coast is to them and how this might change in the future and they included:

- Stories of Change – these were designed to capture peoples imagination about what is important to them about the coast. They formed part of family activities, school sessions and could be submitted online. They have been presented as a booklet along with the timeline.
- Timeline – people were encouraged to bring photos/artefacts from the past along with stories.
- Beach art activities – family activities to enable coastal change conversations.
- Interviews – face to face
- Educational materials and activities (see section x)
- Pin boards – marking the location of comments which were then mapped using Google.
- Maps
- Model & maps of Lepe Visitor Centre options
- Questionnaires

Resources developed to support the process included:

- Postcards – so that people could register their interest in the project. They went into every house in the project area.
- Website – interactive to encourage comment and stories of change
- Pamphlet – information about coastal change
- Events information cards
- Editorial for local publications – promoting events and opportunities to get involved.

Phase 2 of the community engagement work was undertaken by Dialogue Matters and involved structured workshops concentrating on the key issues emerging from the first phase of engagement with the aim of identifying, assessing and prioritising the adaptation opportunities. These key areas were:

- Future of Lepe Country Park
- Lepe Road
- Calshot Beach Huts
- Calshot spit and activity centre
- Private sea defences

To support this final stage of community engagement a number of resources were developed:

- Coastal change mapping
- Computer generated ariel flythroughs
- Stories of change booklet

Dialogue Matters trained six staff from Hampshire County Council and partner organisations to assist with facilitation of the workshops. The first workshop held in May 2011 was the first of two meetings in a process that is enabling key stakeholders to:

- understand what will change
- explore the opportunities and challenges this presents
- discuss and consider priority topics
- generate possible ideas and solutions
- select the best for inclusion in the Adaptation Plan

The first workshop focused on the five key topics given above (e.g. future of Lepe Country Park) in terms of what stakeholders thought would change over the next 10 and 40 years, what the benefits and disbenefits of these changes would be and what the possible adaptation solutions could be. The second workshop looked at implementation planning for adaptation solutions with regard to the key topics and ongoing communication and involvement. An Adaptation Plan was subsequently developed and this agreed by stakeholders in November 2011.

Education and awareness raising

Proposed approach (taken from original bid)

“An education programme is essential to continue the process of raising the awareness and understanding of coastal change and the need for areas under threat to adapt. Both the County Council through the work of its Climate Change Commission and the New Forest National Park Authority are committed to raising the awareness of coastal change amongst all sectors of the population including children and young adults. The obvious impacts of coastal change at key recreational sites such as Lepe Country Park and Calshot Activity Centre provide a unique opportunity to demonstrate and experience first hand the implications for such facilities. In this regard the County Council has recently obtained planning permission for a temporary classroom at Lepe, that can be used for

school/college groups to learn about coastal change/adaptation as well as other issues relevant to the Country Park. This can be linked to educational material e.g. teacher resource packs, coastal change leaflets, combined with ranger led visits for school parties.

“In combination with the above, awareness amongst the general population could be raised by on-site information boards placed in appropriate locations around the park together with explanatory leaflets. Innovative ways of engaging and informing the public will be trialled. These could include art workshops resulting in permanent structures e.g. relief maps showing the changes that will occur to the park in a do nothing scenario.”

CCATCH delivery

An education sub-group was established early on in the project to concentrate on developing education resources to support school involvement in the project and to raise awareness/ increase understanding of coastal change. Ten school/college groups totalling nearly 550 pupils have been involved to date learning about coastal change at Lepe, Calshot and other locations on the New Forest coast.

To support this activity, the group developed a number of activities including:

- Coastal Card Sort;
- Coastal Word Search Quiz;
- House on the Shore Activity;
- Climate Change Quiz
- The Coast: Past, Present and Future Session Plan

In partnership with Artsway a project entitled ERODE ran during the Summer 2010. A community artist worked with a range of community and school groups, including disabled young people, to produce a sculpture. Through this activity young people and families explored the issues around climate change and the effects on the coast.

‘Markers on the Shore’ is a permanent coastal change trail designed to help visitors to Lepe consider coastal change and the impact on the country park. There is a series of different signs asking questions about coastal change e.g. ‘Do you think you will be able to park here in 10 years time?’. This is then followed up by a notice board explaining all about coastal change. It is designed for use by families and school groups.

The DVD of the fly-throughs developed to provide information as part of community engagement were tested with a couple of school groups who found them useful for learning about coastal change and erosion. They have now been copied and an activity sheet produced to accompany them. They can also be downloaded from the Hampshire County Council website.

Short term capital works

Proposed approach (taken from original bid)

“One of the problems with engaging communities in this kind of project, is that they can become disillusioned by the more strategic planning work if it does not then lead on to some tangible action. In order to provide some quick-wins with regard to implementing

coastal change actions on the ground, it is proposed to involve the relevant communities in agreeing and implementing some short-term access improvements that are already necessary due to coastal erosion.”

CCATCH delivery

The original intention was to have a small capital project to show that the Pathfinder was not just going to be a ‘talking shop’. However there was a need to identify what the community wanted to address rather than decide for them. This proved to be an interesting part of the project.

The footpath along the beach has been essentially washed away leaving a revetment. Access has not been compromised completely as the public can access the beach and walk along it but it is not as easy as the original path. The need for improvement comes from two concerns:

- The need to ensure that the area is safe (the revetment and groins present potential trip hazards), i.e. a park management issue
- A desire by the private landowner to reinstate the revetment and improve the groins for defence purposes.

It turned out that there was very little concern raised by the community about this stretch of coast as they still have access. The intention was to undertake a feasibility study to look at the implications of maintaining the *status quo* or taking out the revetment and groins and the impact this may have on the car park, the cliffs immediately backing this stretch of coast and the coast further to the east which is owned by the landowner. This was delayed due to the private landowner’s concerns over the removal of what they consider to be sea defences. However, a contract finally went out to tender with the agreement of the landowner and Hampshire County Council intends to work with him to produce an action plan for this area of the coast to include in the Adaptation Plan.

Adaptation Strategy

Proposed approach (taken from original bid)

“The results of the consultation and research will result in the production of a coastal adaptation strategy for the 10 km stretch of the New Forest coastline. This will set the preferred approach. Further work will then be required to implement the preferred option i.e. agreement from Members, design of any schemes, search for funds etc.”

CCATCH delivery

The Adaptation Plan was agreed by stakeholders in November 2011. It is intended to be a working document that will provide an action plan for implementation by all stakeholders including on-going communication and monitoring of the plan.

Beyond Pathfinder

The experience gained from the CCATCH Pathfinder Project has enabled Hampshire County Council to develop a Solent-wide CCATCH project as part of the Environment

Agency-led Coastal Communities 2150 and Beyond project (CC2150, an EU Interreg IVA2 Seas Programme funded project). The Solent-wide CCATCH will engage with seven different communities around the coastline to produce coastal visions and adaptation plans for each area. The following elements of, and lessons learned from, the Pathfinder are feeding directly into the CC2150 project:

- Solent Forum officers who are leading the CCATCH the Solent project have been trained by both consultants on engagement and facilitation skills.
- The fly-throughs and mapping knowledge can be transferred.
- The tools and different approaches to engagement taken by the consultants will help to determine the approaches required for each of the seven areas and will also be shared with the other CC2150 partners.
- Experience from other Pathfinder projects will also feed into the wider project

Table G1 below provides a summary of what was delivered and at what cost, compared with the original outputs and budget submitted in the bid to Defra.

Table G1: Summary of planned vs actual outputs and budget.

Activity	£ (for 2009-10)	£ (for 2010-11)	Actual £
Education	20,000	25,000	19,533
Engagement	20,000	30,000	86,633 Community engagement strategy - 10,000 Phase 1 engagement - 58,188 Phase 2 engagement - 12,087 Meetings events, room hire, refreshments, materials - 6,358
Research		50,000	7,900
Production of Coastal Adaptation Strategy	4,000	24,000	15,500
HCC Architects	5,000	20,000	7,300
Short term works		50,000	N/A
Evaluation and monitoring	1,000	5,000	2,000
Staff time			32,134
Total	50,000	204,000	171,000

Annex H: Hastings coastal change pathfinder

The following information is taken from the Hastings Coastal Change Pathfinder Final Report to Defra (October 2011).

Background

In December 2009, Defra announced that Hastings Borough Council (HBC), along with 14 other local authorities, would receive financial support to investigate ways of adapting to coastal change in partnership with local communities. HBC received £115,625 to explore planning for, and managing, adaptation to coastal change for the Hastings fishing community in Stade.

Coastal change issues

The movement of shingle material along the Hastings coastline has resulted in a substantial accretion of shingle both within the harbour and on the beach. The steep gradient that this causes for the beach-launched fishing fleet has resulted in significant problems for the safe landing and launching of the fishing boats.

Summary of approach

- **Community engagement:** engaging Hastings' fishing fleet in the development of an options plan, and to capture and share historical record of coastal change and its impact on the fleet
- **Adaptation planning:** identification of short, medium and long term adaptation solutions on the basis of research.

Delivery of activity

Two pieces of research were undertaken:

- **Historical record** of the impact of coastal change upon the fishing community – carried out by Patrick Austin, a consultant previously used.
- **Shingle movement study** – an investigation carried out by Canterbury City Council of the reasons for and impacts of coastal change upon the movement of shingle within and around the harbour, which has had a direct impact on the fishing industry. The study was carried out in two stages:
 - Stage 1 – a detailed investigation into the past, present and likely future condition of the beach and its impact on harbour users, involving the analysis of environmental influences, including coastal processes and climate change.
 - Stage 2 – a more detailed analysis of the future scenario together with recommendations for what may be possible to reduce the impact of sediment transport and climate change on the fishing industry.

Progress and next steps

Preliminary options were put forward by Canterbury City Council in their June 2010 report. These were.⁹⁴

- Do nothing
- Boats moored offshore
- Construction of launching ramps
- Regular recycling of shingle
- Permanent bulldozers
- Reconstructing harbour arm
- Build further groynes updrift
- Build a breakwater/enclose harbour
- Move the fishing fleet east

Further studies to consider the feasibility and costs of these options were carried out and these were shared with the fishermen, Environment Agency, Pevensey Coastal Defence Ltd and the Marine Management Organisation (MMO) in November 2011. Informal discussions were also held and views sought about the preferred approach. The final draft of the research and the historical findings was due to be presented at a multi-agency stakeholder meeting in December 2011.

Table H1 below provides a summary of what was delivered and at what cost, compared with the original outputs and budget submitted in the bid to Defra.

Table H1: Summary of planned vs actual outputs and budget.

Activity	Total grant received £ (2009-10 to 2011-12)	Total £ spent to date August 2011	Remaining budget £ (2011-12)	Planned Activity for remaining of 2011-2
Project management & associated costs	34500	34500	0	
Administration & communication	7500	3500	£4000	Delivering adaptive solutions
Recruitment of researchers	2000	0	£2000	Delivering adaptive solutions
Desk based research	10000	9687	£313	Delivering adaptive solutions
Participatory and appreciative inquiry incl recruitment	30000	14,112	15,888	Final research by Canterbury (Adaptive planning)
Facilitation of history conversations	2500	2500	0	

⁹⁴ Although given as single options, they are not mutually exclusive and, it is likely that an effective solution will be to employ a combination of these.

Materials and publications	10125	5000	£5125	Printing of final materials post the final event (Community Engagement)
Publication of research report	5000	0	£5000	Development of final web resources and publications (Community Engagement)
Training and awareness raising	2000	2000	0	
Final film documentary	5000	800	£4200	Filming the next events in Sep/Nov and the fishermen beach again in Autumn when the slope it is at its worst
Research seminars for Peer review of findings	7000	0	£7000	Initiation of solutions following options appraisal in September (Delivering Adaptive Solutions)
Total	£115,625.00	£72,099	£43526	

Annex I: Jurassic coast pathfinder project

The following information is taken from the Jurassic Coast Pathfinder Project Final Report to Defra (September 2011). The report can be found at:

http://www.jurassiccoast.com/downloads/jurassic_coast_pathfinder_project-final_report_to_defra.pdf. Further information on the Pathfinder and the various resources mentioned can be found at: <http://www.jurassiccoast.com/400/category/the-coastal-change-pathfinder-project-247.html>

Background

The overall objective of the Pathfinder was to “*ensure through meaningful engagement and participation that coastal communities are well-equipped to understand, debate and take part in decisions about coastal change, adapting and becoming more resilient to those changes as a result, based on sound science and local knowledge*”. Within this overall objective, seven aims were identified:

- Aim 1: Coastal communities who are well informed about coastal change.
- Aim 2: Coastal communities who are well equipped to debate coastal change.
- Aim 3: Coastal communities who can play a meaningful role in decisions about coastal change.

- Aim 4: Coastal communities who are more resilient and well-prepared to deal with coastal emergencies as well as long-term change.
- Aim 5: Coastal communities who are supported in the testing and acceptance of practical action to adapt to coastal change.
- Aim 6: Future generations of coastal communities who are aware of the changes they face in the long-term and better prepared to deal with them.
- Aim 7: A spatial planning system which is well-equipped to reconcile the potential conflicts between a sustainable approach to coastal change on the one hand, and onshore/offshore development pressures on the other.

To achieve each of these aims, a number of projects were planned. However, not all of these were pursued and, with hindsight, there were probably too many at the outset. For example, Project 4i (personal emergency planning initiative) was not undertaken as there were a number of initiatives already in existence, while 4ii (research project into tolerance of coastal change risks) was not carried out as it could not be scoped in a way that fitted well with the overall project and its timescales. Project 5ii (trial negotiations with coastal householders) was not pursued as other Pathfinders were doing it 'for real'.

As a consequence, money was diverted into other areas of the project, e.g. scenario planning workshops, which proved to be more resource intensive than originally envisaged. Two new allocations were also created:

- **Project continuation/exit strategy fund (£25k)** – allocated to the Dorset Coast Forum to provide on-going support and advice to local communities, etc.
- **Community Adaptation Fund (CAF) (£27k)** – the bid did not include any resources for funding adaptation solutions as it was felt that this might change the process and it was not possible to second guess what might be needed. However, it was subsequently felt that some funding should be available to take forward some of the practical adaptation options which emerged from the scenario planning process.

Delivery of activity

Aim 1: Coastal communities who are well informed about coastal change.

Project 1i – Development of site specific coastal change scenarios (Bid - £42k / Actual spend - £62k)

A key activity under Aim 1 was scenario planning. This involved carrying out two workshops (3-4 months apart) at each of the six case study areas.⁹⁵ The first workshop set out the key facts and threats and opportunities and presented site-specific scenarios in the form of a newspaper article for 2033. This resulted in a number of options being developed. Following a 'light touch' appraisal of these options (involving the Environment Agency), they were then further refined at the second workshop. Some of these will be funded through the CAF.

Around 200 people attended the workshops. Of these, most were older people who were

⁹⁵ Sidmouth, Charmouth, Seatown, Weymouth, Ringstead and Swanage.

directly affected by coastal change. Generally, it was difficult to engage with those less affected. Having some young people, including school children, helped to make the events more forward-looking. The value of carrying out facilitator training (Project 2ii) was also clearly shown by feedback from the workshops.

Project 1ii – Development of coastal change visualisations (£30k/£22k – remainder diverted to workshops)

Another key activity under Aim 1 was to develop high quality digital visualisations of past and future coastal change to help inform the scenario planning workshops. LIDAR data and aerial photography were used to show what the coast might look like should erosion continue to the fullest extent of the 20, 50 and 100 risk lines identified in the SMPs. These were used as part of public exhibitions in Swanage and Sidmouth. Feedback from participants in the scenario workshops and the public exhibitions was that the visualisations were a helpful and powerful tool which highlighted the need for new thinking about coastal change.

Project 1iii – Arts-science project to raise awareness and understanding of coastal change (£10k/£10k)

The Project Team worked with the Jurassic Coast Arts Officer, who was midway through implementing a programme of activity under the Arts Council-funded Jurassic Coast Arts Programme. A contribution of £10,000 was used to part-fund a series of projects under the ExLab (Exploratory Laboratory) process, the aim of which was to increase mutual understanding of artists and scientists. Coastal change was just one of the themes being explored through these projects and, as such, may have become 'lost' among all the other messages. Although the evaluation of the process indicated that it had been a success, it did not specifically mention coastal change. The Project Team felt that if this approach were to be carried out again, there would need to be a far greater focus on coastal change.

Aim 2: Coastal communities who are well equipped to debate coastal change.

Project 2i – Network of coastal change champions (£10k/£5.5k)

As the project progressed, it became clear that 'community leaders' were emerging who were willing and able to shape the debate about coastal change within their communities. This led to a shift in emphasis away from establishing a formal network of 'champions', which would have created an ongoing administrative burden, to capacity building. Instead, a group of 'community leaders' were given support and training to carry out this role. Thirteen locally elected members such as parish councillors were given support and training.

Project 2ii – Network of coastal change facilitators (£45k/£25.5k – remainder diverted to scenario planning workshops and continuation/exit strategy)

It was necessary to scale back the budget envisaged to accommodate procurement policies of Dorset County Council (spend over £20k would have required a full formal tendering process and as it was necessary to complete the training before the main workshop phase of the project started). Dialogue Matters was selected as the training

provider and 30 officers were trained including planners, community planners, coastal engineers, countryside managers, policy and project officers from County and District Councils across Dorset and Devon. These officers now form a virtual network which can be called upon to facilitate stakeholder engagement events on the Jurassic Coast.

Project 2iii – Jurassic Coast Conversation (£15k/£14)

The original idea was to hold a series of events about coastal change culminating in a conference in 2011 to spread best practice and promote networking between communities facing change. In view of concerns over ‘event overload, an alternative approach was adopted of arranging two full-day site visits of all six case study areas. In total, 42 people went on the visits and, although this was a very limited number, they tended to be in leadership positions within their communities and organisations. A regional event for SW local authorities was also carried out in June 2011.

Aim 3: Coastal communities who can play a meaningful role in decisions about coastal change.

Project 3i – Coastal change decision-making road map (£10k/£10k – though not all yet spent)

The aim of the project was to develop an on-line tool and/or publications designed to support participation in the decision-making process around coastal change. The desired outcome – of coastal communities being able to play a meaningful role in decisions about coastal change – has been partially delivered through the intensive engagement of the scenario planning process (evidence from feedback) rather than via the output originally envisaged. At the time of writing, work was still underway to design a product that would add value bearing in mind that another project (Interreg C-SCOPE, managed by Dorset Coast Forum) was also producing an on-line guide to the decision-making process in the marine and coastal environment. The current plans involve redesigning the Pathfinder section of www.jurassiccoast.com to incorporate on-line guidance on the decision-making process. The current web pages give information about the project looking ahead from its inception, so these will be restructured to look back, with greater emphasis on lessons learnt, how decisions are made and links to the C-SCOPE decision-making guidance as and when it comes on stream.

Project 3ii – Coastal change action plans (£12k/£0k – budget diverted to CAF)

A budget allocation for Pilot Coastal Action Plans for two target locations was included in the bid without being certain whether or not it would be required. The Project Team did not want to raise the expectation that the scenario planning exercise would lead to production of an ‘Action Plan’ in each of the six case study sites, but wanted to leave open the possibility if it emerged that this was desirable. In the event, each of the sites has ended up with a list of actions to take forward and the Team is working with communities to agree the most effective way to deploy this resource.

Aim 4: Coastal communities who are more resilient and well-prepared to deal with coastal emergencies as well as long-term change.

Project 4i – Personal emergency planning initiative (£10k; £0 – budget diverted to scenario planning workshops)

The aim of the project was to develop more resilient communities, with new publications or on-line tools being available to support resilience. The project was not taken forward as a number of similar initiatives were found to be already in existence or underway. Instead, support for resilience was provided through the scenario planning workshops, with resilience becoming a stronger focus of the discussion than originally planned. As a result of greater focus on resilience, and perhaps an inevitable by-product of building scenarios around a catastrophic storm event, most of the workshops addressed emergency planning issues and resilience in some way, and four of the six case study communities are now developing an emergency plan with support from their local authorities. As such, the aim is being achieved via another route.

Project 4ii – Research into tolerance of coastal change risks (£20k/£0k – budget diverted to CAF)

This project was not taken forward as there was not the necessary expertise within the Pathfinder (either the Project Team or more widely) to frame the research so that it fitted well with the overall project and its timescales. The Steering Group partners also wanted the project to focus on engagement with communities and delivering action than further research. A better approach might be for Defra/Environment Agency to fund relevant research in this area.

Aim 5: Coastal communities who are supported in the testing and acceptance of practical action to adapt to coastal change.

Project 5i – landowner liaison (£5k/£0k – budget diverted to continuation/exit strategy)

The aim of the project was to carry out enhanced liaison with coastal landowners and land managers to assess and test options to support more effective relocation of coastal infrastructure, rights of way etc. and, thus, to use the allocated budget to help overcome recognised obstacles to rollback. The project was not taken forward as proposed, but was carried out indirectly via the scenario planning workshops, where there was reasonable engagement.

Project 5ii – Trial negotiations with coastal householders (£15k/£0k – budget diverted to project co-ordination)

In this project, it was proposed to carry out 'trial negotiations' with coastal householders with properties at risk to market test rollback and buy and lease back. The project was not taken forward as several other Pathfinders were doing the negotiations 'for real' and it was felt that they would inevitably learn more valuable lessons as a result. However, the Team did ask some of the questions that would have been asked during the 'trials' in a workshop session and generated useful feedback. This suggested most people with property at risk were pragmatic about the issues and would consider relocation if the right support and incentives were available – although some might have unrealistic expectations about the level of support that would need to be managed.

Project 5iii – Business planning tool for SMEs (£10k/£10k – though not all yet spent)

The project aimed to develop a business planning tool for SMEs to support resilience and integrate coastal risk into business planning. In scoping the project, it became clear that there were insufficient funds to provide the desired level of business support and that a better approach would be to integrate coastal change risk more effectively within the existing Jurassic Coast Quality Business Scheme under the heading of 'business risk'. In doing so, there will be a significant emphasis on risks from coastal flooding as well as erosion. In the meantime, there has been some limited engagement with business on coastal change through the scenario planning workshops and business breakfasts.

Aim 6: Future generations of coastal communities who are aware of the changes they face in the long-term and better prepared to deal with them.

Project 6i – Coastal conflicts education initiative (£24k/£24k)

The project aimed to expand the existing coastal conflicts initiative with Jurassic Coast schools, providing additional training for teachers and support for eight secondary schools to study coastal change with real case studies from the Jurassic Coast. Although the focus was initially on 'able, gifted and talented' pupils, in practice all children in the class took part. The process was student-led and each project centred on answering three questions: 'Why is the coast special?' 'How is it currently managed?' 'What is its future?'

Nine schools along the Jurassic Coast were given financial and practical support to mount investigations into how coastal change would affect an 'adopted' stretch of coast (although 2 dropped out due to competing time pressures). Students conducted field trips, action research and interviews with coastal stakeholders. They reported their findings via a variety of media to a Pathfinder Schools Conference on 11th March 2011. This was attended by over 100 students, parents, teachers, professionals, policy-makers and decision-takers. Students were also involved in the wider process of stakeholder engagement within the Pathfinder project, participating in workshops with other stakeholders. Issues like coastal change, natural disasters and climate change illustrate the importance of geography in the curriculum in ensuring that future generations have the know-how to be resilient in the face of change, so the project had an additional aspiration to promote the subject. This project could be replicated in a wide range of coastal areas for relatively limited cost. This would ultimately lead to a significantly higher level of coastal literacy among the coastal residents and decision-makers of tomorrow.

An evaluation report was produced at the end of the project, which set out the benefits to the students and schools concerned. It also appears that there will be a continuing legacy, as many schools have stated that coastal change will in future be a stronger part of their Geography teaching, that resources generated by the project will be used in future years and that they will work with primary schools within their catchments to integrate coastal change into the curriculum.

Aim 7: A spatial planning system which is well-equipped to reconcile the potential conflicts between a sustainable approach to coastal change on the one hand, and onshore/offshore development pressures on the other.

Project 7i – Spatial planning and coastal change research (£20k/£20k)

Land Use Consultants (LUC) was commissioned to examine how and where the issue of

coastal change can be addressed through spatial planning and where this may conflict with other planning objectives. The key recommendations on how the spatial planning system can best deal with dynamic coastal change both within the Jurassic Coast local planning authorities and more widely are given below.

Project 7ii – ‘Change we can plan for’ seminar (£5k/£0k – budget diverted to CAF)

The intention was to use the funding for before and after seminars with spatial planners to support LUC’s research project. However, the budget was not needed as only one seminar was carried out and this was done as an integral part of project 7i.

Key recommendations from the Jurassic Coast Pathfinder Spatial Planning Research Project

The research was undertaken for Dorset County Council by Land Use Consultants.⁹⁶ The key recommendations for national government and local planning authorities on the Jurassic Coast are reproduced below:

Recommendations for national Government:

- National policy should continue to require local authorities to plan for coastal change within LDFs (or new-style local plans), and to collaborate in the production of such plans, particularly where SMP boundaries include more than one local authority.
- Defra should work closely with DCLG to ensure that the policies in the PPS25 Supplement (Development and Coastal Change) are included in the new National Planning Policy Framework (NPPF).
- The NPPF should maintain and reinforce the guidance contained in PPS25 Supplement and the accompanying practice guidance, that LPAs should take account of the evidence and policies contained in SMPs when preparing local planning policies. Local policies that do not conform with those of the SMP, should be subject to scrutiny by the Regional Flood and Coast Committee.
- Looking forward to the next round of SMPs, Government should consider how they could be given a firmer statutory basis, including an implementation plan and the funding needed to deliver this.
- Additional technical guidance is needed on the means by which adaptation measures referred to in PPS25 Supplement can be implemented (i.e. how to identify CCMA and how to facilitate rollback), including funding mechanisms, drawing on the lessons learnt through the Pathfinder projects around the country.
- Defra’s flood and coastal defence funding formula should enable investment in community planning, including the relocation of at-risk properties, where this contributes to SMP policies. For example, an increasing proportion of the public funding available for coastal defence could be used to support sustainable adaptation and in particular be directed to supporting adaptation in communities where continued

⁹⁶ Land Use Consultants (2011). *Jurassic Coast Pathfinder Spatial Planning Research Project*. Final Report. Prepared for Dorset County Council by Land Use Consultants, July 2011.

or new coastal defence is not an option.

- The role of Housing Associations in the implementation of rollback policies should be explored further.

Recommendations for local planning authorities on the Jurassic Coast

There are three key issues that should be addressed by the local planning authorities on the Jurassic Coast in developing proactive local policies for dealing with coastal change (i.e. in Core Strategies or emerging new-style local plans):

- The type and location of new development that is appropriate in areas subject to significant risk of coastal erosion and related risks such as flooding. This may require different policy approaches for different types of development, e.g. residential properties, commercial developments and minerals and waste sites.
- The relocation (rollback) of existing properties in areas subject to significant risk. Policy should address the circumstances under which rollback will be allowed and the location and quality of 'rolled back' development (i.e. whether the new development is designed to a high standard, incorporates sustainable design/construction principles and avoids adverse impacts on the natural environment, in particular the many designated landscapes and nature conservation sites along the Jurassic Coast). Policies should also address the afteruse of the original site (and any structures left behind), and could encourage opportunities for habitat/open space creation.
- The maintenance and enhancement of coastal defence structures, and the need to integrate and reconcile wherever possible better working with natural processes and the desire to maintain the continuity of thriving communities.

Minerals and waste planners within Devon and Dorset County Councils should also take the SMPs into consideration when allocating sites for minerals or waste development, and consider whether more reference should be made either within development management policies or site-specific policies to the need to avoid proposals where coastal erosion is an issue.

The Jurassic Coast local planning authorities could also consider:

- Applying the lessons learnt from the Pathfinder project about effective community engagement to their own efforts to engage coastal communities in the development of local and neighbourhood planning.
- Collaborating to ensure that, if and when coastal change policies are integrated into local planning, these are consistent across the Jurassic Coast and are informed by both the SMP and WHS Management Plan policies to which the authorities are signatories.
- Working together to explore a joint approach to making use of a portion of Community Infrastructure Levy to help fund rollback or other coastal change adaptation measures.

Examples of adaptation options arising from the scenario planning workshops

Charmouth

The community is looking to rollback a key community building, the Charmouth Coast Heritage Centre, which sits in an exposed location on the coast. It is the key location on the Jurassic Coast for the interpretation and management of fossil collecting on the World Heritage Site, as well as being a focal point for the community. The Parish Council submitted an application to the CAF for a study into the options for its relocation as a necessary first step. The Centre and associated car park are the main source of income for the Parish, but there are complicated land ownership and leasing arrangements involved, and the Parish Council wanted professional help to identify the alternatives and explore the feasibility of attracting funding for relocation (e.g. from the Heritage Lottery Fund).

Swanage

As with all the workshops, the ground rules for the first workshop were that no idea should be ruled out. As a result, in the process of generating options, some ideas inevitably came forward which might not be recognised as 'sustainable adaptation'. Some of these options also survived the prioritisation exercise which took place during the second workshop. The prioritised options were:

1. Educate the community as to the risks of coastal erosion, Shoreline Management Plans (SMPs), coastal processes, defences and adaptation options
2. Extend the SMP cell from the Tanville Ledges to Shep's Hollow and locate a terminal groyne beyond the Tanville ledges to protect all of Swanage
3. Build an offshore break water to protect the beach from erosion
4. Diversification of economy to reduce reliance on beach tourism
5. Bring the community together to form a forum for dealing with coastal change in Swanage

Option 5 provides the mechanism to address options 1 and 4. During plenary discussion the group combined options 2 and 3. During that discussion the coastal engineers/Environment Agency advised that the implementation strategies which are being developed pursuant to the SMP would provide an opportunity for further input from the community to how SMP policies are taken forward in detail. In light of that, specific actions were not agreed for taking these forward beyond making sure that the community was plugged into that process. The development of a Swanage Coastal Change Forum therefore emerged as the immediate priority, and this was established, facilitated by the Pathfinder Team. The Forum also applied for some start-up funding from the CAF.

Other case study areas

As for other case studies, the options and next steps varied in nature, with some being taken forward by District Councils (e.g. emergency planning exercises in 3 of the 5 sites), some by the Pathfinder Team in conjunction with stakeholders (e.g. the Team set up and facilitated further discussions about management options in Ringstead), and some being dependent on communities themselves taking them forward. Included in these options were the possible relocation of vulnerable assets at Seatown (car park) and Sidmouth

(Alma Bridge) and the development of a new Beach Management Plan at Ringstead.

Annex J: Lincolnshire coastal change pathfinder

The following information is taken from the Lincolnshire Coastal Change Pathfinder Interim Programme Report to Defra (September 2011).

Background

In 2009 Lincolnshire County Council, on behalf of partner organisations in the coastal zone of the county, submitted a bid to the Defra Coastal Change Pathfinder pilot scheme. The bid was based on work then in progress to develop the Lincolnshire Coastal Study, and proposed a suite of eight projects costing at £810,000 in total⁹⁷.

Its overall objectives were to complete and build on the Coastal Study, exploring a range of potential pilot approaches to supporting local communities to adapt to the long-term impacts of climate change. In Lincolnshire, because of the local geography and prevailing socio-economic and environmental conditions, the primary long-term impact is the risk of coastal inundation.

The overarching approach governing the proposals in the bid was that the Lincolnshire Coastal Change Pathfinder programme would act as a catalyst for drawing added value from existing initiatives by joining them up and undertaking additional work where gaps were identified.

Development of the Lincolnshire Coastal Change Pathfinder, July 2009

In developing the Pathfinder programme, partners⁹⁸ agreed a set of core outcomes that embodied the results of a number of earlier consultation exercises with coastal communities while building on the evidence base established through the Coastal Study. It was considered essential that the Pathfinder should act to promote co-ordination across the wide range of initiatives in progress along the coast, including:

- The Lincolnshire Coastal Study – building on strategic coastal assessment of social, economic and environmental conditions
- The Lincolnshire Flood Risk Management Framework – linking into development of measures for managing flood risk across the county
- The Multi-Agency Flood Plan – effective linkages with the Lincolnshire Resilience Forum and preparation for coastal flooding emergency
- Shoreline Management Plans – alignment between long term policy aspirations for

⁹⁷ The Coastal Study can be accessed in full on the Lincolnshire County Council website:

<http://www.lincolnshire.gov.uk/residents/environment-and-planning/environment/lincolnshire-coastal-study>

⁹⁸ The Pathfinder Bid was put together by Lincolnshire County Council, East Lindsey District Council, Boston Borough Council, South Holland District Council, the Environment Agency, Natural England, Emda, and GOEM, although a wider range of partners were active in supporting delivery, particularly including Internal Drainage Boards and a number of external consultancies.

- coastal management and strategies and plans for the affected communities
- Community engagement – co-ordination between local and more strategic approaches, building on engagement previously undertaken on a project-by-project basis
- Economic regeneration

The Pathfinder programme was therefore designed to extract additional value from existing initiatives by exploiting interdependencies and identifying opportunities for additional work to create links where appropriate.

It was also determined that the Pathfinder programme should leave a lasting legacy of improved practice among partner organisations, as well as greater awareness, understanding and preparedness for the impacts of coastal change among local communities.

Objectives

These criteria underpinned the agreement of a set of overarching objectives for the Pathfinder programme

- An integrated partnership approach at strategic and delivery level to flood and coastal erosion risk management across the Lincolnshire coastal area, focusing on priority issues for the local area, making best use of existing resources and developing opportunities for new funding and resource
- Local communities continue to thrive and develop in the long-term
- Economic and environmental adaptation is managed to meet the challenges of climate change and sea-level rise
- Levels of risk and hazard to local communities do not increase over the next 100 years
- Improved information sharing and communication (day to day and in emergency situations) between partner agencies and with local communities
- Communities understand and are part of the development of the coastal area for the long term

Delivery of activity

A range of individual projects were identified to achieve these objectives, including activity previously planned but hitherto unfunded, existing initiatives that could be joined more closely with others, and new activities that could enhance the outcomes of existing work. The proposed suite of projects set out for exploration and development through the Pathfinder programme is set out below.

1. Coastal Study

- Initial development of guiding principles and potential spatial development options (July to October 2009 *in progress*)
- Detailed development of spatial development options (Oct-Dec 2009)
- Development of strategies to deliver a set of possible options (Jan-Mar 2010)

2. Social Complexity and Decision Making for Emergencies: A Holistic Approach

- Improve emergency preparedness through social modelling to understand and work better with local communities, particularly, in Lincolnshire's context, with a large, potentially vulnerable population requiring mass evacuation in a worst-case scenario
- Comprehensive plans for large-scale population movements in the coastal area, taking account of the most effective ways of communicating with different communities and sections of communities, as well as key characteristics, such as location and risk levels of more vulnerable people

3. Improving information and communications with communities in the coastal area

- Build on existing promotion of Environment Agency's Floodline service
- Develop consistent methods and standards of collecting and sharing up-to-date flood risk data across the county, and sharing it between partners and with local communities
- Links could be developed with proposals for exploring mass evacuation
- Specific aspects might include a general guide for Lincolnshire residents on flood risk in their area and key contacts for information or closer involvement, or developing improved flood warnings

4. Local engagement and adaptation support

- Setting up effective and sustainable methods for partner agencies to engage with coastal communities such as Sutton Bridge and Long Sutton
- Support development of local community-based approaches to adaptation and resilience
- Assessing the capacity and needs of scattered rural communities around the Wash to adjust to the longer term impacts of climate change, in particular flood risk, and identify appropriate adaptation.

5. Promoting design solutions – Boston

- Making current and future development more resilient in the event of flooding
- Developing a design manual for the Lincolnshire coast
- Active promotion of measures to promote flood resilience in new builds

6. Case Study – Mablethorpe

- Focus on a specific coastal community
- A single trusted source of community information to help inform decisions about the future of their town
- A partnership information resource supported by key agencies, encouraging and helping to facilitate ongoing dialogue with residents, businesses and partners
- Independent support (to challenge as well as facilitate) for one year to help local partners to debate and develop an idea of what the community might start to plan for – helping draw in the engagement of key regional and national organisations.

7. Improving knowledge of the hidden coastal community

- A programme of work to provide much greater information about the characteristics of the 'hidden' community in static coastal caravans
- Developing much more effective mechanisms to support these people in the future
- An alternative to roll-back, as the distance that would need to be moved to provide significantly greater security could be as much as 20km in some places, and up to 9 km in most.

8. National Coastal Innovation Programme

- A programme to help improve understanding and develop innovative responses to coastal change
- a single Innovation Learning and Development Programme developed in partnership with independent expertise and research knowledge

This core group of projects was supplemented by a range of other activities with the potential of supporting linkage between projects and with other wider initiatives and policy responses, such as with the implementation of the Flood and Water Management Act.

The totality of the proposed activities is set out below in Table J1, with the eight 'core' projects highlighted in bold.

Table J1: Projects within the Pathfinder programme and other related activities.

Activity	Delivery lead	Expected outcome
Development and implementation of Flood Risk and Drainage Management Framework	LCC	Framework adopted and in place by April 2010
Complete option development and implementation strategy stages of Lincolnshire Coastal Study <i>(1. Coastal Study)</i>	LCC	Partnership strategy for sustainable development of coastal communities, within SMP policies and supporting communities to adapt in the long-term to climate change and rising sea-levels
Co-ordination and delivery of Pathfinder Programme	LCC	Co-ordinated programme with clear set of objectives that delivers demonstrable benefits to local communities most affected by the need to adapt to coastal change
Mass evacuation research project <i>(2. Social Complexity and Decision Making for Emergencies)</i>	Aston University	Enhanced methods for conducting large-scale evacuations
Activity	Delivery lead	Expected outcome

<i>3. Improving information and communications with communities in the coastal area</i>	Local authorities	Improved information and communications for local communities
<i>4. Local engagement and adaptation support</i>	District Councils	Proven methods for sustainable support to local communities and empowerment to decide and implement their own decisions
<i>5. Promoting design solutions</i>	District Councils	Greater uptake of resilience measures for existing properties affected by flood risk – improved mitigation measures in design of new builds
<i>6. Case Study – Mablethorpe</i>	East Lindsey DC	A package of trialled measures for engaging and involving an urban community developed specifically for a seaside town at risk from flooding and coastal change
<i>7. Improving knowledge of the hidden coastal community</i>	East Lindsey DC	Clear understanding of the nature and needs of a large sector of the east coast population, leading to better targeting of provision for adaptation and emergency response. The information derived from the project is not to be used for enforcement purposes.
<i>8. National Coastal Innovation Programme</i>	Lincolnshire County Council	Best practice is shared and implemented nationally, spreading benefits of Pathfinder outside local area and promoting more joined-up approach across administrative boundaries.

The key variations from the original bid proposal, broken down by individual project, are summarised below in Table J2.

Table J2: Variations in activities from original bid.

Activity	Expected outcome	Variations
Development and implementation of Flood Risk and Drainage Management Framework	Framework adopted and in place by April 2010	Adoption completed on plan; the budget originally allocated was therefore available to pursue implementation of partnership data management arrangements, ensuring that in meeting statutory requirements for asset register under Flood and Water Management Act the opportunity is taken to enhance the basic requirement and improve data sharing as a whole between organisations while providing for public access to data. Designed to support roles of authorities in normal circumstances and their role in emergency situations. This project was due for completion in October 2011.
Complete option development and implementation strategy stages of Lincolnshire Coastal	Partnership strategy for sustainable development of coastal communities, within SMP policies and supporting	Changes to the regional planning system, in particular the suspension and imminent abolition of regional spatial strategies, meant that while option development was completed, the Lincolnshire Coastal Study was completed as an extensive baseline to inform future

Study <i>(1. Coastal Study)</i>	communities to adapt in the long-term to climate change and rising sea-levels	strategy, rather than as part of a consultation draft revised Regional Spatial Strategy. As such, a considerable proportion of the funding originally allocated for this project was redeployed to enhance and extend different aspects of the rest of the Pathfinder programme
Activity	Expected outcome	Variations
Co-ordination and delivery of Pathfinder Programme	Co-ordinated programme with clear set of objectives that delivers demonstrable benefits to local communities most affected by the need to adapt to coastal change	Completed to plan
Mass evacuation research project <i>(2. Social Complexity and Decision Making for Emergencies: A Holistic Approach)</i>	Enhanced methods for conducting large-scale evacuations	Completed to plan
<i>3. Improving information and communications with communities in the coastal area</i>	Improved information and communications for local communities	Completed to plan
<i>4. Local engagement and adaptation support</i>	Proven methods for sustainable support to local communities and empowerment to decide and implement their own decisions	Completed to plan, but very slow initial start due to capacity issues within partner organisation. The project completed under-budget, which released further funds for additional and enhanced works, outlined below.
<i>5. Promoting design solutions</i> <i>(Sustainable Housing)</i>	Greater uptake of resilience measures for existing properties affected by flood risk – improved mitigation measures in design of new builds	Extended to September. The production of the Emergency Planning guide was additional to the original brief, by bringing in the ideas, concerns and issues raised by Emergency Planners from both local and county authorities and the Environment Agency. Their ideas on flood risk within the planning process have been integrated into the main body of work through a literature review, face to face meetings and a Workshop. The Supplementary Planning Documents, SPD, will not have the policy foundation to support the type of document envisaged. The SPD output will reflect the current policy position and signpost the key issues based upon this commission

6. Case Study – Mablethorpe	A package of trialled measures for engaging and involving an urban community developed specifically for a seaside town at risk from flooding and coastal change	A very slow initial start due to capacity issues within partner organisation. Ultimately the project was refocused to allow greater synergies with local plans to develop a community information hub, and because of this the deadline for completion was extended to November 2011 to allow for building refurbishment and redesign, and to complete process of attracting European grant funding.
7. Improving knowledge of the hidden coastal community	Clear understanding of the nature and needs of a large sector of the east coast population, leading to better targeting of provision for adaptation and emergency response	Completed to plan, with the addition of two aerial thermal surveys completed on 4th February and 7th April 2011 enabling an overview of the potential hotspots of caravan occupancy
Activity	Expected outcome	Variations
8. National Coastal Innovation Programme	Best practice is shared and implemented nationally, spreading benefits of Pathfinder outside local area and promoting more joined-up approach across administrative boundaries.	Completed to plan, with tighter focus developed as follows Generate a better understanding of local businesses, including why businesses locate on the coast and what they need to survive Build on established baselines data (such as those developed through the recent coastal study) to provide a more detailed local picture. Develop and test alternative options for locating major inward investment and major industry on the coast. Establish a clear economic model exemplifying business imperatives
Extending 'hidden communities' research to cover wider geographical area	More detailed information on migrant communities in the Boston area	Additional work building on development of originally-proposed project
Develop policy options for future development of caravan sites	Apply the research undertaken through the Pathfinder programme as formal planning policy	Additional work building on development of originally-proposed project
Extend coastal communications campaign	Establish an ongoing dialogue between communities and delivery agencies building on learning from Pathfinder	Additional work building on development of originally-proposed project

	programme	
Extend coastal business model to other areas	Develop the model through the CCA and make available to coastal areas around the UK	Additional work building on development of originally-proposed project
Coastal Management conference	Key information-sharing event, to launch full public Pathfinder report	Additional work building on development of originally-proposed project

Annex K: Scratby Coastal Pathfinder Project (Great Yarmouth)

The following information is taken from the Scratby Coastal Pathfinder Project Evaluation Report for Great Yarmouth Borough Council, Scratby Coastal Pathfinder Management Group and Defra (March 2011). The report can be found at: <http://www.great-yarmouth.gov.uk/rpa-final-scratby-evaluation.pdf> Further information on the Pathfinder and copies of the various reports can be found at: <http://www.great-yarmouth.gov.uk/environment-planning/planning/coastline-protection/scratby-coastal-pathfinder-project.htm>

Background

In December 2009, Defra announced that Great Yarmouth Borough Council (GYBC) would receive £296,500 to examine how the coastal community of Scratby and California can best adapt in the medium and long-term (50 to 100 years) to the pressures and predicted effects of a changing coastline.

The overall aim of the Pathfinder project was to expand the level of detail and depth of engagement with the local community and to empower the local community to explore the range of opportunities that exist for adaptation. It was intended that the project would underpin the development of a template for adaptation that could be applied elsewhere.

Scratby and California is a community located on soft cliffs fronted by low dunes and in part protected by a rock berm. The Kelling to Lowestoft Ness Shoreline Management Plan 2 (SMP2) (which has been approved by GYBC) indicates that this coastline will continue to erode in all three epochs and has a policy of 'no intervention'. This is a change from the 'hold the line' policy in the previous SMP. The community is a small to medium coastal village (around 520 properties). There are a number of holiday lets (caravan and chalet parks), as well as a small number of retail outlets and one public house. Although only a relatively small number of properties, 27 will be at risk by 2020, this will rise to a total of 251 by 2105 (if those affected by loss of the road are included).

Communication with Scratby and California residents in the past has been partial and many seem to have missed out on the SMP2 consultation. While some people in the village are well-informed (there is a very active community group – the Scratby Coastal Erosion Group (SCEG) – that has been campaigning for changes to the SMP2 as well as an extension of the existing rock berm),⁹⁹ most have only partial knowledge and are largely reactive in their approach to coastal issues.

⁹⁹ Under the old funding rules, examination of a scheme to extend the rock berm, with a life of only 20 years, did not get through the pre-feasibility stage. Despite this, GYBC agreed to fund the project appraisal. However, inevitably, it did not get funding. Under the new rules, it would get around £400k (compared to the total cost of £3.9m), but there would still be a major funding short-fall.

Delivery of activity

The Scratby Pathfinder Project involved five main tasks:

- development of a programme of community education and information to engage, inform, reassure and support communities and individuals in coming to terms with coastal change;
- examination and testing of equity release and equity transfer schemes and opportunities, such as purchase/rent back, property exchange programmes and business support programmes;
- investigation of sources of external and commercial funding that may be accessed to support adaptation programmes;
- exploration of 'rollback' options and infrastructure implications; and
- possible development of a Community Adaptation Management Plan, in line with Development and Coastal Change Policy.

The first of these five tasks was undertaken throughout the whole project. Where there were particular gaps in knowledge or inconsistencies in understanding amongst the community, the Scratby Coastal Pathfinder Management Group (SCPMG)¹⁰⁰ produced leaflets and letters to fill these gaps. All of the studies undertaken throughout the Project also involved extensive engagement with the community, emphasising that the project was being led by the community.

Most of the tasks were undertaken by consultants, appointed and overseen by the SCPMG following a tendering process. Three consultants were appointed:

Norfolk Rural Community Council (NRCC)

NRCC carried out the initial community engagement and consultation to:

- complete a basic demographic study of the community to inform future consultation;
- raise awareness of the Pathfinder process;
- gain some baseline knowledge of the community's understanding of coastal processes (e.g. SMP); and
- gain some baseline understanding of the community's concerns and aspirations.

NRCC hand-delivered and collected the initial questionnaire, resulting in a high response rate of 52%. This showed that there was significant misinformation about coastal change issues and SMPs and resulted in a leaflet being produced to explain the SMP process. NRCC produced a report on the results of the community consultation: <http://www.great-yarmouth.gov.uk/community-consultation-final.pdf>. This included full details of the questionnaire responses (with annexes containing all the comments received).

NRCC also carried out a survey of the 15 businesses affected by coastal erosion, but engagement by business was generally poor, with only one of the 11 businesses that

¹⁰⁰ The project was managed by the SCPMG comprising Borough Councillors, SCEG members, a business representative and an invited member of Ormesby Parish Council.

responded expressing an interest in being involved in the project. In the case of caravan owners, their view was that they would stay put until they were deemed to be at risk, when they could simply move elsewhere. NRCC produced a report on the business survey (again with annexes including all the comments). <http://www.great-yarmouth.gov.uk/community-consultation-final.pdf>. See attached links:

<http://www.great-yarmouth.gov.uk/scratby-pathfinder-survey-summary-1.pdf>

<http://www.great-yarmouth.gov.uk/scratby-pathfinder-survey-summary-2.pdf>

<http://www.great-yarmouth.gov.uk/scratby-pathfinder-survey-summary-3.pdf>

Risk & Policy Analysts (RPA)

In response to a request from many people for more information about financial matters, RPA was appointed to carry out a major piece of work looking at land and assets, with the aims of:

- investigating possible ways of helping land, business and home owners so that the community of Scratby and California is supported in the medium and long-term; and
- investigating opportunities for funding this assistance.

The approach taken was as follows:

Stage 1 – identify initial options, develop evaluation matrix to assess options and refine options:

- options and criteria developed at a workshop with project team and SCPMG members
- drop-in session for the community in Scratby

Stage 2 – assess options:

- questionnaires to obtain community views on possible options – questionnaires delivered to 480 residences, of which 168 were returned (35% response rate). The results showed that there was a preference for options to purchase the at-risk properties or to provide help to allow people to stay in their properties for as long as possible
- identification of potential funding sources
- identification of obstacles and constraints that could affect implementation of the options
- assessment of how the obstacles and constraints could be removed or reduced

This gave around 35 different ways to help those living and working in property at-risk from coastal change. The various approaches were grouped into five option types to be examined in detail.

Stage 3 – identify short-list of most promising options:

- using results of assessment of options

- feedback from engagement on results of questionnaire
- feedback from discussions with businesses
- feedback from engagement on results of assessment of options

Stage 4 – recommendation for next steps (further research)

RPA's project identified that large amounts of money would be needed to take any of the options forward. This was particularly true of the community's preferred options where the Government or Housing Authority (or Association) would purchase the property. The money needed to pay for this option was estimated at almost £50m if all the properties at-risk over the next 100 years were purchased at a price that assumed they were not at-risk from coastal change. Other options, such as those to help people to continue to live in their properties for as long as possible could cost less. For example, an option to help people with pay for maintenance of their property was estimated to cost £8 million (over 100 years) where help was available when the at-risk properties were predicted to be affected by coastal change within 10 years.

RPA produced a report covering a wide range of adaptation options and possible sources of funding: <http://www.great-yarmouth.gov.uk/rpa-adaptation-land-fr.pdf> (This included annexes describing the analysis of questionnaire results and the results of the drop-in sessions.)

Planning Cooperative

The Planning Cooperative was appointed to work with the community of Scratby and California to explore the range of opportunities that exist for adaptation in response to predicted rates of coastal erosion. The main aim was to identify a Coastal Change Management Area (CCMA) and to develop a set of policies relating to rollback of development from the areas predicted to be affected by coastal erosion.

The core of the project was a Community Statement, a single page document setting out all the most important points produced after a one day workshop with invited stakeholders. From the outset the stakeholder workshop identified a strong consensus about a number of key points to guide the management of coastal change:

- the right of property owners to relocate within the village, subject to a restriction that a property could only be relocated once
- a planned approach to this by identifying 'roll-back' areas
- four locations suitable as roll-back areas for various uses
- the importance of preserving the character of the village in spite of significant new development
- the right of property owners at risk to develop their properties

The Community Statement was agreed by the Management Group and distributed to all residents, with an invitation to attend a Community Exhibition at which the ideas and proposals were presented for further discussion and endorsement. The results of the exhibition were used to revise the Community Statement and add clarity to the proposed roll-back areas. This was presented to the Council earlier this year as representing community aspirations as to how the challenge of coastal change and the development that stems from it should be handled. A further meeting is planned in August.

Planning Cooperative produced a report setting out policies for the CCMA and rollback, with a Community Statement: <http://www.great-yarmouth.gov.uk/p.coop-full-final-report.pdf>

Engagement

Engagement was a key element throughout the Pathfinder Project. Engagement activities undertaken have included:

- nine letters sent to each residential address to inform them of the Pathfinder Project and to provide regular updates. These letters were accompanied by the reports and/or summaries of reports produced by consultants;
- a leaflet explaining the SMP;
- installation of a portacabin in the seafront car park that acted as an information centre for the latter part of the project;
- nine drop-in sessions/exhibitions open to everybody for them to provide their views, ideas and feedback;
- two questionnaires hand delivered and collected from all residential properties. This also included an opportunity for people to ask questions about the Project;
- two workshops for invited members of the community to provide their views and be involved in the identification of adaptation options and potential rollback areas; and
- regular Management Group meetings that involved SCEG, parish councillors, local councillors and a business representative.

Workshop for households occupying dwellings in the “most at risk areas”

Following completion of the main part of the Project, it was agreed by the SCPMG that detailed discussions should take place between the representatives of the Pathfinder and occupiers of those households living in the most at-risk properties (defined as those within the first erosion line on the SMP2 map). As part of these discussions, they should be given an outline of the approach taken by North Norfolk District Council (NNDC) to providing assistance to those living in properties at risk of coastal erosion in Happisburgh, which had been developed as part of the North Norfolk Pathfinder.

Letters were sent to the 31 “at most risk” properties, inviting people to a workshop to discuss their concerns and to establish what they would like to see happen in the future. Six people attended the workshop on 4 March 2011.

Overall, the majority of attendees said that they wanted a rock berm. Attendees felt that people needed time to accept the situation and adapt to it. A rock berm would provide this time and enable those currently living in Scratby to make plans for their futures. Any buyers subsequently purchasing properties would do so with the

The project delivered the five tasks set out in the original bid and no additional costs were incurred. Table K1 compares the tasks initially identified and the outcomes from the project.

Table K1: Comparison of tasks initially identified and outcomes from the project.

Task	Has the task been completed?	Cost
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Development of a programme of community education and information	Yes, FULLY	£42k
Examination and testing of equity release and equity transfer schemes and opportunities	Yes, FULLY	£53k
Investigation of sources of external and commercial funding	Yes, FULLY	Part of above project
Exploration of rollback options	Yes, FULLY	£61k
Development of a Community Adaptation Management Plan	Yes, FULLY	Part of above project

Annex L: Sefton coastal change pathfinder

The following information is taken from the Sefton Coastal Change Pathfinder Evaluation Report for Defra (July 2011). Further information on the Pathfinder and copies of the various reports and other outputs can be found at:

<http://www.sefton.gov.uk/default.aspx?page=10969>

Delivery of activity

The following *planned activities* were set out in the original bid:

Community engagement

The aim was for the community to have a better understanding of coastal change and the problems arising from it so that they could participate in deciding on an appropriate way forward and be prepared to both make and accept some of the 'hard' decisions. This would be delivered via three mechanisms that complemented and built upon existing work:

- community outreach officer;
- project with schools and parents; and
- project engaging with the residents of the caravan site that is under threat.
- A **Community Outreach Officer** would focus on the Formby area but would also encourage wider participation from residents across Sefton. This element of the project would have two key remits; the first would promote understanding through talks, walks, newspaper articles and such like focused specifically on the issues facing the community of Formby. The second would engage the community through volunteering, not only providing an opportunity for education of the community but also for them to develop a much greater ownership of their environment and hopefully encourage wider participation. There would be additional benefits in relation to the health agenda but these are peripheral to our aims.
- The **Schools and Parents Project** would seek to work with not only children but adults via their children. Working with primary schools in Formby through the North Sefton City Learning Centre we would work with the children to develop their understanding of coastal change and climate change and then extend the work to involve their parents; a key element of this would be discussion of possible options and their relative benefits. This would be designed to obtain a baseline of current understanding of climate change (which can be compared to the NW of England response for the same questions) and of coastal change. Subsequent surveys would then evaluate any change in attitudes over time within the target groups and enable the team to explore changing attitudes to coastal and climate change in space and time. This project would be delivered in partnership with the North Sefton City Learning Centre and the National Trust.
- The **Caravan Site Residents Engagement** would seek to promote an understanding of their predicament through documentation of residents' long standing experience with the site. This is a very intimate approach suitable for a small and discrete community such as that found at the caravan site. There would also be an opportunity for the residents to undertake some sand dune management work. It is anticipated that this would help with the understanding of the problem and offer ownership of the problem.

This project would be delivered in partnership with the National Trust.

The community engagement would be further supported through material developed using visualisation science. This work would be undertaken by Dr Andy Heath, a Visualisation Scientist who has 20 years scientific visualisation and programming experience including web development, he is also the Photographer in Residence for Liverpool University. The work would focus on showing past and future coastal change at Formby Point using modern approaches to the manipulation of visual data.

Planning for adaptation

The aim would be to set out key decisions in a timely and sustainable manner so as to optimise the timing and design of any investment. It was noted that a substantial amount of work was already underway to support the development of the Adaptation Strategy for the coast but two specific areas that would benefit from additional funding were plans looking at dune slacks and at car park provision.

- The **Dune Slack Study** would supplement some work already undertaken to identify the potential for dune slack creation (see later) but this was only done for areas that had previously experienced sand extraction, not in a comprehensive manner across Formby Point, and set in the context of the wider sand dune system. Dune slacks are a valuable habitat and Sefton currently contains approximately 40% of the dune slacks in England but the roll-back of the coast will destroy a number of them and also lead to fragmentation of this habitat both in terms of distance and the nature of habitat between slacks. This study would build upon current work looking at potential future extents of habitats to establish where and when dune slacks should be located and what associated works would be required to avoid habitat fragmentation. It would also consider the work being undertaken on dune hydrology when designing new slacks given that climate change is predicted to lead to lower water tables on average. The work would be delivered in Partnership with the National Trust and would make use of the wide range of expertise found within the Sefton Coast Partnership.
- The work on the **Car Park Study** would build on initial consultation already undertaken in relation to the car park at Victoria Road which is currently being inundated by sand dunes with its foundations being exposed by erosion of the frontal dunes. Key areas to be addressed in such a study would be the design of the sand dune restoration following removal of the car park, an outline design of the replacement car park and a consideration of the balance of car parking provision between the two principle sites on this area of coast. All this is required in order to progress discussions with the public, to undertake a Strategic Environmental Assessment and to identify costs for inclusion in future budget applications. This work would be delivered in Partnership with the National Trust.

Adaptation actions

The aim was to undertake actions that improve our understanding of designing and implementing adaptation actions in a sustainable and timely manner so as to inform future approaches. It was proposed to address two key areas:

- **Boardwalk construction** – while there is an acceptance that access in a natural environment can be challenging and that it is not possible to provide easier access all

the time there is a general expectation that in a limited number of locations there should be improved access provision such as boardwalks. The problem with boardwalks in a dynamic environment is that as the sand dunes erode not only is the support for the structure undermined or lost but the loading conditions are increased as more of the structure is exposed to tidal energy. This action would design and construct a boardwalk in such a way as to be both able to withstand short term changes without having to be closed and to be able to be adapted in a planned manner to match in with the changes in the future position of the coastline. Based on the knowledge gained from this it would be possible to assess the relative merits of a more robust but expensive structure compared to cheaper but more vulnerable alternatives.

- **Dune slack creation** – while there is a requirement for a broader study considering dune slacks a previous study considering areas of past sand extraction has already identified a number of locations where new slacks can be created in anticipation of the loss of old slacks to coastal change. This would be of clear value in habitat terms and would be a valuable activity for volunteers to participate in and thus gain a broader appreciation of the coastal environment and coastal change.

Dissemination

As a Pathfinder dissemination is a key element of the work to be undertaken and this would be achieved via two mechanisms. The first would be through having an academic partner who could provide scientific rigour to our approaches in a research context and would also provide support in the evaluation, documentation and collation of the lessons learnt through the various adaptation activities being undertaken on the Sefton Coast. This would ensure that the process was well documented and presented and that it could be presented to both an academic and practitioner audience.

The second would be through offering to host a conference towards the end of the funding period where the results from the various Pathfinders can be presented and collated in to conference proceedings. This could be structured under the three themes of community engagement, planning for adaptation and adaptation actions along with a fieldtrip to Formby to see adaptation in action and participate in some marram planting. The conference would be facilitated through the North West Coastal Forum who have significant experience of organising and promoting such events. This would provide a significant opportunity to collate and disseminate the results of the initial Pathfinder funding and potentially consider further funding opportunities.

As noted in Section 5 (para. 5.256), the Pathfinder was not able to deliver all the planned activities. Table L1 sets out the planned and revised budgets for the project and the activities delivered are summarised below.

Table L1: Planned and revised budget for the project.

Pathfinder sub projects	Original budget (£)	Revised budget (£)
Community Outreach Officer – Revenue	50000	0
Schools and parents project – Revenue	15000	0
Caravan site residents engagement – Revenue	20000	0
Formby Point visualisation –	5000	5000

Revenue		
Dune Slack Study – Revenue	25000	20000
Car Park Study – Revenue	25000	5000
Boardwalk construction – Capital	105000	91000
Dune slack creation – Capital	40000	0
Dissemination outputs – Revenue	20000	20000
Conference – Revenue	12000	0
Project management – Revenue	12000	8000
Contingencies – Revenue	8000	0
Total	337000	149000

The **key activities delivered** were:

Community engagement

- **Caravan park engagement** (unfunded) – members of the Pathfinder Team engaged with a caravan site at Formby Point, a community and business that are vulnerable to the impacts of coastal erosion in the relatively short term. Meetings were held between involving the National Trust (which owns the land), the caravan owners and residents. It was agreed that, while attempting to prolong the life of the site, an exit strategy was needed and Sefton Council could assist with the technical aspect of this by advising on rates of erosion. The Council also liaised with planning officers to discuss the option of ultimately moving to another location. The Council also agreed to carry out sand dune management works along with the National Trust to try to minimise erosion rates in the immediate future to allow the owners more time to plan their exit strategy. As a result of the negotiations, the National Trust is now renegotiating the lease with the site with appropriate conditions to reflect its limited life span.
- **Formby Point visualisation** – this work explored the development of material that can be used on YouTube and similar media but deviated from the more traditional animation approach. Distribution to date has been limited to some websites and YouTube but a review is underway to make better use of this material. This work has shown the importance of having an engaging narrative, making good use of images and making it interesting for a local audience especially through the use of history.

Planning for adaptation

- **Dune Slack Study** – a long term strategy is currently in development that takes account of coastal change and climate change and sets out short term actions (5 years) that will contribute to the delivery of the long term strategy.
- **Car park study** – a limited amount of work was undertaken to engage with the public which included the development of interpretation materials that explained the changing coast and the implications of change at this location.

Adaptation action

- **Boardwalk construction** – the approach followed was to build for future conditions but designing it to allow change (accepting that there may be problems), and instigating a management regime. The boardwalk has been successfully constructed, but no

feedback has yet been received on its performance.

Dissemination activity

The academic partners were involved in advising on the setting up and monitoring of projects. As the scale of this activity was reduced, some of their time was refocused into communication activities, in particular a timeline booklet and a report of the work funded by Pathfinder and IMCORE, which will be disseminated to funders and made available to other practitioners.

Key outputs from the IMCORE project

The Innovative Management for Europe's Changing Coastal Resource (IMCORE) project has been operating since 2007 and was due to finish in 2011. It was an EU-funded Interreg IVB project involving Sefton and eight other partners aimed at investigating ways to develop understanding, knowledge and responses to coastal change in a changing climate. In Sefton, this resulted in a number of outcomes such as an Adaptation Strategy on the coast, the publication of peer-reviewed conference proceedings and the production of a Key Stage 2 Education Resource Pack about coastal change and climate change.

Adaptation Strategy

This strategy considered the potential impacts of coastal change including climate change on the Sefton Coast and identified risks and opportunities arising from coastal change (including those driven by climate change) using a risk based approach. This study has helped to highlight the issue of coastal change for members of the Sefton Coast Partnership and land managers along the coast so that they can consider options and how these might be included in their policy documents and management plans. The study can be found at:

<http://www.sefton.gov.uk/pdf/Coastal%20Adaption%20Study%20Oct%202010.pdf>

Sefton's Dynamic Coast Conference Proceedings

In September 2008 a conference entitled Sefton's Dynamic Coast was held in Southport to celebrate 30 years of working in partnership on the Sefton Coast. A call for papers to be included in the conference proceeding or presented on the day was requested. Large numbers of papers were submitted from various local experts and partners on the Sefton Coast on varying themes from plants and animals found on the coast to physical changes in the landform, from past to present day, of the coast and how over time management practises on the coast have changed. The conference was a big success and although it took a further 2 years to publish the conference proceedings (which are over 300 pages long) the now published book which can be viewed on line has received good reviews and forms an up to date documentary legacy of Sefton's dynamic coast.

Coast Watch Education Resource Pack

Communication and education of coastal change, including climate change, has been a major focus of Sefton's efforts within the IMCORE project. An innovative educational resource pack has been developed to educate at a grass roots level the impacts of coastal

change and climate change, both positive and negative and to demonstrate how to respond to these changes now and into the future.

The resource pack contains a custom made animated series called 'CoastWatch' with accompanying activities and supporting materials for teachers of Key stage 2 primary children. Its aim is to inspire, motivate and enthuse pupils to become good citizens and ambassadors of the Sefton Coast and equip them with knowledge and understanding of the challenges they may face on the coast into the 21st Century.

A limited print run of the resource pack is available free of charge, initially to all Sefton primary schools, then on a first come first served basis to schools outside of Sefton. Once this print run has been exhausted, electronic versions will be made available.

Annex M: Slapton line coastal change pathfinder (East Hams)

The following information is taken from the Slapton Pathfinder Project Report for Defra (July 2011). Further information on the Pathfinder and copies of the various reports and other outputs can be found at: <http://www.slaptonline.org/>

Background

Slapton Sands is located in the South Devon Area of Outstanding Natural Beauty (AONB) on Devon's most southerly peninsula facing eastwards into Start Bay and the English Channel. The Ley, the beach and surrounding area are a National Nature Reserve and a Site of Special Scientific Interest (SSSI) designated for vegetated shingle, freshwater lakes and wetlands, geomorphologic features, plant collections and birds. The 'Line' is a shingle barrier beach dividing the largest natural freshwater lake in South West England from the sea. The shingle barrier carries the main A379 arterial road. This road, the coastal village of Torcross and a number of car parks along the length of the Line are threatened by long term erosion by the sea.

In early 2001 a '25 year storm event', with easterly gales on a high spring tide, brought the full power of the sea to bear on the centre of Slapton Sands which was already depleted of shingle following earlier storms. It ripped away 5m of beach head and undermined a 200m section of the A379 coastal road. The road was out of action for three months, causing disruption to residents and businesses alike, before a signal-controlled single track road was re-opened. The road was fully re-opened some 12 months after the storm, by realigning the damaged section inland by 20m at a cost of around £500k.

The Slapton Line Partnership formed to co-ordinate the future management of the Line. A study was commissioned by the Partnership from consultants Scott Wilson to provide future management options. This predicted that the shingle barrier beach, formed originally from flint deposits 20 miles offshore and washed landwards by post-glacial sea-level rise, would continue to move towards the 'original' coastline. The study concluded that there would be no national funding available for a multi-million pound engineered coast defence stretching the length of the 2 mile road section. Taking all factors into account, the consultants concluded that the best option was 'managed realignment' – moving the most vulnerable sections of the road inland for as long this is practicable – but on the understanding that eventually the road would become irreparable and would close permanently, probably between 30 and 50 years from now (from 2006).

The report also recommended that the community should be helped to adapt: if the impact could be planned for, it could be reduced. An adaptation plan was created which supported by Defra achieved a number of objectives including putting contingency plans in place, communicating with residents and working with businesses to plan for the future.

Delivery of activity

Coastal Change Community Adaptation Toolkit

- The first Toolkit version was circulated in July 2010 to Defra and other Pathfinder

projects. It was published on the Slaptonline.org and the Communities of Practice websites. It was updated several times in 2011 and it will continue to be updated until May 2012. (Google search on 'coastal adaptation toolkit' places Slapton Line in the top three.)

- Techniques included in the toolkit were also shared with other Pathfinder projects specifically in a number of ways, including:
 - Timelines: The Somerset Pathfinder project sought additional information about the use of a timeline to reinforce the message of historical and present-day continuing coastal change and have now produced their own version on their website: <http://www.somersetcoastalchange.org.uk/>
 - Partnership structure: The (Devon/Dorset) Jurassic Coast Group were interested in the Partnership structure and its method of including stakeholders.
 - Survey: both the Jurassic and Somerset Pathfinders looked at the detail and methodology of the residential surveys and how they helped steer the project.
 - Toolkit Adaptation methods were also presented to a variety of other audiences (e.g. as part of Devon/Dorset Pathfinder Schools programme, Exeter University Geography and Psychology academics).

Timelines and the changing coast

- **Archive** – a large archive has been assembled containing items such as photographs, newspaper articles and videos on coastal change and wartime events
- **Video** – the video was intended to provide a means of explaining the background to the challenges faced by the Slapton Line. This was also planned as a legacy item to last beyond the end of the project providing an easily accessible explanation for individuals, as well as helping develop the scope of the educational resources. It had three elements:
 - Explaining how the barrier beach was formed – this was achieved with local school students presenting a script
 - revisiting coastal change history using the BBC archive films of storms and road damage
 - explaining the different interests and points of view taken into consideration in the solution
 - using 'talking head' interviews of the 'stakeholders'

The video was developed to meet the needs of both a general audience but also to be used in an educational context where a set of videos has been developed and brought into the education programme now run by SLapton Ley Field Centre. The inclusion of archive materials helped its acceptance as part of the local history group archive event (Blackawton and Strete History Group BASH) where it has been shown on three days to a total of over 400 attendees (during March 2011).

- **Coastal Change Interpretation** – this project has enabled co-ordination of interpretation to take place. Research has been completed on a number of panels and others are in production including a replacement panel for Hallsands, one of the more significant sites of coastal change. A digital presentation of local village life including coastal change has been assembled from the archive which is being to go on

permanent exhibit in the Torcross Post Office. A brief survey¹⁰¹ confirms that, whilst awareness of coastal change is generally high, the timelines and other panels increase awareness of the challenge of erosion.

- **Inclusion of materials in presentations** – the video and archive materials have been incorporated into a number of presentations including those given at Celebrate Start Bay Day, Slapton Ley Field Centre Research Day, Advisory Group meeting.

Business and tourism adaptation and resilience

- **Business Forum** – meetings with businesses at an earlier stage established that a main desire was to ‘make more of the assets of the area’, including the natural environment. The feeling was that often people passed through the area without appreciating that there was more to see and learn about the area. Subsequent car park data analysed has shown that in the majority of the car parks spaces around 50% of visitors stayed an hour or less. Another point made by businesses was to be careful about how the road loss story was presented – too much publicity focussing on the long term road loss would deter visitors.
- **Tourism Strategy** – an action plan of activities has been created that has been successfully submitted for funding from the Local Action Group. This was based on the tourism strategy¹⁰² created during the adaptation project through negotiation with local businesses individually and through meetings as well as with tourism representatives. The action plan will continue beyond the end of the Pathfinder project until May 2012. It includes continuing some of activities started in the Pathfinder project and also linking to the South West Coast RDPE project ‘Uncovering our Coastal Heritage’.
- **Celebrate Event** – the ‘Celebrate Start Bay’ event originally established as part of the adaptation project has been continued. The event showcases the natural environment of the area, local businesses, local arts and crafts, history and presentations on coastal erosion and the Slapton Line project to residents and visitors. To some extent, one of the legacies of the road damage in 2001 was a gulf between businesses and those representing the natural environment which the Field Centre (and Nature Reserve, managed by the Field Centre), to some extent, symbolises. Bringing people into the Field Centre helps establish relationships and break down barriers. An underlying theme of the event is to encourage realisation from the business community of the ‘draw’ of the Nature Reserve. The Celebrate Event is structured so that it can be self-financed and the management of the event can be taken over in 2012 by the Field Centre. Linkage has also been made to the South Devon Walking Festival. In 2010 this included a themed coastal walk covering coastal change, while in 2011 the walk focused on the wartime story and included additional events at which the wartime panels were used (see below).
- **Wartime Story** – a major piece of history in the area was the evacuation of the villages surrounding the Slapton Line to enable D-Day practices to take place. During the project, work was carried out with the tank memorial company to, for the first time, provide interpretation which also listed the names of the US servicemen lost in ‘Exercise Tiger’ following a surprise attack by E-boats. The memorial is regularly visited by relatives of US servicemen, is something of a draw for many visitors and is the focus of commemorative services each year in April. In addition, an exhibition of the

¹⁰¹ http://www.slaptonline.org/download.php?id=173&type=DOWNLOAD_FILE

¹⁰² http://www.slaptonline.org/library/index.php?cat_id=Filter+by+Category&search=sustainable+tourism+strategy&Submit=Search

Torcross Wartime story was developed which was exhibited using the Field Centre's information trailer (both staff and local volunteers) to coincide with the services during Easter 2011. Work was also undertaken worked with colleagues in the AONB unit to record the memories of survivors of the evacuation and these were turned into a video using the archive film of the evacuation. The audio files have been loaded onto the audio trail.

- **Business-linked Interpretation** – the tourism strategy originally identified a 'visitor centre' as an objective. In lieu of substantial capital investment, work has been undertaken on a distributed interpretation approach. As part of this, links have been developed between the businesses along the line and interpretation, including:
 - The seven wartime story panels have been installed in the Start Bay Inn.
 - Coastal change has been linked into an orienteering trail at Strete Gate and the revised leaflets made available from the refreshment providers – to sustain this production, sponsorship of these leaflets has been pursued.
 - Torcross history including coastal change materials have been developed for display at the Torcross Post Office.
- **Car parks** – car parking is crucial for the access of visitors to the area. Erosion will denude the middle car park eventually creating 'destination' car parks at either end of the Line. There is limited additional space for car parking and this issue is difficult to resolve as the car parks are currently only at capacity in peak summer months, making additional investment difficult to justify, and the Torcross car park abuts the nature reserve. The idea of substituting for reduced car parking in the middle car park has been introduced, with extension 'overflow' car parking into the nature reserve at Torcross. Agreement has been reached for an environmental impact assessment for this to be carried out as part of an MSc project in 2012. At Strete Gate costings have been done for both extended hardened parking but also much cheaper temporary overflow parking. Discussions with a local business have begun to investigate cost justifications to fund this.

School outreach and engagement

- **Primary schools** – working with the Field Centre, a programme of day-long activities with follow up sessions for the primary school children of the area was developed and piloted during 2010. The programme continued during 2011. Sponsors have been identified to help support the programme into the future including the local bus company and a local golf club which has set up a visitor gifting scheme to contribute to the ongoing costs. The programme provided education for three schools in 2010 and five in 2011 with a target of around 200 primary school children to visit per year.
- **Secondary schools** – at this level, resources have been jointly developed with the Field Centre to provide a more comprehensive story about the adaptation issues (for both GCSE and A Level courses). A number of schools have attended the Field Centre and used these resources.

Additional activities

- **Partnership Meetings** – the steering group (for Partnership officers) and the advisory group (for local representatives and open to the public) have continued to meet, though frequency will be reduced beyond the Pathfinder project. Beach profile measurements continue to be made with periodic minor bastion (protective

- shingle mounds created at strategic locations) movements when needed.
- **Shoreline** – a local group of business people resident in the area, known as ‘Shoreline’, has emerged with an alternative privately-financed idea for providing protection for the coast road. Liaison with this group is currently underway to help assess whether the idea is both sufficiently robust to warrant support from the Partnership and provides a real alternative to the existing managed realignment scheme. The detailed work in the Scott Wilson study (which also helped us contribute to the SMP2 process) has been an invaluable baseline to these negotiations. Interestingly, Shoreline members have modified their ideas to focus more on ‘soft’ engineering (moving shingle around) after finding the original hard engineering solutions were not enthusiastically supported by those local residents they consulted. This particular initiative potentially presents a new approach to funding coastal management, which may have greater relevance to the Pathfinder approach.

Annex N: Somerset coastal change pathfinder project

The following information is taken from the Somerset Coastal Pathfinder Project Final Evaluation Report for Defra (October 2011). Further information on the Pathfinder and copies of the various reports and other outputs can be found at:

<http://www.somersetcoastalchange.org.uk/>

Background

The focus of the Pathfinder was the following three communities which were highlighted through the Shoreline Management Plan (SMP):

- Porlock Weir;
- Steart;
- Brean and Berrow;

These were identified as “hot spots” at risk of flooding and coastal change. The policy for these locations in the medium to long term recommends “No Active Intervention” or “Managed Realignment”.

The Pathfinder aimed to ensure that these communities:

- increase their awareness of coastal change;
- are better able to understand what actions they may need to take as individuals and collectively, to improve resilience to coastal change;
- can better influence future decisions about management of coastal change.

The programme of work was due to run until the end of May 2011, but there were sufficient funds to extend the work of the Project to November 2011.

Delivery of activity

Porlock Weir

Community engagement was identified as vital in achieving the key aim of securing buy-in to the development of a draft Flood Adaptation Plan for Porlock Weir. The village is at risk from coastal flooding but local residents were largely unaware of the medium to long term implications of the SMP and, in particular, the increased likelihood of severe flooding, with emergency services perhaps being unable to access the village. This meant bringing together residents, business owners and landowners to get across the purpose of Pathfinder, and draw out their ideas for making their community more resilient.

Paul Jones (Project Officer) began by explaining the study to the parish council. This was followed by the first tranche of publicity, a mock newspaper (“The Coastal”) which set out the scenario of a severe weather event taking place on 7 February 2010, delivered door-to-door. This was developed with the help of technical information and analysis from consultants (Black & Veatch) and was accompanied by a covering letter, to ensure that no resident was alarmed or took it for real, and to advertise the planned public drop-in sessions.

The newspaper was followed by three public drop-in sessions in 2010 (conducted with the help of Black & Veatch, who advised on the format, attended the sessions, delivered presentations, gathered questionnaire responses and produced an evaluation report on the outcomes of each session). The three sessions progressively built upon each other, the first two mainly gathering ideas and information from the community and the third delivering a draft Flood Adaptation Plan for Porlock Weir, which was presented to the Porlock Parish Council to take forward.

This Adaptation Action Plan covers the following issues:

- Flood Warnings
- Emergency Action Plans (individual and community)
- Flood Resistance Measures – to stop flood water entering properties
- Flood Resilience Measures - to minimise damage caused by flood water
- Other Measures (insurance; alternative housing outside of the flood risk area; and actions to be taken in case of major failure of the harbour groyne).

It is intended as a community guide to “what needs to happen next” and will be a lasting legacy of the Pathfinder. A Flood Action Group has been formed to implement the plan.

Work has also begun to refurbish Porlock Ford Community Hall to act as an emergency evacuation centre with some Pathfinder funding. In addition, there has been significant interest in putting together a collection of old photographs of Porlock Weir and these will be placed on-line.

Stear

The original bid included proposals to develop tools and scenarios for communicating with communities about coastal change along the Somerset Coastline, including funding to support a community engagement officer at Steart, where EA is currently running a scheme to set back the defences and create new intertidal habitat. The Steart Coastal Management scheme is potentially one of the largest managed realignment schemes in the country and, if implemented, the peninsula will undergo a period of dramatic change; construction, tidal inundation and the eventual creation of intertidal habitat creation.

Following the successful bid, the Steart component received funding of £65,000 and the Environment Agency used this money to fund community engagement activities, in particular, a full-time Community Engagement Officer for one year.

The Community Engagement Officer played an important role in relation to the Steart Coastal Management scheme, helping to ensure continued communications and building on the existing relationships with the local community (as evidenced by positive feedback). The officer also provided a direct link between the local residents and the Environment Agency, ensuring that issues and concerns were addressed as quickly as possible. For example, when there were concerns over the routing of a footpath, a working group was set up and an alternative route was proposed which was accepted by the Environment Agency.

The Wildfowl & Wetland Trust (WWT) was appointed as the Environment Agency’s site manager and the Community Engagement Officer worked closely with the Trust to identify

ways to involve the community in the future management and vision for the Steart peninsula, including:

- **formation of a Community Sub-Group** – as part of the Pathfinder, the Environment Agency set up a Community Sub-Group, involving a representative from each of the parishes, to look at ways in which the community could be involved in taking the project forward. The sub-group welcomed ideas from the community on what they would like from the project. Several people expressed an interest in receiving professional advice on making their homes more flood resilient. With Pathfinder funding, Black & Veatch carried out surveys of each property in Steart (14 properties), including estimations of vulnerability and advice on action that could be taken to increase resilience.
- **educational links** – WWT worked closely with the local primary school, to look at how coastal change has happened over living memory. Through curriculum based topics, the children have undertaken a range of indoor and outdoor activities to help them understand what coastal change means to both people and wildlife.
- **3D Digital Visualisation model** – funding was provided for a 3D digital visualisation model to help local communities and wider stakeholders understand how the peninsula will adapt over time by showing how water will move across the site and new habitats will be created. The Environment Agency has regarded this as a key community engagement tool and was shown at a public drop-in session in autumn 2011.

Brean and Berrow

It was decided that a completely different approach to community engagement was required in Brean and Berrow. Following the Boscastle floods, the Environment Agency contacted the local caravan park owners by a mail-drop, the aim being to encourage the posting of notices in the caravans, warning visitors what to do in the event of a flood. The perception of the park owners was that flooding of the type that happened in Boscastle would be extremely unlikely to happen and thus there was very little take up of the suggested measures because of the possible effect on tourism in the area.

Instead, it was suggested that the focus of engagement should be on Coastal Community Teams, monitoring and conserving the dunes, and ensuring that residents and visitors are aware of the vital role which they play as a natural sea defence. Again, the Project Officer carried out one-to one engagement work in the area and discovered during that there were a number of groups involved in conservation work on the dunes and it would be possible to facilitate their working together.

A public drop-in session was held at Berrow Village Hall on 17 March 2011, which gave an opportunity for attendees to view exhibition stands displaying the work being carried out on the coast between Brean and Berrow. Twenty two people attended the session, which was a fairly good turnout, and further work has been carried out to facilitate a closer working relationship between the three main groups that appear to be monitoring the coast in this area. Funding was also given for sand fencing.

At Brean Down, the National Trust refurbished the permanent information display opposite its café, which is used by visitors, bird-watchers, wildlife enthusiasts and residents. The Pathfinder project contributed £2,000 towards improving the display, which includes a smart phone facility to guide people to local places of interest and inform them about this stretch of the coast. Work was also be carried out with summer visitors in Brean and

Berrow, which brought an important different dimension to the Pathfinder.

Other activity

- “Somerset’s Changing Coast” – a film showing the changes that are occurring along the coast and some of the ways people and agencies are starting to adapt. It is designed as a tool to raise awareness of key issues and coastal change and to give people practical advice on how to adapt to a changing coast.
- An e-game for all Somerset primary schools to enable children to learn about the coast and encourage them to go out and explore it.
- Creation of a website, www.somersetcoastalchange.org.uk, which not only records the achievements and progress of the Project, but will:
 - act as a voice for the communities;
 - record their thoughts, coastal photographs both past and present;
 - record coastal changes; and
 - be a living resource which could be owned by the communities now the Pathfinder comes to an end

Table N1 below provides a summary of what was delivered and at what cost, compared with the original outputs and budget submitted in the bid to Defra.

Table N1: Summary of planned vs actual outputs and budget.

Original Aims	Expected Outcome	Comparison with original plan	Proposed Expenditure	Actual Expenditure
Aim 1 Ensure Coastal communities that are well informed about the natural processes which will impact upon coastal change in their area and how they can participate.	Development of site specific technical scenarios for Brean and Berrow, Minehead to Blue Anchor, Porlock Weir, to generate informed discussion on how coastal change could affect communities on the Somerset Coast in the future.	It was decided at the first Steering group meeting to focus attention on Brean & Berrow, Steart and Porlock Weir, and that a technical scenario – a plausible future flood event scenario, be developed for Porlock Weir as a different longer term approach were needed for Brean & Berrow.	£30,000	£19,465.50 - Scenario development
	Development of dedicated educational resources regarding Somerset Coastal Change, with resources provided for local communities, the Tourism sector, Schools and information for partners.	After further research it was decided to develop a Coastal e-Game using a format which was in development by the County Tourism department.	£20,000	£15,135 - eGame & distribution to all primary schools in Somerset £2,000 - Contribution towards Brean Down café interp

<p>Aim 2</p> <p>To enable coastal communities to discuss the impact of coastal change and to consider the options for their area.</p>	<p>To explore possible future situations where coastal change will impact on parts of the Somerset coast. To organise and run workshops for the site specific technical scenarios.</p>	<p>The technical scenario was developed for Porlock Weir, following on from this a Flood Adaptation Action Plan was developed in liaison with the community.</p>	<p>£30,000</p>	<p>£6488.50 - Porlock Weir drop-in sessions & adapt plan</p>
	<p>Development of a high quality DVD containing case studies from around the country where businesses and individuals are developing ways of adapting to Coastal Change which will be relevant to Somerset.</p>	<p>Early on, it was discovered that the National Trust had already produced a very comprehensive national DVD – ‘Living with a Changing Coastline’, which could be used as a tool and therefore the Pathfinder DVD focused on examples from the Somerset Coast.</p>	<p>£20,000</p>	<p>£10359.88 – DVD</p>
		<p>It was decided to award some small grant towards practical adaptation measures to coastal change</p>		<p>£2,000 – Berrow dune restoration £1,800 – Porlock Weir flood resilience kit</p>
<p>Aim 3</p> <p>To explore the additional benefits that can be gained through a managed realignment project in order to assist communities in adapting to the changes occurring .</p>	<p>To build relationships with and demonstrate to local communities how they can adapt to sea level rise, benefit from new defences and help contribute to intertidal habitat creation.</p>	<p>A full-time Community Engagement Officer has been employed specifically for Steart. A 3D visualisation tool has been developed. To develop a Steart community subgroup.</p>	<p>£65,000</p>	<p>£26k WWT – schools project £35k FT Comms Officer 1 year £4k House resilience surveys and 3D visualisation model</p>
<p>Aim 4</p> <p>To identify whether there is a need for a Somerset Coast consultative</p>	<p>A thorough analysis of the resources and mechanisms required to set up and run a forum for the Somerset Coast.</p>	<p>Following the first Steering Group meeting, it was decided that it was not necessary to develop a coast forum. This funding would be spent</p>	<p>£10,000</p>	<p>£16,164.95 (+1 year additional hosting = £400.00) Website &</p>

forum, which would provide an opportunity to debate those actions which relevant stakeholders acknowledge need to be undertaken in partnership.		on Community Engagement instead, to include developing a Somerset Coastal Change website, with plans to develop coastal change interpretation materials at the National Trust Brean Down Café. There is a shared synergy between the communities at Steart and Porlock in particular, due to Porlock having experienced an unplanned shingle ridge breach situation and Steart potentially being involved in a large planned managed realignment project.		Coastal Change timeline £1,200 - Social media training
Pathfinder projects management and co-ordination			£60,000	£94,986.17 (Includes 6 month extension to project)

Annex O: East Riding coastal change pathfinder

The following information is taken from the in-depth evaluation. Further information on the Pathfinder can be found at: <http://www2.eastriding.gov.uk/environment/sustainable-environment/looking-after-our-coastline/coastal-change-getting-support/>.

Delivery of activity

The East Riding Pathfinder has delivered what it set out in the bid but some elements have been implemented more slowly (e.g. ICZM Communications Tool). Some elements have not been as effective as first thought such as buy and lease back. Others are considered to have achieved its objectives.

Partnership Working and Group Structures

Internally, an East Riding coastal officers working group has been established. This includes representatives from planning, housing, building control, civil engineering, highways, environmental management and legal. The group is chaired by Sustainable Development and meets on a monthly basis to discuss the broad strategy for dealing with

coastal erosion and the Pathfinder project as well as individual cases and support which will be given. This will be retained on a permanent basis.

Externally, an Integrated Coastal Zone Management (ICZM) Group had been established following the release of the ICZM Plan in 2002 and this has been exploited throughout the pathfinder project. The Sustainable Development Team is currently exploring the options available for developing a coastal partnership in the East Riding as advocated at a national level.

Rollback Review and links to the LDF

East Riding of Yorkshire District Council has implemented a policy of rollback since 1995. However, it was recognised that the Council's rollback policy needed to be reviewed. The review is considering how business properties (e.g. tourism infrastructure) can be incorporated into the suite of rollback policies that already cover caravan parks, residential properties and farmsteads. The aim is to produce a single multi-faceted Coastal Change Management Policy. This will allow the short term rollback of appropriate infrastructure in line with PPS25.

Coastal change issues are being addressed within the East Riding Local Development Framework (LDF), and the lessons learned through the Pathfinder are contributing to this element of the Framework. The Council is also developing a mapping tool for informing rollback and building on the SMP2 using monitoring data.

Vulnerable Groups Priority Outcome

To meet the project's aim of supporting vulnerable communities at risk from coastal change, a process for identifying and prioritising the cases of those most at risk has been developed. Coastal monitoring data have provided the baseline on which any assumptions of risk have been based and have informed the levels of risk established as part of the Enhanced Assistance Package (EAP) (see below). An assessment of risk is updated on a six monthly basis informed by the latest monitoring data. Three risk levels have been introduced with the third (lower risk) introduced in March 2011. This is focused on households located between the projected 2025 and 2055 cliff lines within the SMP2 within this category. The other risk categories include:

- Imminent risk (Level 1) – to be at imminent risk, a household must be within the maximum annual loss distance recorded for its particular location since the Council's monitoring began in the 1950's.
- Higher risk (Level 2) – beyond the maximum annual loss distance for its particular location but within the area projected to be lost by 2025 based on cliff line projections within SMP2.

Enhanced Assistance Package (EAP)

This allows the Council to take a local and proactive approach to those at risk and identified as vulnerable through the Vulnerable Groups Priority Outcome process described above. It has been designed to help those at both imminent (Level 1) and higher risk (Level 2), with properties located within the 2025 erosion line as identified by the SMP. The EAP is also available to level 3 (lower risk) applicants. A summary of the

EAP is given in Section 6 (para. 6.2) and further details are given in the in-depth evaluation.

Rollback and Buy and Lease Back

One element of the Pathfinder bid was a review of rollback policies. In relation to delivery of the EAP, the Council envisaged considering rollback on a case-by-case basis, both for single residents or a number of residents wanting to relocate as a community. However, this did not occur in practice for a number of reasons (see Section 6, Lessons for future policy on coastal change adaptation and the in-depth evaluation).

Buy and lease back was offered to residents as part of the EAP. Three applications were received and these are currently at differing stages of completion. While it is clear that there are a number of barriers to implementing this process successfully, the Council is still working with the residents involved to try and achieve an acceptable solution. However, for a number of reasons, the buy and lease back component of the EAP has proved more difficult to test within the Council's corporate structure and wider legislative and policy framework than had been anticipated (discussed further under 'Less successful elements of the Pathfinder'). Other alternatives have been considered (set out in the in-depth evaluation) and one approach (removing the residential status of the property being considered)¹⁰³ is being progressed. This is discussed further in the in-depth evaluation.

ICZM Adaptation Communications Toolkit

The Council is developing a suite of information which will form an Integrated Coastal Zone Management (ICZM) Adaptation Communications Toolkit. This will include the Council's coastal monitoring data and emerging coastal change policies, and will provide the basis for communities to engage in long-term planning for coastal change. A coastal change website will provide a central hub for coastal information. This work is being progressed during winter 2011-12, in light of ongoing changes to the Council's corporate website where the ICZM toolkit will be imbedded.

Value for money assessment

Table O1 is reproduced from the in-depth evaluation and summarises the costs and benefits estimated for the EAP.

Table O1: Value for money assessment of the Enhanced Assistance Package.

	Do Nothing	Pathfinder Project
Description	The 43 properties under consideration would fail after an average of 5 years (some would fail sooner, some would fail later). After Fail,	The intervention involves the removal of 43 properties in East Riding. As the properties are not replaced, it is not possible to monetise future benefits as a

¹⁰³ In this approach, the property or its land would be valued based on any commercial value it may have for temporary use (e.g. for agricultural purposes such as storage of equipment). This would provide the resident with some financial assistance and would remove the burden of demolition and land restoration costs.

		the properties would not be replaced.	result of the intervention.	
Costs	PV Societal Costs	-	£434,600 (A)	
	PV Public Sector Costs	-	£434,600 (B)	
Assets	No. of Properties <i>(source: Pathfinder)</i>	43 (existing) (C)	0	
Monetary Benefits	Estimated Property Benefits (see technical note in Appendices)	£918,400 (D)	0 (E)	
	PV of Benefits <i>(source: Regeneris calculation)</i>	-918,400 (E-D)		
	PV of Benefits (net of costs)	Net of Societal Costs	-£1,352,900 (E-D-A)	
	Cost Benefit Ratio	Societal CBA	NEGATIVE FIGURE ((E-D)/A)	
		Public CBA	NEGATIVE FIGURE ((D-C-A)/B)	
	Cost per Property (unit cost)	Societal Cost	£10,100 (A/C) (cost per unit demolished)	
Public Cost		£10,100 (B/C) (cost per unit demolished)		
Other Impacts (colour coding denotes largely positive, neutral or negative impact)	PV Blight Effects	Given the timescales involved, it is assumed that if left to 'fail', the properties would receive limited investment and would deteriorate in condition, having a negative visual impact on the surrounding area	By demolishing a relatively large number of properties, the project will have some positive impact in terms of reducing blight.	
	Impact on Wider Cohesion / Regeneration	Under the 'do nothing', the number of properties in East Riding would be sustained for a longer period of time. However, investment in the properties would be limited and as such, impacts on regeneration would be limited.	The project succeeds in its objective of removing properties at risk from coastal erosion. In doing so, the project has some regenerative potential, in reducing the number of at risk properties in the area and reducing the risk of blight. However, the regenerative impact is limited given the fact that the properties are not replaced and the existing community is not sustained	
	Impact on Local Amenities	The 'do nothing' scenario would result in demand for local amenities falling as and when the population decides to move away from Failing properties	Whilst the number of properties has been reduced, many of the local residents have relocated elsewhere in the local area. Impact of the project on demand for local amenities is therefore likely to be neutral	

<p>Overall Comments</p>	<p>The 'do nothing' scenario would result in a number of negative impacts which it is not possible to quantify.</p>	<p>As the project does not involve the replacement of property, the project achieves a negative net cost benefit, removing potential income that could be achieved if the properties were to remain (as under the Do Nothing). However, the project has some positive impact in terms of reducing blight associated with Failing buildings and in terms of removing residents at risk from coastal erosion.</p>
<p>NOTE 1 – All figures rounded</p>		
<p>NOTE 2 – Societal Costs take into account all costs associated with the intervention (excluding costs associated with acquisition of at-risk property). Public Sector Costs take into account only those costs borne by the public purse (including costs such as property acquisition)</p>		
<p>Assumptions – To estimate the annual value of the property under the do nothing, a yield of 3.5% (the accepted social preference rate) has been applied to the property value.</p>		
<p>A detailed technical note which explains the key assumptions and methodology is included in the Appendices.</p>		

Annex P: North Norfolk coastal change pathfinder

The following information is taken from the in-depth evaluation. Further information on the Pathfinder and copies of the various reports and other outputs can be found at: <http://www.northnorfolk.org/pathfinder/>.

Delivery of activity

Happisburgh

A holistic approach to tackling the issues at Happisburgh has been taken. The **property acquisition programme** (which is part of a rollback programme) has allowed for the purchase of 9 out of 12 properties identified as being imminently at risk (within the first SMP epoch, up to 2025). A demolition contract and process is being prepared for these. In the meantime, a preferred site consultation is complete and final negotiations with the landowner of the preferred site are being concluded. A series of detailed consultant reports has informed the scheme (published August 2010 to July 2011).

A **buy and lease back scheme** was considered and appraised, but was found to have a very low return on investment, carry considerable risk for the Council and be of no interest to RSLs due to poor fit with investment plans. The intention is to work with estate agents in the near future to educate them on an understanding of EN12 policy.

Under the **cliff top enhancement project**, the construction of a new car park and toilets is underway and due for completion in 2012, along with the agreement for future management by the Parish Council and the final landscaping scheme/maintenance schedule. The beach access ramp has been created and the final land transfers/purchases are underway. Interpretation panels are being developed for installation. The removal of beach debris at Happisburgh is nearing completion, with final debris surveying and installation of health and safety signage identified as future planned work.

Rollback of the Manor caravan park has been granted an extension in order that the owner is able to secure an alternative site and relocate each plot whilst a business plan is in the process of being finalised over the next couple of months (the Pathfinder programme supported the business plan itself). An appraisal of site options has been undertaken to help inform the roll back, with one site having been identified as most suitable (near Gold's Farm and playing fields).

The **Coastal Heritage project** is now complete. The project has included a number of events, training sessions and resource use between 2010 and 2011, with the publication of a heritage book still outstanding but already over-subscribed. A valuable result has been the creation of a local heritage group.

Business Support

Three elements of business support have been delivered through the project. A **Business Advice Project** has involved 90 businesses. Business planning advice is being provided and business advice vouchers are being redeemed, enabling firms to access greater levels of support. As part of a second phase, **business grants and loans** have been

developed. Finally, a **tourism audit of the east Norfolk coast** was completed and included workshops with local businesses and relevant organisations. Through these a marketing action plan and tourism development plan were completed. The action plan and development activities are being implemented over the next three years through a Service Level Agreement with the North Norfolk Tourism Forum (NNBF). A **marketing toolkit** for businesses within this area has been launched which provides guidance at assessing developing the marketing approach and provides materials such as high quality photographs.

The bid has also supported a study to look at the potential for **private sector contributions towards the continuing maintenance of flood defences in Wolferton** (the Environment Agency cannot justify maintenance from its own resources). This was carried out with the Borough Council of Kings Lynn. Stakeholders attended a workshop in December 2010 to agree on a preferred approach of contributions collected across the borough with a surcharge for those living inside the floodable area.

Infrastructure Package

Progress has been made in developing a **succession strategy for the Trimingham Village Hall**: an agreement is in place to assist in funding the relocation of the village hall and a land purchase agreement is currently in conveyance for the new site. A local group has been active through the Parish Council and is developing applications and plans for relocation. A number of open days and consultation events were arranged in 2010. The hall was due to be constructed between October 2010 and May 2011 although this has fallen behind schedule considerably. The Pathfinder will part fund the development to replace the old hall, which is at risk of coastal erosion.

The **realignment of the cliff top public footpath** from Runton Road to Cromer, (the Marram's Path) is now complete with the process for amending public right of way initiated. Final arrangements were completed in November 2011.

The beach debris removal project at Beeston Regis is complete, with pedestrian access at high water between Sheringham and West Runton having been reinstated and the beach environment improved.

Value for money assessment

Tables P1 and P2 below are reproduced from the in-depth evaluation and summarise the costs and benefits estimated for the Happisburgh removal and relocation scheme and the relocation of Trimingham Village Hall, respectively.

Table P1: Value for money assessment of the Happisburgh removal and relocation scheme.

	Do Nothing	Pathfinder Project
Description	The 9 properties under consideration would 'fail'. The EN12 rights would be held by individual property owners and the EN12 opportunity	The project involves the purchase by the council of the EN12 opportunity from the current property owners. The acquired rights would be used

		would not be activated collectively for the 9 households. It is assumed that 50% of EN12 rights would ultimately be activated.	collectively to ensure the provision of 9 replacement homes in one development
Costs	PV Net Societal Costs	£549,400 (A)	£1.3 million (B)
	PV Net Public Sector Costs	-	£581,000 (C)
Assets	No. of Properties	9 (existing)	9 (new) (D)
	<i>(source: Pathfinder)</i>		
Monetary Benefits	Estimated Property Benefits (see technical note in Appendices)	£1.2 million (E) – it is assumed that the EN12 right would be activated by 50% of property owners and that properties built after Fail would have the same value as those created under the Intervention	£2.1 million (F)
	PV of Benefits	£929,300 (F-E)	
	<i>(source: Regeneris calculation)</i>		
	PV of Benefits (net of costs)	Net of Societal Costs	-£393,900 (F-E-B)
Cost Benefit Ratio	Societal CBA	0.7:1 ((F-E)/B)	
	Public CBA	NOT DEEMED RELEVANT – SEE NOTE 1 BELOW	
Cost per Property (unit cost)	Societal Cost	£147,000 (B/D)	
	Public Cost	£64,600 (C/D)	
	Sensitivity Testing	<p>It is possible to test sensitivity around a number of the assumptions made above:</p> <p>The figures above assumed that under the Do Nothing, 50% of EN12 Right holders would activate their EN12 Right. However, if 100% of EN12 Right holders activated their EN12 Right, the project cost benefit ratio would decrease to 0.4:1 (societal cost benefit ratio).</p> <p>Under the Intervention, the Council paid an inflated rate for the 9 properties. If the Council had only paid for the EN12 Right, it is estimated that project spend would have been 42% lower. Under this scenario (and assuming 50% of EN12 rights are activated under the 'Do Nothing'), the societal cost benefit ratio would remain unchanged, but in the event that the wider intervention was worthwhile, the public cost benefit cost ratio would be improved. However, the Pathfinder believes that if lower prices were offered, there would have been a significant risk of no offers being accepted at all.</p>	

Other Impacts (colour coding denotes largely positive, neutral or negative impact)	PV Blight Effects	It is assumed that if left to 'fail', the 9 properties would deteriorate in condition, having a negative impact on the surrounding area, both visually and in terms of house prices	In ensuring the demolition of the 9 properties expected to 'fail', the project would ensure that blight relating to these properties does not become an issue. By collectivising the EN12 rights under the council, the project would also ensure that any new development is high quality in design and responds to existing policy, lessening risk of future blight
	Impact on Wider Cohesion / Regeneration	It is likely that the 'do nothing' would have a detrimental impact on wider cohesion / regeneration as the lost properties would not necessarily be replaced in the short term	It is likely that the project has a positive impact in terms of cohesion / regeneration – especially the case given the project would ensure that the replacement properties respond to local policy objectives.
	Impact on Local Amenities	It is possible that the individual property owners would chose not to activate their EN12 right in the short term. This could potentially negatively impact upon local amenities.	The project would ensure that the properties are replaced in the local area thus maintaining demand for local amenities
Overall Comments		The 'do nothing' scenario would result in a number of negative impacts which it is not possible to quantify.	The overall cost benefit of the project is likely to be higher, given the presence of a number of benefits which it is not possible to quantify - including reducing blight effects, and ensuring that demand for local amenities is sustained
<p>Assumptions – To estimate the annual value of the existing property under the do nothing, a yield of 3.5% (the accepted social preference rate) has been applied to the property value. For the 'do nothing' it has been assumed that the EN12 holders would replace their lost property with a new property of the same value.</p> <p>A detailed technical note which explains the key assumptions and methodology in full is included in the Appendices.</p> <p>NOTE 1 – The public benefit cost ratio is negative. However, given that the societal cost benefit ratio is below 1:1, this is not deemed to be relevant</p> <p>NOTE 2 – All figures rounded</p> <p>NOTE 3 – Societal Costs take into account all costs associated with the intervention (excluding costs associated with acquisition of at-risk property). Public Sector Costs take into account only those costs borne by the public purse (including costs such as property acquisition)</p>			

Table P2: Value for money assessment of the Trimingham Village Hall relocation.

Do Nothing	Pathfinder Project
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Description		Under the 'Do Nothing', it is presumed that the current 'Pilgrim Hall would fail within 20 years	The project involves the provision of a new village hall for the community.	
Costs	PV Societal Costs	-	£292,500 (A)	
	PV Public Sector Costs	-	£270,000 (B)	
Assets	No. of Properties <i>(source: Pathfinder)</i>	1 existing, 0 after fail in 20 years(C)	1 (D)	
Monetary Benefits	Estimated Property Benefits (see technical note in Appendices)	£154,200 (E)	£433,800 (F)	
	PV of Benefits <i>(source: Regeneris calculation)</i>	£279,600 (G)		
	PV of Benefits (net of costs)	Net of Societal Costs	-£12,900 (G-A)	
	Cost Benefit Ratio	Societal CBA	1.0:1 (G/A)	
		Public CBA	NEGATIVE	
	Cost per Property (unit cost)	Societal Cost	£292,500 (A/D)	
Public Cost		£270,000 (B/D)		
Other Impacts (colour coding denotes largely positive, neutral or negative impact)	PV Blight Effects	Given the high quality nature of the Pilgrim Hall and the plans to utilise it in the period up to 'fail', there are no blight issues associated with the 'do nothing'	The impact of the project in terms of reducing / increasing blight would be relatively neutral	
	Impact on Wider Cohesion / Regeneration	Under the 'do nothing', the village of Trimmingham would eventually be left without a village hall - an important community asset	The project ensure the replacement of the Trimmingham village hall and as such has a strong positive cohesion impact going forward	
	Impact on Local Amenities	As above	As above	
Overall Comments		The 'do nothing' scenario would result in a the eventual loss of an important community asset	The project achieves a net cost benefit of 1.0:1. However, this does not recognise the presence of strong cohesion benefits associated with the replacement of a community asset	
Assumptions – It has been assumed that the value of the village hall is £310,000 – the average value of village halls in the UK. To estimate the annual value of the existing property under the do nothing, a yield of 3.5% (the accepted social preference rate) has been applied to the property value. A detailed technical note which explains the key assumptions and methodology in full is included in the Appendices.				
NOTE 1 – All figures rounded				

NOTE 2 – Societal Costs take into account all costs associated with the intervention (excluding costs associated with acquisition of at-risk property). Public Sector Costs take into account only those costs borne by the public purse (including costs such as property acquisition)

Annex Q: Scarborough coastal change pathfinder

Value for money assessment

Table Q1 is reproduced from the in-depth evaluation and summarises the costs and benefits estimated for the proposed rollback of 15 residential properties.

Table Q1: Value for money assessment of the proposed rollback scheme.

		Do Nothing	Pathfinder Project	
Description		The 15 properties under consideration would 'fail' within the next few years. It has been assumed that 50% of property owners would use insurance money to buy replace lost property.	The project involves the provision by the council of land (with infrastructure) on which to build a replacement property using insurance money	
Costs	PV Net Societal Costs	£427,200 (A)	£1.35 million (B)	
	PV Net Public Sector Costs	-	£764,400 (C)	
Assets	No. of Properties <i>(source: Pathfinder)</i>	15 (existing) – expected to fail in two years; assumption that 50% of the total of £1.13 million insurance money is reinvested in property	15 (new) (D)	
Monetary Benefit	Estimated Property Benefits (see technical note in Appendices)	£576,800 (E)	£2.0 million (F)	
	PV of Benefits <i>(source: Regeneris calculation)</i>	£1.45 million (F-E)		
	PV of Benefits (net of costs)	Net of Societal Costs	£100,700 (F-E-B)	
	Cost Benefit Ratio	Societal CBA	1.1:1 ((F-E)/B)	
		Public CBA	0.1:1 ((F-E-B)/C)	
	Cost per Property (unit cost)	Societal Cost	£103,000 (B/D)	
Public Cost		£56,500 (C/D)		
Other Impacts (colour coding)	PV Blight Effects	Given the short timeframe within which the current properties are expected to fail, impact in terms of blight would be minimal.	Given the short timeframe within which the current properties are expected to fail, impact in terms of reducing blight would be minimal.	

denotes largely positive, neutral or negative impact)	Impact on Wider Cohesion / Regeneration	It is likely that the 'do nothing' would have a detrimental impact on wider cohesion / regeneration as the lost properties would not necessarily be replaced and existing community linkages would be lost	The project has strong regenerative potential, facilitating the renewal and improvement of the existing housing stock and environment. In replacing the existing properties, the project would also help to maintain existing community linkages. Significantly, the project will also help to achieve positive social outcomes - helping property owners to achieve a better outcome than would have been possible otherwise
	Impact on Local Amenities	A detrimental impact on wider cohesion / regeneration as lost properties would not necessarily be replaced, thus reducing the local population.	The project would ensure that the properties are replaced in the local area thus maintaining demand for local amenities
Overall Comments		The 'do nothing' scenario would result in a number of negative impacts which it is not possible to quantify.	The overall cost benefit of the project is likely to be higher, given the presence of a number of benefits which it is not possible to quantify - including positive regenerative and social impacts
<p>Assumptions – To estimate the annual value of the existing property under the do nothing, a yield of 3.5% (the accepted social preference rate) has been applied to the property value. For the 'do nothing' it has been assumed that 50% of property owners would use insurance money received to replace property (i.e taking forward 50% of the insurance money).</p> <p>A detailed technical note which explains the key assumptions and methodology in full is included in the Appendices.</p> <p>NOTE 1 – All figures rounded</p> <p>NOTE 2 – Societal Costs take into account all costs associated with the intervention (excluding costs associated with acquisition of at-risk property). Public Sector Costs take into account only those costs borne by the public purse (including costs such as property acquisition)</p>			

Annex R: Tendring coastal change pathfinder project

Value for money assessment

Tables R1 and R2 below are reproduced from the in-depth evaluation and summarise the costs and benefits estimated for the demolition of four properties in Jaywick and the Crag Walk project, respectively.

Table R1: Value for money assessment of the Jaywick removal of properties.

		Do Nothing	Pathfinder Project	
Description		Under the 'Do Nothing', it is presumed that the 4 properties under consideration would 'fail' in 30 years.	The project involves the purchase and demolition of four properties by the council	
Costs	PV Societal Costs	-	£60,000 (A)	
	PV Public Sector Costs	-	£176,000 (B)	
Assets	No. of Properties <i>(source: Pathfinder)</i>	4 (existing), 0 after fail in 30 years (C)	0	
Monetary Benefits <i>(source: Regeneris assumptions and calculation)</i>	Estimated Property Benefits (see technical note in Appendices)	£135,200 (D)	0 (E)	
	PV of Benefits		-£135,200 (F)	
	PV of Benefits (net of costs)	Net of Societal Costs	-£195,200 (F-A)	
	Cost Benefit Ratio	Societal CBA	NEGATIVE FIGURE	
		Public CBA	NEGATIVE FIGURE	
	Cost per Property Demolished (unit cost)	Societal Cost	£15,000 (A/C)	
Public Cost		£44,000 (B/C)		
Other Impacts <i>(colour coding denotes largely positive, neutral or</i>	PV Blight Effects	The quality of the properties is relatively low. It is assumed that if left to 'fail', the properties would receive limited investment and would continue to deteriorate in condition, having a negative visual impact on the surrounding area	By demolishing the four properties, the project will have some positive impact in terms of reducing blight. It should also be noted, however, a larger scale intervention would be necessary to have a substantial impact in terms of reducing blight in the local area.	
	Impact on Wider Cohesion / Regeneration	Under the 'do nothing', the number of properties in Jaywick would be sustained for the next 30 years. However, investment in the properties would be limited and as such,	The project has some regenerative potential, in reducing the number of low quality properties in Jaywick. However, the regenerative impact is limited given the	

negative impact)		impacts on regeneration would be limited.	small scale nature of the intervention and given the fact that the properties have not been replaced.
	Impact on Local Amenities	The 'do nothing' scenario would result in demand for local amenities being sustained over the next 30 years	In reducing the number of properties in the local area, it is likely that the project would have a small negative impact on demand for local amenities
Overall Comments		The 'do nothing' scenario would result in a number of negative impacts which it is not possible to quantify.	As the project does not involve the replacement of property, the project achieves a negative net cost benefit. Whilst the project has some positive impact in terms of reducing blight, the small scale of the project means that this is likely to be limited.
<p>Assumptions – To estimate the annual value of the existing property under the do nothing, a yield of 3.5% (the accepted social preference rate) has been applied to the property value. A detailed technical note which explains the key assumptions and methodology in full is included in the Appendices (NB that due to PPS25 residents are unable to rebuild/build properties in Jaywick)</p> <p>NOTE 1 – All figures rounded</p> <p>NOTE 2 – Societal Costs take into account all costs associated with the intervention (excluding costs associated with acquisition of at-risk property). Public Sector Costs take into account only those costs borne by the public purse (including costs such as property acquisition)</p>			

Table R2: Value for money assessment of Crag Walk project.

		Do Nothing	Pathfinder Project
Description		The Naze Tower, Car Park and Cafe will 'fail' after around 15 years, 20 years and 7 years respectively.	The project involves intervention to slow (and eventually stop) the rate of coastal erosion, thus protecting the assets at risk
Costs	PV Societal Costs	-	£1,307,700 (A)
	PV Public Sector Costs	-	£1,307,700 (B)
Assets	No. of Properties Affected <i>(source: Pathfinder)</i>	3 (existing) – cafe, car park and Naze Tower expected to fail after 7, 20 and 15 years respectively	3 (existing) – protected for 50 years – the projected life of new defence (C)
Monetary Benefits	Estimated Property Benefits (see technical note in Appendices)	Naze Tower - £181,400; Cafe – £21,400; Car Park – £102,000; Total – £304,800 (D)	Naze Tower - £369,400; Cafe – £82,100 Car Park – £168,300; Total – £619,800 (E)
	PV of Benefits	£315,000 (E-D)	

	<i>(source: Regeneris calculation)</i>		
	PV of Benefits (net of costs)	Net of Societal Costs	-£992,700 (E-D-A)
	Cost Benefit Ratio	Societal CBA	0.2:1 ((E-D)/A)
		Public CBA	NOT DEEMED RELEVANT – SEE NOTE 1 BELOW
	Cost per Property (unit cost)	Societal Cost	
		Public Cost	
Other Impacts (colour coding denotes largely positive, neutral or negative impact)	PV Blight Effects	Given the nature of the assets at risk, and their likely continued use up to 'fail' blight is not considered to be an issue	Blight is not considered to be an issue under the 'do nothing' so the additional impact of the project will be limited in this respect
	Impact on Wider Cohesion / Regeneration	It is likely that the 'do nothing' would have a detrimental impact on the local economy due to the loss of tourism assets and facilities (and in turn a decline in visitor numbers). In turn this would likely be detrimental to regeneration efforts	In ensuring that the existing tourism facilities are protected and improved (e.g. through the education boards), it is anticipated that future tourism levels will be increased. This will lead to local economic benefits, and feed into wider regeneration objectives
	Impact on Local Amenities	The 'do nothing' would result in the loss of the physical tourism assets. In the longer term, a decline in tourism would potentially impact upon the demand for local amenities	The project would sustain and potentially enhance visitor numbers, maintaining (and enhancing) demand for local amenities
Overall Comments		The 'do nothing' scenario would result in a number of negative impacts which it is not possible to quantify.	The project achieves a low net cost benefit ratio of 0.2:1. This reflects the relatively high cost of intervention and the design life of the intervention of 50 years (the cost benefit would be stronger if the lasted for a longer time period). However, the overall cost benefit of the project is likely to be stronger, given the presence of a number of benefits which it is not possible to quantify - including the likely positive impacts on tourism numbers
NOTE 1 – The public benefit cost ration is negative. However, given that the societal cost benefit ratio is below 1:1, this is not deemed to be relevant			
NOTE 2 – All figures rounded			
NOTE 3 – Societal Costs take into account all costs associated with the intervention (excluding costs associated with acquisition of at-risk property). Public Sector Costs take into account only those costs borne			

by the public purse (including costs such as property acquisition)

Assumptions – *To estimate the annual value of the 3 assets, a yield of 3.5% (the accepted social preference rate) has been applied to the property value. The design life of the rock revetment is 50 years if maintenance is carried out on a regular basis – therefore the appraisal period has the same timeframe. **A detailed technical note which explains the key assumptions and methodology is included in the Appendices.***

Annex S: Waveney coastal change pathfinder

Further information on the Pathfinder and copies of the various reports and other outputs can be found at: <http://waveney-pathfinder.com/>.

Value for money assessment

Table S1 is reproduced from the in-depth evaluation and summarises the costs and benefits estimated for the proposed rollback of nine properties at Easton Bavents.

Table Q1: Value for money assessment of the proposed rollback scheme at Easton Bavents.

		Do Nothing	Pathfinder Project	
Description		The 9 properties under consideration would 'fail' in an average of 12 years time. It is assumed that none of the 9 properties would not be replaced after failing.	The project involves the rollback of 9 properties. The council pays for the demolition of existing properties, the land for the new properties and various legal and consultation costs.	
Costs	PV Societal Costs	-	£1,289,600 (A)	
	PV Public Sector Costs	-	£213,500 (B)	
Assets	No. of Properties <i>(source: Pathfinder)</i>	9 (existing)	9 (new) (C)	
Monetary Benefits	Estimated Property Benefits (see technical note in Appendices)	£1.14 million (assuming average life of property of 5 years) (D)	£2.84 million (E)	
	PV of Benefits <i>(source: Regeneris calculation)</i>	£1.7 million (E-D)		
	PV of Benefits (net of costs)	£410,600 (E-D-A)		
	Cost Benefit Ratio	Societal CBA	1.3:1 ((E-D)/A)	
		Public CBA	1.9:1 ((E-D-A)/B)	
	Cost per Property (unit cost)	Societal Cost	£143,300 (A/C)	
		Public Cost	£23,700 (B/C)	
Sensitivity Testing		As part of the Intervention, the council has paid for the land costs for the new properties. However, It is anticipated that some or all of this cost (£108,000) can be recouped at a later stage. If – 50% of the land costs was recouped, the societal cost benefit ratio would increase to 1.4:1 and the public sector cost benefit ration would increase to 2.7:1		

		100% of the land costs were recouped, the societal cost benefit ratio would increase to 1.4:1 and the public sector cost benefit ration would increase to 4.1:1	
Other Impacts (colour coding denotes largely positive, neutral or negative impact)	PV Blight Effects	Given the timescales involved, it is assumed that if left to 'fail', the properties would receive limited investment and would deteriorate in condition, having a negative visual impact on the surrounding area	It is anticipated that the project would have some positive impact in terms of reducing blight.
	Impact on Wider Cohesion / Regeneration	It is likely that the 'do nothing' would have a detrimental impact on wider cohesion / regeneration as the lost properties would not necessarily be replaced and existing community linkages would be lost	The project has strong regenerative potential, facilitating the renewal and improvement of the existing housing stock and environment. In replacing the existing properties, the project would also help to maintain existing community linkages. The project will also help to achieve positive social outcomes - helping property owners to achieve a better outcome than would have been possible otherwise
	Impact on Local Amenities	A detrimental impact on wider cohesion / regeneration as lost properties would not necessarily be replaced, thus reducing the local population.	The project would ensure that the properties are replaced in the local area thus maintaining demand for local amenities
Overall Comments		The 'do nothing' scenario would result in a number of negative impacts which it is not possible to quantify.	A relatively strong cost benefit. Strong performance here reflects the low cost of the intervention – the council did not purchase the existing properties as part of the intervention. The overall cost benefit of the project is likely to be higher, given the presence of a number of benefits which it is not possible to quantify - including positive regenerative and social impacts
NOTE 1 – All figures rounded			
NOTE 2 – Societal Costs take into account all costs associated with the intervention (excluding costs associated with acquisition of at-risk property). Public Sector Costs take into account only those costs borne by the public purse (including costs such as property acquisition)			
Assumptions – To estimate the annual value of the property under the do nothing, a yield of 3.5% (the accepted social preference rate) has been applied to the property value.			
A detailed technical note which explains the key assumptions and methodology is included in the Appendices.			

Glossary of common terms

Accretion – the gradual extension of land by natural forces, as in the addition of sand to a beach by ocean currents, or the extension of a floodplain through the deposition of sediments by repeated flooding.

Adaptation – the process of becoming adjusted to new conditions, in a way that makes individuals, communities or systems better suited to their environment.

Benefit to Cost Ratio (BCR) – measure of the benefits and costs associated with projects and, hence, their value for money. In terms of Government funding for coastal defence projects, this will only be provided for projects where there is an overall positive BCR.

Buy and lease back – the purchase of a property at risk due to coastal change by a local authority. The property is then either rented by the previous owner or an unrelated tenant or used as a holiday let.

Coastal change – physical changes to the shoreline, i.e. erosion, coastal landslip, permanent inundation and coastal accretion.

Coastal Change Management Area (CCMA) – an area identified by a local planning authority under spatial planning policy that is likely to be affected by coastal change. The authority is required to set out the type of development that will be appropriate within the CCMA and allocate land within it for appropriate development. Where development and infrastructure needs to be relocated from within the CCMA, the local planning authority should make provision for sufficient, suitable land outside those areas, e.g. through rollback.

Coastal erosion – a natural process that occurs as a result of waves, tides or currents striking the shore. Sediment or rocks are washed away (but can be a sediment source for elsewhere), and the coastline changes shape as a result.

Coastal flooding – the inundation of land areas along the coast that is caused by sea waters over and above normal tidal action.

Coastal landslip – downhill movement of unstable earth, clay, rock etc often following prolonged heavy rain or coastal erosion.

Community – defined by the range of people, businesses, services and assets (including both natural and historic assets) which come together in a particular geographical place.

Community Infrastructure Levy (CIL) – a levy that local authorities can choose to charge on new developments in their area. The money obtained from new development planning applications can then be used to fund infrastructure that the council, local community and neighbourhoods have identified as being needed.

Demolition – the removal of an unsafe property as set out in the 1985 Housing Act.

Integrated Coastal Zone Management (ICZM) – adopting a joined-up and holistic approach towards the many different interests in coastal areas, both on the land and at

sea, to harmonise the different policies and decision-making structures and bring together coastal stakeholders to take concerted action towards achieving common goals.

Local Development Framework (LDF) – a local planning strategy that all local authorities in England are required to produce under the Planning and Compulsory Purchase Act 2004.

Planning gain – refers primarily to the increase in the value of land which results from planning permission being granted for that land. This increase in land value mainly accrues to the owner of the land, but a levy or tax may be applied to divert some of the planning gain to the public sector. In England and Wales, such arrangements are currently negotiated between the developer and the Council, and take place under the terms of Section 106.

Regional Spatial Strategies (RSSs) – these provided regional level planning frameworks for the English regions outside London. Their revocation was announced by the Government in July 2010.

Rollback - the physical movement of assets inland away from the threat posed by coastal change.

Shoreline Management Plans (SMPs) - high level documents which form an important element of the strategy for flood and coastal erosion risk management, provide a long term vision for a sustainable coast where future decisions can be taken with confidence using the best available evidence and effective engagement with local communities. There are four main approaches to the management of coastal erosion:

- ***Holding the existing defence line*** by maintaining or changing the standard of protection. This policy should cover those situations where work or operations are carried out to improve or maintain the standard of protection provided by the existing defence line.
- ***Advancing the existing defence line*** by building new defences on the seaward side of the original defences. Using this policy should be limited to those policy units where significant land reclamation is considered.
- ***Managed realignment*** – moving the line of defence backwards or forwards, with management to control or limit movement (such as reducing erosion or building new defences on the landward side of the original defences).
- ***No active intervention*** – where there is no investment in coastal defences or operations thus allowing natural define the position of the shoreline.

Spatial planning – refers to the methods used to balance demands for development with the need to protect the environment, and to achieve social and economic objective.