

Coastal Pathfinder Evaluation: An Assessment of the Five Largest Pathfinder Projects

A Final Report by Regeneris Consulting

November 2011

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Executive Summary

Introduction

Regeneris Consulting was commissioned in August 2011 to carry out an evaluation of Defra's Coastal Change Pathfinder Programme, focusing on the five largest pathfinder projects. These include: North Norfolk (£3m); Waveney (£1.53m); East Riding (£1.2m); Scarborough (£1m); and, Tendring (£1m). The programme was launched to road test new and innovative approaches to planning for and managing coastal change and fifteen local authorities received nearly £11m under the programme which ran between December 2009 and March 2011 (though some pathfinders continue to deliver their projects).

There are a number of objectives for this work which includes the following:

- To report on the outcomes achieved, including the real net additional benefits provided to communities affected by coastal change;
- To 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
- To assess the extent to which Pathfinder Projects could be replicated in other coastal adaptation settings in England;
- To assess situations where either value for money (VfM) and/or the possibility of replication were not achieved and advise on any lessons for future adaptation initiatives;
- To provide specific advice on and assessment of the performance and potential development of "Rollback" and "Buy and Lease Back"¹ schemes, which were trialled by some of the Pathfinder Authorities.
- To 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.

This detailed evaluation will inform a wider evaluation which is looking at all 15 pathfinder projects and being carried out by Defra.

This study has been informed by a number of stages of work which includes: a review of background information; face to face consultations with key individuals involved in the pathfinder project; and, a value for money assessment.

Context and Value for Money Methodology

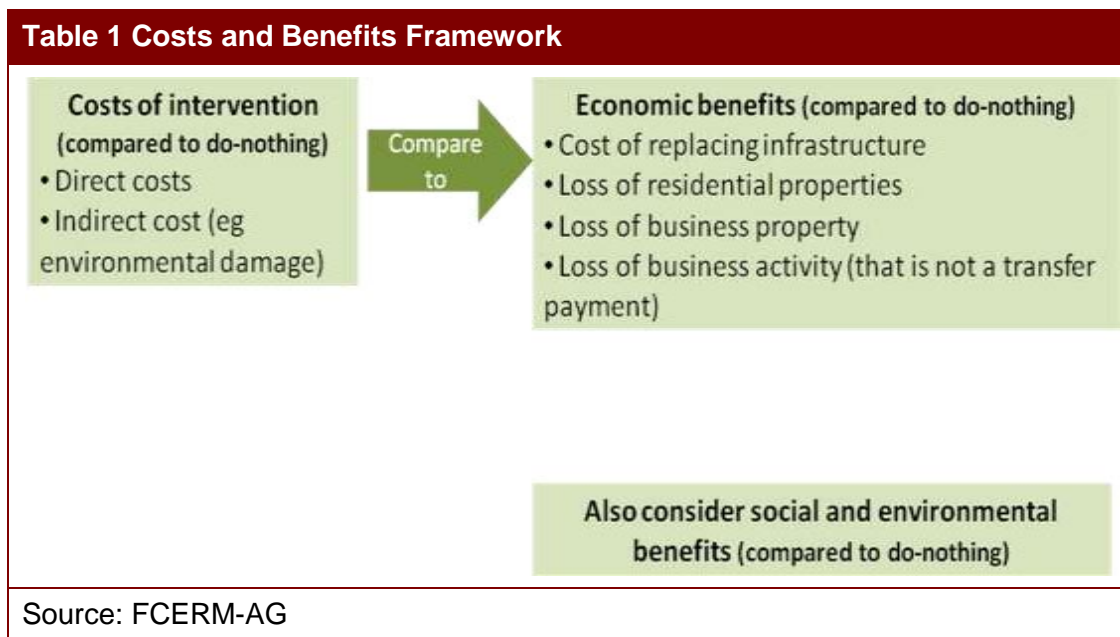
Defra provides funding for flood and coastal erosion risk management, the majority of which is distributed by the Environment Agency as flood defence grant in aid. The direction of policy

¹ *Rollback is the physical movement of assets further 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 the local authority. The property would then either be rented by the previous owner or an unrelated tenant, or be used as a holiday let.*

towards funding support is that Defra will provide some but not necessarily all the funding for projects. It will however only fund projects where there is an overall positive benefit cost ratio.

Funding is aligned to achieving the four outcomes which Defra is seeking to support. The most relevant of which, for this project, are: economic benefits (Outcome Measure 1) and households better protected against coastal erosion (Outcome Measure 3).

Defra and the Environment Agency have developed extremely detailed guidance on how to assess the value for money for all proposed projects to tackle flooding or coastal erosion (FCERM-AG)². This follows the good practice principles in the HM Treasury Green Book. Clearly, the guidance is highly relevant to any assessment of the projects developed by Pathfinders. In summary, the approach and scope of costs and benefits covered by FCERM-AG are as follows:



The framework we have adopted draws on FCERM-AG and focuses on (i) a society wide benefit cost analysis (net benefits and costs for all parties) and (ii) the benefits and costs to the public purse. This consists of the following principles:

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. These are outlined in detail in the VfM assessment;
- **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.

² Flood and Coastal Erosion Risk Management appraisal guidance (FCERM-AG), Environment Agency, March 2010

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 – see above.
- **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.

Other benefits which we sought to quantify but, in the event, were not possible to estimate include the following:

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

In all cases we have tried to establish the relevant costs and benefits from each project and for those benefits which cannot be quantified, we have undertaken a qualitative assessment.

Summary Assessment of Pathfinder Projects

The pathfinder funding has supported a large number and a range of projects which are summarised below. It is important to recognise that only 32% of pathfinder funding has been spent by the five largest pathfinder projects to date. There is therefore a risk that the pathfinder projects will not deliver or that they will spend the funding on activities other than adaptation to coastal change.

Table 2 Summary of Projects

	Tendring (£1m)	Scarborough (£1m)	East Riding (£1.2m)	Waveney (£1.5m)	North Norfolk (£3m)
Rollback and Buy and Lease Back projects (further information is provided below)	Buy and demolish 4 properties at Jaywick Considered buy and lease back but no RSL interested	Work to relocate 9 properties at Knipe Point. Through provision of a serviced site. Households then use insurance payment to fund development.	Rollback review and links to the LDF to consider how business properties can be assisted Agreed approach for prioritising communities at risk A relocation and adaptation package to support communities at risk and provide them with an incentive to move Also considered buy and lease back	Rollback of 9 households at Easton Bavents. Council purchases a site and households fund property and infrastructure.	Relocation of 9 properties at risk. Council provides financial contribution to households to move (to any location), purchases a site for rollback and uses planning policy to realise an economic value which part funds process. Consideration of buy and lease back options Business plan to support rollback of Manor Caravan Park Rollback of Trimmingham Village Hall
Amenity / Tourism / Business Projects	Brooklands Gardens – derelict land affected by coastal erosion bought back into use Crag Walk, 150m rock revetment allows visitors to view affects of coastal erosion and provided protection to some properties (Naze Tower, Cafe, Car Park)		Business Package under small grants scheme	A range of projects to increase the vitality of Corton as a destination for residents and visitors e.g.: Improved access to beach CCTV Toilets, kiosk/cafe at beach Cliff top erosion study and improvements Nature Walks and interpretation at Corton Woods	Cliff top enhancement project at Happisburgh (car park, toilets, access ramp, removal of beach debris) Coastal Heritage Project at Happisburgh Business Support projects including Tourism Audit of East Norfolk Coast Realignment of Marams Footpath Removal of beach debris at Beeston Regis
Community Engagement and Partnership Working	Community Development Worker to work with residents to raise awareness of coastal erosion		Partnership working and group structures to put in place support structures for those at risk of coastal erosion		

Rollback

There are a number of key findings resulting from our analysis and these are explored in further detail below:

Mechanisms

Key issues for rollback include the **mechanism for funding** this and who should pay: innovative approaches are required to implement rollback in practice such as North Norfolk's EN12 policy. 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. If successful (it is still early days), North Norfolk's EN12 policy could be replicated elsewhere to facilitate rollback. This approach does however depend upon being able to secure sufficient values and this may not be appropriate to other locations such as East Riding or Tendring where land values are lower (although it is worth recognising that property values will also be lower).

The issue of **compensation** and whether the pathfinder projects have in effect been compensating individuals for the loss of their home is a complex one. The government has always taken the position that it will not compensate individuals for the loss of their property due to coastal erosion. Compensation can refer to situations where households have received financial support which is above the at risk value of their property and as such it is possible 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" has been awarded to these households. However, the argument here is that the local authority wanted the households to move quickly and so in this sense they are in a weak bargaining position and will need to pay more. A programme operating over longer timescales might be able to avoid paying compensation to the same extent.

It is also possible that financial support at the 'at risk value' amounts to compensation if this is not recovered elsewhere. In Tendring for example, properties which are at risk of coastal erosion have been bought through the pathfinder project (though the key driver for the scheme was to tackle regeneration) and this could amount to compensation. 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.

The East Riding case is not as straightforward. In this case, individuals are receiving an incentive to relocate. They 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 unfair. However, again, the counter-argument is that this could be justified if it does assist with relocation away from the coast in a more planned and orderly manner.

Benefits

As stated earlier, there are a number of reasons for supporting rollback since it is believed that this could lead to a number of benefits which includes: community cohesion, local services being sustained (which can support economic development or regeneration), and maintaining the housing stock in a particular area. These issues are discussed below in relation to the pathfinder projects.

Keeping the community together in one location through a managed process has typically been seen as a benefit of rollback approaches to secure **community cohesion**³ (referring to the strong and positive relationships which exist amongst the community, it is widely held that this can result in positive benefits for society as a whole). Only one of the pathfinder projects (Waveney) however has sought to keep a group of people together in the sense of a community. Scarborough may also try to keep the Knipe Point community together however due to difficulties in agreeing a new location, this may not happen in practice. On the whole, pathfinder projects found that the community itself did not have an overwhelming desire to remain together and instead their priority was on finding the optimal solution. Generally this is the best solution financially or in terms of meeting their 'wish list' i.e. in terms of finding the best site, rather than to secure community cohesion itself. In a number of cases (e.g. Scarborough), this is due to the fact that a number of tenants are second home owners and as such the community ties do not appear to have been strong. Interestingly North Norfolk's approach allowed individuals to use the money received to locate where they wish but they were still able to maintain the size of the community through the provision of a site nearby which can deliver a similar number of homes to those lost. Our view is that community cohesion should not be an overriding factor in informing a preferred approach and indeed a desire to keep a community together has led to difficulties in some cases (e.g. Scarborough). This suggests that the assumption that rollback projects should seek to keep individuals together in the same location should be reviewed.

There are economic benefits associated with **maintaining the size of the settlement**, which can sustain local services and contribute to the **vitality of a local area**. However, only North Norfolk has sought to maintain the size of the existing settlement in or close to the locality affected by coastal erosion through the pathfinder programme. Other projects appeared to focus on much smaller communities with little existing services and as such it may not have been feasible or desirable to achieve this objective. Furthermore, in these cases planning policy is being used to support housing growth across the local authority as a whole. Clearly, the size of the existing settlement in areas affected by coastal erosion together with the existing provision of services as well as the economic prosperity of the area, are key considerations in understanding the extent to which there are benefits in maintaining the size of the existing settlement.

Sustaining local services can have positive benefits in terms of supporting economic development or regeneration. Only one of the pathfinder locations (Jaywick in Tendring) is seriously in need of regeneration however, being the most deprived locality in the country. Whilst Happisburgh is not significantly deprived, it could be argued that maintaining the size of the settlement will help to prevent any future decline in the economic prosperity of the area which could occur, and also address issues around access to services (a key indicator of deprivation) which affects a number of smaller more remote settlements.

Three of the pathfinder projects have sought to **replace properties**, of which Scarborough and Waveney have sought to do this elsewhere; North Norfolk has replaced properties within the same community. Whilst there are benefits in terms of maintaining housing stock, this issue needs to be considered within the wider context. There is already a significant shortage of housing in the UK, and the relatively small number of properties lost to erosion is unlikely to make a significant impact compared to other larger influences (e.g. migration). Furthermore, local authorities can take account of the reduction in the number of properties due to coastal

³ NB there are different definitions of community cohesion. The Community Cohesion Delivery Framework (2009) by DCLG refers to three key ways of living together in a which reflects community cohesion including, including a shared future vision and sense of belonging, focus on commonalities (whilst recognising differences) and strong and positive relationships. The latter is most important in this context).

erosion and replacement of these through the LDF process. However, the Pathfinders that have sought to replace properties have developed useful models that could be refined and applied elsewhere in future.

Barriers

Key **difficulties** in implementing rollback appear to be the time taken to gain consensus on a preferred way forward (this was particularly the case in Scarborough) and difficulties in finding suitable sites. These issues need to be tackled through other ways such as planning policy. Funding rollback (as identified above) is also an issue.

“Buy and Lease Back”

Buy and lease back refers to the purchase of property at risk of coastal change by the local authority (or another public sector body such as a Registered Social Landlord). The property would then either be rented by the previous owner, an unrelated tenant or be used as a holiday let. As demonstrated in the table above, a number of the pathfinder projects have sought to consider and implement buy and lease back schemes, however none were successful in practice.

The key **barriers** to Buy and Lease Back appear to be the cost of bringing properties up to a standard which meets the decent homes standard and identifying parties able or prepared to manage the properties since there are a number of risks to the council if they were to manage the properties. This appears to have led to buy and lease back being unfeasible to implement. However, this is not to say that this approach should be ruled out entirely as it may be workable in certain locations where housing at risk is more suitable to being rented out and managed by for example a Registered Social Landlord. If there was demand for buy and lease back, government could consider allowing greater flexibility as regards the decent homes standard and other regulations for local authorities in areas affected by coastal adaptation issues.

Other approaches could be considered such as the potential for the private sector to manage the properties (which would reduce burdens such as achieving the decent homes standard and the costs associated with this). In terms of private sector involvement, it may be difficult for the local authorities to outsource management of properties to the private sector since it may be difficult to retain control of the properties and for them to be too prescriptive. However in theory the private sector could carry out buy and lease back without public sector involvement. We are not aware of this happening, though it is possible that individual properties at risk have been purchased for use as holiday let or for long term rental.

Value for Money Assessment

A value for money assessment has been carried out for key projects supported through the Pathfinder programme. Due to the limited time available for completion of the report and difficulties in accessing information from pathfinder projects (largely as this has not been collected or because the projects are still at an early stage with only 32% of pathfinder funding spent) it has not been possible to carry out value for money calculations for all projects. Where possible, we have tried to calculate the value for money of rollback schemes.

The key indicators are shown below and further information is provided in the sections which follow. The key points to note are:

- The rollback project at Waveney performs better than all other projects (with a Public BCR of 1.9:1) and it may be possible that the Waveney scheme can be replicated at other locations.

- A number of the schemes have a negative benefit cost ratio⁴ (East Riding, North Norfolk and Tendring schemes). It is worth noting that the wider benefits associated with these programmes (e.g. regeneration benefits) have not been assessed due to the fact that information has not been collected. However, due to the limited number of households supported (due to the timescales and other factors) we would envisage that these benefits are fairly low.
- The public BCR for Happisburgh is negative. Nevertheless, it is recognised that there are some strengths to this approach and that it may be possible to improve the benefit cost ratio, for example by reducing costs or increasing the return to the council which would count as an additional benefit.

It is important to reiterate that there are a number of issues with assessing the value for money of these schemes (as set out in Section 2). The key issues which need to be reiterated are a) the difficulties in predicting what the do nothing scenario might be and b) 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 eventual benefits are not clear at this stage.

⁴ Note that because the numerator of the public “BCR” is social Net Present Value, a project which is not worthwhile for society as a whole (NPV<0) will automatically lead to a public BCR which is also negative. The use of NPV as a numerator rather than gross benefit (as for traditional coastal defence activities) is necessary because of the presence of private costs in the typical benefit-cost balance for Pathfinder activities. To compare a Pathfinder “BCR” with a BCR for a traditional (fully publically-funded) coastal defence scheme, subtract 1 from the BCR for the latter.

Table 3 Value for Money Assessment

	North Norfolk		Scarborough	Tendring		Waveney	East Riding
	Happisburgh "Rollback"	Trimingham Village Hall	Scarborough "Rollback"	Jaywick "Rollback"	Crag Walk	Easton Bavents rollback	Enhanced Assistance
Societal Benefit Cost Ratio (=Societal Benefits / Societal Costs)	0.7:1	1.0:1	1.1:1	Negative	0.2:1	1.3:1	Negative
Public "Benefit Cost Ratio" (= Societal NPV* / Public costs)	Negative	Negative	0.1:1	Negative	Negative	1.9:1	Negative
Societal cost per property replaced or demolished	£132,300	£292,500	£103,000	£15,000	n/a	£143,300	£10,100
Public cost per property replaced or demolished	£58,100	£270,000	£56,500	£44,000	n/a	£23,700	£10,100
Blight Effects							
Impact on wider cohesion/regeneration							
Impact on local amenities							

Source: Regeneris Consulting, drawing upon information provided by each of the Pathfinder areas

Key: impact positive (green), neutral (amber), negative (red)

* Where Societal NPV = Societal Benefits minus Societal Costs.

Key Lessons

What Worked Well

- **Pathfinder projects allowed new approaches** to be trialled to tackle coastal erosion.
- **Partnerships:** pathfinder areas, particularly East Riding have benefited from strong partnerships incorporating council services such as planning, building control and housing.
- **Use of planning policy:** has been found to support adaptation e.g. through North Norfolk's EN12 policy, Waveney's approach which has clarified planning rights for home owners at risk of coastal erosion or East Riding's approach which looks at removing the residential status of properties.
- **Rollback:** significant research has been prepared to inform the pathfinder project which can be used to support other areas thinking of implementing rollback.
- **Monitoring of those at risk and consistent definition:** East Riding has developed a consistent definition of households at imminent risk which allows prioritisation of support.
- **Community and business benefits of adaptation:** clifftop enhancements at Happisburgh and improvements at Corton may help communities to adapt to coastal erosion and lead to wider benefits such as improved confidence and increased levels of tourism.
- **Increased understanding and awareness of risk** of coastal erosion: this has been achieved through a co-ordinated and cross-authority approach to coastal erosion (East Riding) and through educational projects (e.g. Crag Walk which also provides defence).

What Worked Less Well

- **Timescales:** tight timescales for implementing programmes which have impacted on potential to deliver and test new approaches.
- **'Ring fencing' of funding:** some pathfinders have indicated that funding should have been ringfenced to ensure that it is used to support coastal erosion issues.
- **Market failure:** it is often not clear what the market failure rationale is behind interventions and objectives. For example, in Scarborough the majority of beneficiaries are second home owners which will receive insurance money for the loss of their home in any case (although this will cover only the rebuild cost, not the full cost of purchasing a replacement property).

- **Additionality:** in a number of cases, pathfinder projects have delivered activities which would have occurred in any case. For example in Tendring other funding may have been used to support buy-to-demolish projects.
- **Eligibility:** programmes have not always set out clear eligibility criteria or means testing for beneficiaries (e.g. second home owners).
- **Compensation:** it is possible that some approaches to rollback have been compensatory. This is discussed further in the main section of the report.
- **Demolition of properties:** pathfinder areas do not appear to have accessed separate funding available to support the cost of demolition (though a number of these were not eligible). The cost of demolition is reported to vary considerably.
- **Lack of available sites:** the pathfinder programmes have highlighted the difficulties in finding suitable sites for rollback (e.g. Scarborough and in Happisburgh, difficulties in finding a suitable site for business use).
- **Buy and Lease back:** has been found not to work well in a number of locations largely due to the sub-standard properties (and the costs of bringing these up to standard) and who would manage the process.
- **Lack of guidance on legislation:** the pathfinder projects have in some cases (e.g. Tendring) helped local authority areas to explore what is possible within current legislation. However, this has demonstrated that there is a requirement for greater levels of guidance on how legislation can be used to support coastal adaptation activity.

Rollback and Buy and Lease Back

Whilst none of the Pathfinder areas have fully implemented a rollback programme, good progress has been made in a number of areas, developing workable models which could be refined and applied elsewhere. This appears to work well for businesses (where they can fund rollback or obtain a loan). The Waveney rollback scheme performs better than other projects in terms of its benefit cost ratio (public BCR 1.9:1). This provides a model which could be replicated elsewhere. However, this model relies on householders affected by erosion having the means to fund rebuilding of their properties elsewhere (and it is too early to say whether this will work in practice). None of the projects suggested that rollback schemes could be implemented without some subsidy from the government. However, North Norfolk's 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). This approach may not be appropriate in other areas where property/land values are low (for example in Jaywick). The North Norfolk model also demonstrated how a rollback scheme could be integrated with other adaptation projects to bring benefits to the wider community.

To **conclude**, there are elements of good practice within all of the projects being trialled and combinations or aspects of these (for example the Waveney and North Norfolk approaches) may deliver models which add value and could be replicated on a larger scale.

Buy and lease back does not appear to work in practice due to the costs involved and the risks to the local authority. The government could carry out some further work to investigate whether this is feasible and whether legislation (e.g. housing regulations) may 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. It may be that buy and lease back could work in other locations where RSLs are willing to manage the properties. However, our conclusion is that buy and lease back does not appear to 'stack up' financially and as such may not be an appropriate mechanism to tackle issues associated with coastal erosion.

Other Lessons

Our research has pointed to a number of other lessons which can inform delivery of future programmes. These are set out throughout the report and summarised below.

- There is a need to **plan ahead** to ensure that a more planned and co-ordinated approach is being taken 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 policy using monitoring information on the level of land required. This is in response to difficulties identified in finding suitable sites. It is likely that this may be easier for residential properties rather than business premises (due to their specific requirements), though 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 able to inform prospective buyers in a way which is informative and effective. Local authorities also have a role to ensure that they have up to date and accurate information on coastal erosion and the impacts on properties.
- 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. This would help local authorities to use existing mechanisms to support adaptation since it is felt that the potential exists but people do not know how to use these mechanisms. This could be provided by government or under the new localism agenda, pathfinder local authorities themselves could do this (perhaps in partnership with government). As

identified above, there is a particular need to consider how **planning policy** can be used to support coastal adaptation. East Riding's attempt to remove the residential status of properties and North Norfolk's rollback policy are two examples of this.

- Due to the comments made by a number of Pathfinder areas, the government may need to consider the assistance with **demolition costs** provided which appears to be low and not very flexible. This was reported by a number of the pathfinders including East Riding and Tendring. As a result of the pathfinder projects, these areas now have greater levels of evidence on the cost of demolition and East Riding is preparing a report which will set out further information on the cost of demolition.
- A **partnership approach** should be encouraged in tackling coastal erosion. For example, the East Riding Coastal Officers Working Group could be replicated across locations at risk. Our work has suggested that there are benefits of ensuring a joined up approach where key council services such as planning, housing and building control work together to tackle issues associated with coastal erosion. This has not worked as well as it could in some areas (e.g. Scarborough).
- The approach to **monitoring and assessing risk** and targeting support at those within the most imminent risk category could also be replicated (East Riding). This will ensure that support is targeted where it is needed most.
- Finally, the Pathfinder programme points to the need to set a clear **market failure** rationale at the start of a project supported by government funding and with SMART objectives. There is a need to set out clear impacts and outcomes which can be used to measure the success of the programme and to monitor the delivery of programmes against these on an ongoing basis and at the end of the project.
- Linked to this, there is also a need to specify what the intended community and regeneration benefits and to consider whether and how these can be captured and appraised.

Much of the money allocated to the five largest pathfinder projects has not yet been spent; therefore it is too early to assess the benefits.

1. Introduction

Introduction

Regeneris Consulting was commissioned in August 2011 to carry out an evaluation of Defra's Coastal Change Pathfinder Programme, focusing on the five largest Pathfinder projects. These were the following:

- Tendring (£1m)
- Scarborough (£1m)
- East Riding (£1.2m)
- Waveney (£1.53m)
- North Norfolk (£3m)

The Programme which began in December 2009 was launched to road test new and innovative approaches to planning for and managing Coastal Change⁵. The programme aimed to improve understanding of how coastal communities can adapt to coastal change and the costs and benefits of these different approaches. It also aimed to provide practical lessons and examples which can be shared with other practitioners focusing largely on community adaptation planning and engagement and delivery of adaptive solutions. Overall, fifteen local authorities received nearly £11m under the programme which was due to run until March 2011.

Study Objectives

There are six specific objectives for this work as set out within the study brief:

- To report on the outcomes achieved, including the real net additional benefits provided to communities affected by coastal change;
- To 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;
- To assess the extent to which Pathfinder Projects could be replicated in other coastal adaptation settings in England;
- To 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;

⁵ The programme was initially announced in Defra's Consultation on Coastal Change Policy, June 2009

- To provide specific advice on and assessment of the performance and potential development of “Rollback” and “Buy and Lease Back”⁶ schemes which were trialled by some of the Pathfinder Authorities;
- To 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.

This detailed evaluation will inform a wider evaluation which is looking at all 15 Pathfinder projects and is being carried out by Defra.

Overall Methodology

This study has been informed by a number of stages of work which include the following:

- **Review of background information:** we have reviewed information provided by Defra and each of the Pathfinder projects which include, the original Pathfinder bid, a high level evaluation report prepared by each of the Pathfinder areas, progress reports submitted during the delivery of the project and research studies carried out during the delivery of the project.
- **Consultations:** we have carried out one to one consultations with key individuals involved in the Pathfinder programme as well as stakeholders. Where necessary we have carried out additional telephone consultations to gather further information.

Value for Money Assessment: we have carried out an assessment of the value for money of interventions drawing on information on the costs and benefits associated with these. The next section sets out our approach to this.

Report Structure

The remainder of the report is set out under the following headings:

- Section 2: Context and Value for Money (VfM) Assessment
- Section 3: Summary Assessment of Pathfinders
- Section 4: Tending Coastal Change Pathfinder Project
- Section 5: Scarborough Coastal Change Pathfinder Project

⁶ *Rollback is the physical movement of assets further 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 the local authority. The property would then either be rented by the previous owner or an unrelated tenant, or be used as a holiday let.*

- Section 6: East Riding Coastal Change Pathfinder Project
- Section 7: Waveney Coastal Change Pathfinder Project
- Section 8: North Norfolk Coastal Change Pathfinder Project.

2. Context and VfM Methodology

Context for the Pathfinders

Policy Context

Defra has national policy responsibility for flood and coastal erosion risk management. England faces a significant and growing challenge from coastal erosion, especially on its eastern coast. 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 vulnerable⁷.

The way in which the coastline is managed has been changing:

- A 2nd generation of Shoreline Management Plans (SMPs) has been in the process of development since the early 2000s. Coastal groups, comprising members from local authorities and other relevant organisations (such as Natural England and the Environment Agency) have formed partnerships to look at managing the coast from a more strategic perspective. Shoreline Management Plans (SMPs) assess the risks from coastal flooding and erosion and work out how to manage these risks over the short, medium and long term.
- These SMPs are intended to identify the approach to dealing with coastal erosion: whether there is to be investment in sea defences or “nature is allowed to take its course”, in which case there needs to be a managed process of adaptation.
- In parallel the Environment Agency has been carrying out mapping of coastal area to identify more clearly the degree of coastal erosion risk.
- Work to tackle coastal erosion (and also the risk of sea flooding) is carried out by local councils in collaboration with the Environment Agency (collectively the coastal erosion risk management authorities). Local authorities also have powers to protect land against coastal erosion and to control third party activities on the coast.

Government policy states that it is committed to “maintaining sustainable coastal communities” where coastal change happens. This is described as ensuring that “all aspects of the affected communities [are] supported to help ensure they remain attractive places for people to live in and visit, and support thriving local economies”⁸.

Defra has been developing policy towards coastal change (both sea flooding and coastal erosion). The consultation on coastal change policy in 2009 led to the

⁷ Appraisal of flood and coastal erosion risk management: A Defra policy statement, June 2009

⁸ Adapting to Coastal Change: Developing a Policy Framework, Defra March 2010

creation of the Coastal Change Pathfinder Programme. This programme aimed to road-test new and innovative approaches to planning for and managing coastal change.

Support for Tackling Coastal Erosion in England

Defra provides funding for flood and coastal erosion risk management, the majority of which is distributed by the Environment Agency as flood defence grant in aid. The direction of policy towards funding support is that Defra will provide some but not necessarily all the funding for projects. It will however only fund projects where there is an overall positive benefit cost ratio. There are four outcomes Defra is seeking to support⁹. These are:

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

Outcome 3, which is obviously the most relevant to this project, is measured by assuming that the annual value of a property is £6,000 (the average annual rental income of a residential property in the UK). So extending the life of a property by 5 years would produce a value of £30,000 (before discounting). Defra then weights any payment for coastal erosion schemes by the location of the household. The rate of payment is 45p per £1 of present value benefit for household protected in the 20% most deprived areas¹⁰ in England down to 20p in every £1 for household in the 60% least deprived areas.

In 2010 Defra introduced the coastal erosion assistance grant. This grant is not intended as a compensatory payment. As Defra policy states the long-standing position of successive governments in the UK that compensation is not available for properties or land lost as a result of coastal erosion or damaged as a result of flooding (whether inland or on the coast). This includes instances where the decision by the relevant authorities has been taken not to defend a particular area. No-one has a right to flood or erosion defences or, if defences are provided, there is no legal requirement to provide any particular standard of defence (paragraph 4.15¹¹)

Coastal erosion grant level is currently fixed at £6,000 per household. The grant is available to help with the initial transitional costs associated with loss of a residential property as a result of coastal erosion, but only in instances where no alternative

⁹ Flood and Coastal Resilience Partnership Funding policy statement on an outcome-focused, partnership approach to funding flood and coastal erosion risk management, , Defra 23 May 2011

¹⁰ As measured by the Index of Multiple Deprivation produced by DCLG

¹¹ Appraisal of flood and coastal erosion risk management: A Defra policy statement, June 2009

provision such as insurance is available¹². Principally, it will be available to help with the costs associated with demolishing any residential property at risk of loss because of coastal erosion. It may then additionally be used by the authority to help with basic moving costs where this would be appropriate.

Assessing the costs and benefits for flood and coastal erosion risk management

Defra and the Environment Agency have developed extremely detailed guidance on how to assess the value for money for all proposed projects to tackle flooding or coastal erosion (FCERM-AG)¹³. This is “living guidance” in the sense that it is designed to be updated as and when better information becomes available. This guidance has been devised to provide a clear framework for appraising a wide range of schemes dealing with flood risk and coastal erosion. Clearly, the guidance is highly relevant to any assessment of the projects developed by Pathfinders. The guidance follows the good practice principles in the HM Treasury Green Book.

There are several key points in FCERM-AG:

- All proposed investment needs to be compared to **alternatives** (either the do nothing/do-minimum or other options)
- The benefits associated with most investments are the **reduction in risk** (or reduction in absolute losses) associated with flooding or coastal erosion compared to the alternative option (usually do-nothing).
- The discounted stream of costs associated with any intervention is then compared to the discounted stream of benefits. Typically the appraisal period is 100 years.
- The costs and benefits measured are **national** costs and benefits: *“an economic appraisal for national funding should consider only those benefits and costs accruing within the national boundaries, and treat localised effects, which are offset by gains or losses that occur elsewhere, as transfer payments”*.
- The focus of the appraisal and value for money assessment is on monetised economic benefits, but environmental and social impacts should be taken into account in assessing options (especially when the differences are marginal).
- The guidance treats what might be called “regeneration benefits”, namely local social benefits, as not core economic considerations for the appraisal. These benefits in a locality are not monetised and included in the assessment of benefit cost ratios.
- The loss of any property is taken as the “risk-free market value” of the property.

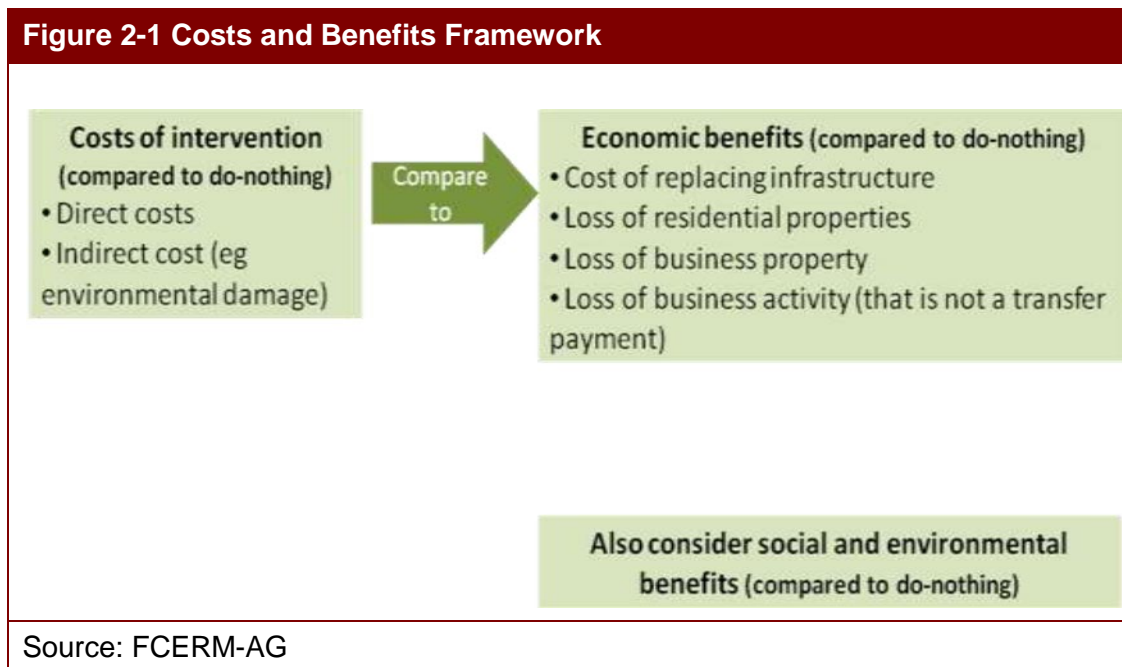
¹² In some cases losses may be insurable and insured as is in the case of one of the projects in the Scarborough Pathfinder

¹³ Flood and Coastal Erosion Risk Management appraisal guidance (FCERM-AG), Environment Agency, March 2010

- The guidance also recognises that there may be impact of blighting effect on local buildings and so wider socio-economic problems from coastal erosion.

The focus of projects covered by FCERM-AG is on active interventions that reduces the risk of flooding or coastal erosion. However, the guidance requires the assessment against do-nothing options which in the case of coastal erosion would mean allowing nature to form a new coastline without human intervention. The guidance is not really designed to assess the merits of different adaptation options, nor is there detailed guidance on how to assess social impacts.

In summary the approach and scope of costs and benefits covered by FCERM-AG are as follows:



International experience

A recent review of international approaches to coastal adaption looked at the experience in USA, France, the Netherlands and Australia (as being areas where the most lessons for the UK could be provided¹⁴). Other mechanisms (identified in Section 5.5.2) that could be considered further include:

- Acquisition and lease back of coastal lands at risk. Under such schemes, local government acquires land at risk and leases it to existing or future users for a specified period of time, after which the land reverts to public ownership.
- Voluntary purchase and resale for development. Under such schemes, the resale of land at risk might be dependent on its use for purposes compatible with the governing hazards; and
- Special rates levied on existing development at risk to offset the cost of necessary protective works.

¹⁴ Environment Agency Coastal Adaptation Project: Review of international best practice, Halcrow Group, November 2008

Note: in practice the purchase and lease back approach has not been applied in New South Wales, Australia.

Measuring Value for Money

We have attempted to apply the broad principles of FCERM-AG to the various coastal Pathfinder projects reviewed. In so doing we have established that, in practice, there are several different types of projects and the framework needs to be able to deal with all of these. These types of projects can broadly be categorised as:

- Managed “**rollback**” projects where houses, businesses, infrastructure and or community facilities are **physically relocated** away from the local area at risk from coastal erosion. So the physical assets at risk are replaced by new assets.
- Managed “**rollback**” projects where residents and businesses are relocated or helped to leave erosion risk areas, but the lost assets are not replaced. These projects are not really rollback in the sense that Defra has understood, but are more about assistance to individuals affected by coastal change.
- **Business boost** projects - where there is investment in supporting local businesses directly or encouraging investment and spend in the local economy (often via tourism support projects) to offset the blighting or other negative effects from coastal erosion.
- “**Buy and leaseback**” projects. Here assets are purchased and then run on a temporary basis whilst they are at risk – to extend their useful economic life. [However, in practice so far no Pathfinder has actually implemented such an approach].

Within these broad categories, it is also worth noting that there are a number of different delivery approaches. For example, in rollback schemes these have included partial assistance towards the process (e.g. through funding a business plan) or use of planning policy. The range of approaches are explored in more detail in Section 3 of this report.

The assessment of Pathfinder projects raises several methodological and policy issues:

- First, it is clear from FCERM-AG that the main benefits from flood/coastal erosion prevention projects will be the reduced damage or loss to physical assets compared to a do-nothing scenario. The benefits are linked largely to the cost or value of physical assets not the activity that takes place in them or the households and businesses affected. The coastal Pathfinder projects have a mix of projects focused on replacing physical assets and helping residents/businesses.
- Second, although not generally set out explicitly, the rationale for most of the Pathfinder projects is ultimately the impacts on local community cohesion and sustainability, not wider national economic benefits. As noted above, FCERM-

AG does not have a strong set of valuation techniques for measuring these benefits.

- Third, there have been and still are significant areas of government intervention that recognise there is wider social (and in some instances economic) value in sustainable local communities. For instance successive governments have recognised the special challenges faced by some deprived coastal towns and communities. As *Adapting to Coastal Change* recognises when it points out, “coastal change [could] have a detrimental impact on a community’s local economy and structures” [via impacts on residential demand, business investment and infrastructure] and that this “could contribute to deprivation in some coastal areas”¹⁵. There has been an increasing move to start to quantify these community cohesion or regeneration benefits in appraisals of public investment¹⁶.
- Fourth, there are examples of intervention that use the planning gain associated with a change of use on land to pay for the costs of new (residential) assets. This raises some interesting methodological issues – if the local planning authority was willing or prepared to provide for this change of use in the absence of the project, it cannot properly be treated as a net economic benefit.
- Fifth, we note that there is a potential methodological issue in FCERM-AG in how it treats the impact of coastal erosion on physical business assets compared to the output of the business. This is because the value of most business assets is in part determined by the turnover and profitability of the business.
- Sixth, FCERM-AG does not allow inclusion of blight effects in the sense that all property values used to appraise (traditional) schemes are meant to be “risk free”. Blight effects are thought to be local impacts and do not inform scheme decisions since schemes have generally been nationally funded.

The framework we have adopted draws on FCERM-AG and focuses on (i) a society wide benefit-cost analysis (net benefits and costs for all parties) and (ii) 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 we have developed consists of the following principles:

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.

¹⁵ *Adapting to Coastal Change: Developing a Policy Framework*, Defra March 2010

¹⁶ *Valuing the Benefits of Regeneration; Economics paper 7: Volume I - Final Report*, DCLG December 2010

Assumptions have been made on a project by project basis about what would happen under the do nothing scenario after failure. These are outlined in detail in the VfM assessment;

- **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 – see above.
- **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 strict HM Treasury Green Book definition of “benefit cost ratio”, i.e. Net Present Value / Government Cost or “NPV/G”¹⁷.

Other benefits which we sought to quantify but, in the event, were not possible to estimate include the following:

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

The framework used is summarised in the table below. In all cases we have tried to establish the relevant costs and benefits from each project and for those benefits which cannot be quantified we have undertaken a qualitative assessment.

¹⁷ 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).

Table 2-1: Framework			
		Do Nothing	Pathfinder Project
Costs	PV Net Societal Costs		(A)
	PV Net Public Sector Costs		-
Assets	No. of Properties <i>(source: Pathfinder)</i>		(D)
Monetary Benefits	Estimated Property Benefits (see technical note in Appendices)		(E)
	PV of Benefits <i>(source: Regeneris calculation)</i>		(F-E)
	PV of Benefits (net of costs)	Net of Societal Costs	(F-E-B)
	Cost Benefit Ratio	Societal CBA	$((F-E)/B)$
		Public CBA	$((F-E-B)/C)$
	Cost per Property (unit cost)	Societal Cost	(B/D)
Public Cost		(C/D)	
Other Impacts (colour coding denotes largely positive, neutral or negative impact)	PV Blight Effects		
	Impact on Wider Cohesion / Regeneration		
	Impact on Local Amenities		

Practical VFM Assessment Issues

It is all very well having a framework; but in practice we have had to work with the relatively inconsistent information that has been available from Pathfinders on the projects. Several practical issues have been raised:

- First, most schemes are at early stages where although costs are reasonably well established benefits are not.
- Second, Pathfinders have not, generally, collected information systematically on the future timing of benefits (for instance the useful life of assets or when new housing will be built).

- Third, although there is reasonable information on costs of physical investment, and support for relocation, none of the Pathfinders have 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).
- Fourth, although there are many projects focused on boosting or at least sustaining the tourism economy evidence on the likely impacts has not been collected.
- Fifth, 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.

As we make clear in the next section, there are significant gaps in the information to assess costs and benefits. In some cases it can be possible to develop proxy values. However, this is potentially very misleading for some kinds of benefit (such as the impact of improving local facilities on tourism) as they are extremely location and project specific.

Community and Regeneration Benefits

The 3Rs Guidance¹⁸ defines regeneration as being “a holistic process of reversing economic, social and physical decay in areas where it has reached a stage when market forces alone will not suffice.” The current coalition government confirms a commitment to regeneration emphasising that “regeneration can help us to make the best of our assets and our people. It can help areas adapt to new roles, and improve the distribution of wealth and opportunity. It can restore social justice, and reduce community tensions. And as the country adapts to a smaller state, regeneration can play a vital role for communities by fostering a sense of solidarity and hope¹⁹.”

The rationale for intervention is focused on meeting equity objectives such as local or regional regeneration (HM Treasury, Green Book p.51). Successful regeneration is about achieving additional economic, social and environmental outcomes that would not otherwise have occurred (or would have been delivered later or of a lower quality) whilst also representing good value for money.

As identified above, the pathfinder projects have not been able or sought to measure the social and regeneration benefits of the pathfinder programmes but these are extremely important in understanding the true costs and benefits associated with the project. Due to the fact that these have not been captured and measured, the value for money calculations in the next section do not fully reflect the benefits and disbenefits associated with the intervention and in some cases it is difficult to compare interventions due to this very fact.

¹⁸ ODPM (2004) Assessing the impact of spatial interventions, renewal and regional development. The 3Rs guidance. ODPM

¹⁹ Ministerial statement at the National Regeneration Summit, 14 July 2010

Rollback

It is difficult to measure social and regeneration benefits. However, in October 2009, the Department for Communities and Local Government (DCLG) commissioned a study to examine how the benefits of regeneration might be valued as well as how they compare to the cost of intervention²⁰. This looks at the benefit cost ratio (BCR) for acquisition, demolition and new build which is similar to a number of the “rollback” projects which are being examined within this project.

The workings are shown in the table below and this demonstrates that the study has attempted to value the community and regeneration benefits in a number of ways, that is taking the

- Consumption benefits from private betterment (that is the planning permission for new housing will increase land values) minus disamenity.
- External consumption benefits arising from enhanced visual amenity (removal of derelict properties results in an amenity gain to society as a whole).

The BCR attributed to acquisition, demolition and new build, is high at between 3.7 and 5.5. The average cost per unit is £114,105.

Table 2-2 Deriving the value of benefits from acquisition, demolition and associated new build activity

	Consumption benefits – private betterment minus disamenity	Consumption benefit - external benefits arising from enhanced visual amenity
a) Expenditure	£0.148 billion	
b) Public sector cost per net additional dwelling replaced	£114,105	
c) Net additional dwellings (a/b)	1200	129.7 derelict property restoration projects of 10 properties each
d) Value per net additional dwelling restored/replaced	£29,159	£322,000 per annum per 10-dwelling project
e) Value of net additional benefits p.a. (c x d)	£0.038 billion (one off)	£0.042 billion (3 year build up and 30 year duration)
f) Present Value of benefits	£0.038 billion	£0.777 billion
g) Benefit Cost Ratio	5.5	
h) BCR based on sensitivity exercise (benefit duration 15 years rather than 30 years))	3.7	

There are a number of shortcomings in this approach in that it does not appear to have taken into account the following:

- consumption benefits (society) from reduced carbon emissions (i.e. if replacement stock is more energy efficient than the stock it replaces);

²⁰ Valuing the Benefits of Regeneration. Economics Paper 7: Volume I Final Report. CLG

- consumption benefits (private) from improved security, health and warmth (as inferior stock is replaced with modern housing stock);
- the production benefit to the economy through employment enabled by the new housing;
- the benefits in terms of sustaining local services and contributing to the local vitality of an area through maintaining the size of the community;
- the benefits associated with supporting community cohesion (particularly in terms of well being) through keeping the affected community together.

It is important to recognise that not all of the five pathfinder areas which have been examined in this report are priority areas for regeneration. Jaywick in Tendring is the most deprived locality in the country and as such the impacts which are described above (in terms of reducing crime and improving health) are particularly relevant. None of the other localities fall within the 25% most deprived in the country (which would be priorities for regeneration). Nevertheless, a number of the pathfinder areas recognise that the threat of coastal erosion could have a negative impact in terms of reducing the economic fortunes of an area (through reducing investment and for example tourism) and have sought to implement activities which will contribute to the economic development of an area (e.g. improving beach access or amenities close to the beach).

Other Interventions

Aside from rollback, there are a number of other interventions provided through the pathfinder which have regeneration benefits such as general business support and the provision of open space. For context, the table below demonstrates the benefit cost ratios estimated by CLG for mainstream regeneration interventions.

Table 2-3 Benefit Cost Ratios by Activity Type – central and cautious valuation applied to outputs derived using average unit costs				
Activity type	Valuation basis	BCR		Average unit cost
		Central valuation	Cautious valuation	
Theme 1: Worklessness, skills and business development				
Tackling worklessness	Consumption benefits (earnings) plus indirect crime and health benefits	1.04	1.04	
Skills and training	Production benefit - Earnings uplift arising from skills enhancement	2.2	1.6	
General business support	Production benefit - GVA	8.7	6.0	
Start-up and spin-outs	"	9.3	6.8	
Business enterprise research & development	"	2.5	1.8	
Theme 2: Industrial and commercial property				
Industrial and commercial property	Production benefit - GVA	9.96	5.8	

Theme 3: Homes, communities and environment				
New build housing	Consumption (property betterment) and production benefits (GVA)	2.6	1.7	£77,427
Housing improvement	Consumption benefits - property betterment and social benefits	2.0	1.3	£17,977
Acquisition, demolition and new build	Consumption benefits - property betterment and visual amenity enhancement	5.5	3.7	£114,105
Communities: Volunteering	Shadow price of volunteer inputs - minimum wage	1.1	1.1	
Communities: investing in community organisations	Shadow price of social enterprise 'GVA'	1.8	1.3	
Environmental: open space	Consumption benefits - Willingness To Pay	2.7	1.8	
Environmental: public realm	Consumption benefits - Willingness To Pay	1.4	0.9	
Neighbourhood renewal	Consumption benefits - value transfer from NDC evaluation which adopted shadow pricing approach	3.0	3.0	
All Activity Types (real resource)		3.5	2.3	
Source: Valuing the benefits of Regeneration, CLG				
Note:				
willingness to pay is used to place an economic value on non market goods. It is the value placed on gaining a good or service.				
Consumption benefits include a value uplift i.e. the fact that planning permission for new housing increases land values. Other consumer benefits result from improved security, health and warmth as well as amenity gain resulting from the removal of derelict premises.				
Production benefits include: employment enabled by new housing and associated transport infrastructure.				

Reduced Coastal Erosion Risk Benchmarks

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. This will inform decision making on the most appropriate intervention in response to coastal erosion and the approach which offers the best value for money.

According to Defra, there are around 100 potential investment schemes which deliver reduced coastal erosion risk to households in the CSR10 period (excluding studies, those where benefits have not yet been estimated, and those with a currently-indicated benefit/cost ratio less than 1)²¹. The total estimated PV cost of these is £971m and estimated PV benefit of these is £10,026m and the total number of households removed from risk is 35,437. Therefore:

- The average benefit/cost ratio is therefore: 10.3:1. (This is the traditional gross benefit per £ of public cost metric. Using the Net Present Value per £ of public

²¹ There are a couple of points to note with regards to these figures. First, some schemes which also tackle flood risk in combination with erosion risk have been included, as well as "pure" erosion interventions.. Second, the figure includes early stage (pre-Gateway 1) schemes where the claimed benefits have yet to be verified.

cost metric used for the Pathfinder schemes in this report, the comparable figure would be 9.3:1).

- Total PV cost per household removed from risk is therefore around £27,000.

However, it is important to appreciate that these VfM figures are in large part delivered by projects where the investment leads to the securing of physical assets that would otherwise be damaged. These VfM ratios do not, in the main, relate to adaptation projects. It is also worth reinforcing the fact that the BCR in pathfinder areas is likely to be lower.

3. Summary Assessment of Pathfinders

This section summarises the key findings arising from the evaluation of the five largest Pathfinder projects. This is followed by a more detailed explanation of the approaches in the following sections.

Programme Delivery

Overview

The different approaches to the Pathfinder programme are shown in the table and key points are summarised below. In order to fully understand the types of activities which have been supported, it is important to understand the context within which the projects have been developed.

It was recognised by the government that more work was needed to understand what planning for and managing adaptation to coastal change meant for local authorities and their communities and this was to be achieved through the coastal change pathfinder programme. 'Coastal Change' has been defined (in Defra's Coastal Change Policy consultation document) 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 consultation document on coastal adaptation also recognises that the definition of successful adaptation will depend on perspective. For example, a community facing permanent loss of assets or infrastructure may see things differently to communities who are not immediately at risk. Similarly, successful adaptation will depend on a wide variety of socio economic conditions. Some locations have high levels of social well-being with other locations facing greater levels of deprivation.

It was recognised that approaches could range from projects to help maintain beach car parks or access points damaged by coastal change; to exploring ways of supporting "roll-back"; to buy and lease back schemes designed 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 pathfinders to draw and build on. These are listed below:

- **Preparing and planning for change** e.g. community adaptation, creating capacity for change and exploring the spatial planning system's role in responding to coastal change.
- **Managing change** e.g. through regeneration or focusing on the following assets: local buildings and properties, business, local and community infrastructure, natural environment, and, historic environment.

The projects which have actually been supported and delivered by the five largest pathfinder areas largely reflect the guidance and can be categorised into three areas which include the following:

- **Rollback and Buy and Lease Back:** all five of the Pathfinder areas have trialled schemes of this type to varying success. As we outline below, very different approaches have been adopted by each of the Pathfinder areas. Indeed, the term rollback has been used to describe processes which are quite different in some instances.

- **Amenity, Business, Tourism Projects:** three of the Pathfinder areas have implemented projects of this type. These are in response to the individual needs at Tendring, Waveney and North Norfolk (here there was a strong focus on a series of projects at Happisborough).
- **Community Engagement and Partnership Working:** some Pathfinder areas saw the Pathfinder programme as an opportunity to implement new partnership structures (East Riding) and recruit staff specifically tasked with raising awareness on coastal erosion.

Table 3-1 Summary Projects					
	Tendring (£1m)	Scarborough (£1m)	East Riding (£1.2m)	North Norfolk (£3m)	Waveney
Rollback and Buy and Lease Back projects (further information is provided below)	<ul style="list-style-type: none"> Buy and Demolish of properties at Jaywick Considered buy and lease 	<ul style="list-style-type: none"> Work to relocate properties at Knipe Point. 	<ul style="list-style-type: none"> Rollback review and links to the LDF to consider how business properties can be incorporated Agreed approach for prioritising communities at risk A relocation and adaptation package to support communities at risk (including buy and lease back) 	<ul style="list-style-type: none"> Relocation of properties at risk Consideration of buy and lease back options Business plan to support rollback of Manor Caravan Park Rollback of Trimmingham Village Hall 	<ul style="list-style-type: none"> Rollback of households at Easton Bavents
Amenity / Tourism / Business Projects	<ul style="list-style-type: none"> Brooklands Gardens – derelict land affected by coastal erosion bought back into use Crag Walk, 150m rock revetment allows visitors to view affects of coastal erosion and provided protection to some properties (Naze Tower, Cafe, Car Park) 		<ul style="list-style-type: none"> Business Package under small grants scheme 	<ul style="list-style-type: none"> Cliff top enhancement project at Happisburgh (car park, toilets, access ramp, removal of beach debris) Coastal Heritage Project at Happisburgh Business Support projects including Tourism Audit of East Norfolk Coast Realignment of Marams Footpath Removal of beach debris at Beeston Regis 	<ul style="list-style-type: none"> A range of projects to increase the vitality of Corton as a destination for residents and visitors e.g.: Improved access to beach CCTV Toilets, kiosk/cafe at beach Cliff top erosion study and improvements Nature Walks and interpretation at Corton Woods
Community Engagement and Partnership Working	<ul style="list-style-type: none"> Community Development Worker to work with residents to raise awareness of coastal erosion 		<ul style="list-style-type: none"> Partnership working and group structures to put in place support structures for those at risk of coastal erosion 		

Pathfinder Funding

To date, a number of Pathfinder areas have spent a small proportion of the funding allocated, with only 32% of funding spent to date for the five largest programme areas. Scarborough for example, plans to spend their funding on their original proposal of rollback but this has been delayed for a number of reasons (largely due to difficulties finding a suitable site and in gaining community consensus on the way forward). Due to issues with their project, they may not be able to come to an agreement which allows them to spend the Pathfinder funds in this way.

East Riding plans to use the funding received to continue to deliver the enhanced assistance package, supporting those most at risk from coastal erosion. North Norfolk and Waveney have committed the majority of their funding to projects identified above. Finally, it is not clear yet how Tendring will use their funding though the council has indicated that this will be used for projects in Brooklands and Grasslands (Jaywick) which is at risk from coastal flooding and suffers from regeneration issues.

There is a risk that some of the money may not be spent (for example if the Scarborough proposals do not work) or that money will be directed at activities which do not support coastal adaptation, particularly where local authorities do not have clear proposals for future spend (e.g. Tendring).

Table 3-2 Pathfinder Funding: Expenditure to date and Future Spend

	A. Expenditure to Date		B. Future Allocated Expenditure		Total (A+B)		Total Pathfinder Funding Allocated
	£	% of Total	£	% of Total	£	% of Total	
Tendring	£741,944	74%	£0	0%	£741,944	74%	£1,000,000
Scarborough	£16,900	2%	£755,600	74%	£772,500	76%	£1,022,500
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%*	£3,000,000
Waveney	£330,352	22%	£1,204,203	78%	£1,534,150	100%	£1,534,555

Source: Pathfinder Authorities

*NB that N Norfolk has allowed for 1% of the funding to be reserved for contingency

“Rollback”

Rollback is the physical movement of assets further inland away from the threat posed by coastal change. This can include the movement of households, communities, infrastructure or businesses (including visitor attractions).

Without public sector intervention, it is likely that households will in a sense “rollback” in any case but they will do this in a piecemeal way which could take some time, and which may not occur until the threat of coastal erosion is imminent. The rationale behind public sector intervention is that the process of “rollback” will be a managed one, with potential to lead to a number of benefits relating to community cohesion and regeneration (including reducing blight).

This is explored in more detail in the previous section which outlined the difficulties in quantifying these impacts but nevertheless they are a consideration for local authorities.

To date, none of the Pathfinder areas have fully implemented rollback as part of the Pathfinder scheme (largely due to the tight timeframes involved with the programme). Nevertheless, a number of different approaches have been trialled (or are being trialled). Each of these fall into two main categories and within this different approaches have been adopted. The key information is summarised below with further information provided within the subsequent table:

Managed “Rollback” – Assets Replaced – Residential

- **Purchasing a Site for Residents:** in the case of Scarborough, the local authority will purchase a serviced site to which residents can relocate and use insurance money to rebuild a new property. The key weakness with this approach is that it is unlikely to be applicable elsewhere, because households affected by coastal erosion do not usually receive insurance payments (in the Scarborough case, households have been affected by a landslide, which is a form of coastal change). The Waveney approach is similar though households will need to pay for infrastructure and households will not have insurance money to rebuild a new property, instead funding the development themselves.
- **Purchasing Properties and a Site (which could be occupied by households not at risk from coastal erosion):** North Norfolk has purchased properties at risk in Happisburgh (and their planning rights, through purchase of EN12, see below) and these households have been able to relocate at any location. They are in the process of purchasing a site in Happisburgh which can be occupied by any household (and not necessarily those at risk from coastal erosion). The benefit of this approach, compared to the site purchase model, is that it avoids the need for all residents to move to the same site.

Managed “Rollback” Assets Replaced - Other uses

- **Partial Assistance for Community Uses:** in North Norfolk, the Pathfinder has been used to implement rollback for non-residential use. In the case of Trimmingham Town Hall, the council has used Pathfinder funding to provide support for feasibility studies and community engagement. The funding will be used to part fund any new development (it was originally planned that this would fully fund any new development but the costs have been too high). There have been delays due to gaining agreement on a preferred site.
- **Partial Assistance for Commercial Uses:** North Norfolk also used Pathfinder funding to support a business plan for a caravan park at Happisburgh to rollback, but this has not been taken forward to date due to a lack of available sites.

Managed “Rollback” – No Assets Replaced – Residential

- **Buy to Demolish:** in Tendring, the approach has been to ‘buy to demolish’ at Jaywick. This was linked to wider regeneration objectives, specifically, the need to reduce housing density in an area at risk of flooding and to tackle crime by widening passageways between properties. Since the programme was ceased part way through due to concerns over value for money it is likely that this approach has not achieved its intended benefit (with only 4 properties demolished).
- **Incentives to support relocation away from risk:** East Riding has focused on households at imminent risk of coastal erosion. Through a package of incentives (such as help with relocation costs or demolition costs), households have been removed from risk but no additional homes have been provided (since the assets are not replaced).

Using Planning Policy

Planning policy has been important in supporting rollback and a number of different approaches have been adopted:

- **Council uses planning policy to capture an economic value which encourages rollback:** in the case of North Norfolk, spatial planning is being used to facilitate rollback. Here, 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. If successful (it is still early days), North Norfolk's EN12 policy could be replicated elsewhere to facilitate rollback.

Related to this, there are a number of other options which have not been tested to date but which require a mention:

- **Private sector uses planning policy to capture an economic value which encourages rollback:** one of the key questions surrounding the approach adopted in North Norfolk is the extent to which the private sector (i.e. developers) can use EN12 thus reducing the role of the public sector. This would ensure that any costs, risks and possibly profit are borne by the private sector. To date, there has not been any interest in exploiting EN12 from private sector developers in North Norfolk and this is likely to reflect the economic climate, a lack of awareness and the co-ordination time and costs associated with implementing this policy.
- **Private sector uses planning policy to capture an economic value which encourages rollback with public sector support:** another option for consideration is where the council co-ordinates the implementation of the EN12 policy, for example through liaising with affected households and getting involved in negotiations but the private sector implements rollback using the policy thus taking on the cost burden and any risks.

Table 3-3 Rollback

Location	Approach	Strengths	Weaknesses
Managed Rollback – replacement of assets			
<p>North Norfolk: to date 9 properties have been purchased at Happisburgh</p>	<ul style="list-style-type: none"> • The Council has purchased the properties at risk. A methodology for valuing and purchasing properties has been devised by Bruton Knowles and includes three values: <ol style="list-style-type: none"> 1. All risks value – market value of property reflecting the ‘risk’ associated with coastal erosion. 2. EN12 Value: value associated with EN12 which includes a presumption that the current owner of an affected site will be able to obtain planning permission on a site adjacent to a village where planning would not usually be permitted. This policy only applies to properties within 0-20 year risk zone. 3. Supplementary Payment: additional payment based on statutory compensation rules. This is set at 7.5% (non owner-occupiers) and 10% (owner-occupiers). • The council then plans to purchase a site which can accommodate the 9 replacement dwellings (not the residents themselves). • Once planning permission is in place, the council can demolish the properties at Happisburgh • Development site sold to a developer and NNDC receives a share of proceeds (estimated to be 60% of cost of acquisition) 	<ul style="list-style-type: none"> • An agreed methodology has been developed which is consistent and allows transparency • Financial benefits to the property owners since they are receiving a value above the at risk value • Allows the council to recoup some of the acquisition costs through sale of land. • Properties are being replaced elsewhere in Happisburgh in a managed and cost effective way which maintains the size of the settlement and will have economic benefits (through for example supporting local services). • Affected households could move to any location 	<ul style="list-style-type: none"> • Council is taking a risk since they are purchasing a site without planning permission and they do not know whether they will be able to recoup the full value. • It is questionable whether the council is paying an inflated or compensatory value for the properties. • The EN12 value could be realised by the current owners of properties at risk. • If the key aim was to maintain the size of Happisburgh, this could be achieved through planning policy without a need for the local authority to buy to demolish (village growing in any case).
<p>Scarborough: managed rollback of 13 (originally 15) properties away from Knipe Point in Scarborough</p>	<ul style="list-style-type: none"> • Council would purchase land away from risk, obtain planning permission and provide a serviced site with infrastructure. • At risk property owners would then be offered the option of rebuilding their homes on the new development. The offer would be conditional but the exact terms and conditions would be worked up as part of the project (likely to include a resale/lease restriction to prevent profit gain). 	<ul style="list-style-type: none"> • Allows residents to use money from insurance payments and only a serviced site is required. • Community moved away from risk and community may remain intact since 13 properties are developed elsewhere. 	<ul style="list-style-type: none"> • Relies on residents to use insurance payments to fund new home. However, only available for landslide not coastal erosion. • This has not been implemented in practice due to difficulties in finding a new site/gaining agreement from residents on a preferred approach. • Difficult to identify a site which meets

	<ul style="list-style-type: none"> Individuals would be able to use insurance money received when they lose their home to rebuild a new property. 		<p>all needs.</p> <ul style="list-style-type: none"> Project revealed that keeping the community together was not a priority for residents, who had differing needs and expectations.
<p>Waveney: relocation of 9 households at Easton Bavents</p>	<ul style="list-style-type: none"> Pellings (a planning firm) commissioned to oversee a process to find a suitable site. Involved: <ul style="list-style-type: none"> liaising with residents on their preferred option; site appraisal and identification of a suitable site; working with the council to ensure the site meets their requirements. There are now discussions with the landowners regarding purchasing the site. The council will provide a plot to each of the households (conditions to be agreed). Households will need to fund the development of a new home and all infrastructure costs. The council may seek a return, for example through securing planning permission for the whole site, selling this to a developer and using the return to cross fund the land costs for those affected by coastal erosion. 	<ul style="list-style-type: none"> The council has not purchased homes from those at risk and so this is a lower cost approach compared to other options (e.g. North Norfolk). Properties will be replaced elsewhere in Waveney in a managed and cost effective way which will allow the community to remain together and will have economic benefits. Process appeared to work well with a preferred site identified which all residents are in agreement with. Led to amendments to planning policy and clarification of rights associated with properties lost due to coastal erosion. 	<ul style="list-style-type: none"> Individuals will need to pay for property to be developed which could prevent some individuals from doing this in practice. Frustration from community that pathfinder has not delivered to date. There may be difficulties prior to completion e.g. negotiating with land owners.
Managed Rollback – no replacement of assets			
<p>East Riding: 12 households accepted support for relocation and 10 households discussing adaptation approaches. 43 structures have been removed from risk.</p>	<ul style="list-style-type: none"> Process to identify and prioritise individuals at risk (mainly tenants) has been developed. Three risk categories have been introduced: imminent, higher and lower risk. For those at imminent risk, a relocation package has been offered which includes: help with demolition and relocation costs, help with rent and furnishings (the most appropriate support is selected for households). For those at higher and lower risk, an adaptation package is available which includes: buy and lease back option; erosion adaptation assistance grants. The council has considered full scale rollback of 	<ul style="list-style-type: none"> Allows consistent approach to assessing properties at risk and transparency. Allows East Riding to take a 'whole borough' approach rather than focusing on a specific community which is in line with their needs. Low cost per household assisted compared to other schemes, allowing wider application than is the case for other projects. 	<ul style="list-style-type: none"> Does not allow for assets to be replaced and so leads to a reduction in the housing stock overall (though can be resolved through allowing more development in the area if that is consistent with needs of area). Could be argued that this approach is compensatory. Difficult to justify greater levels of assistance for those who lose their home due to coastal erosion as opposed to any other reason.

	communities and is reviewing their rollback policies within their LDF.		
Tendring: removal of 4 properties at risk in Jaywick (buy to demolish).	<ul style="list-style-type: none"> • Part of a wider initiative supported by Essex CC to reduce the number of derelict, empty and sub standard properties in this regeneration area. • Households within Brooklands and Grasslands were contacted with a view to having their property purchased and demolished and properties were valued independently. • Only 4 properties came forward and they were given the at risk value for their property. • The properties have subsequently been demolished. 	<ul style="list-style-type: none"> • Households accepted at risk value. • Used independent property firms to carry out valuation of properties. 	<ul style="list-style-type: none"> • Acquisition programme halted in Sep 10 following a budget review by Essex CC and a recognition that without significant additional finance the overall impact of acquisitions would be minimal. Had little impact on tackling coastal erosion or regeneration issues. • Does not allow for assets to be replaced and so leads to a reduction in the housing stock overall (though this could be resolved by allowing more development outside the flood risk area). • Difficult to justify greater levels of assistance for those who lose their home due to coastal erosion as opposed to any other reason.

An Analysis of Rollback

There are a number of key findings resulting from our analysis and these are explored in further detail below:

Mechanisms

Key issues for rollback include the **mechanism for funding** this and who should pay: innovative approaches are required to implement rollback in practice such as North Norfolk's EN12 policy (see paragraph above). If successful (it is still early days), North Norfolk's EN12 policy could be replicated elsewhere to facilitate rollback. This approach does however depend upon being able to secure sufficient values and this may not be appropriate to other locations such as East Riding or Tendring where land values are lower (although it is worth recognising that property values will also be lower).

The issue of **compensation** and whether the pathfinder projects have in effect been compensating individuals for the loss of their home is a complex one. The government has always taken the position that it will not compensate individuals for the loss of their property due to coastal erosion. Compensation can refer to situations where households have received financial support which is above the at risk value of their property and as such it is possible 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" has been awarded to these households. However, the argument here is that the local authority wanted the households to move quickly and so in this sense they are in a weak bargaining position and will need to pay more. A programme operating over longer timescales might be able to avoid paying compensation to the same extent.

It is also possible that financial support at the 'at risk value' amounts to compensation if this is not recovered elsewhere. In Tendring for example, properties at risk of coastal erosion have been bought through the pathfinder project (though the key driver for the scheme was to tackle regeneration) and this could amount to compensation. 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.

The East Riding case is not as straightforward. In this case, individuals are receiving an incentive to relocate. They 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 unfair. However, again, the counter-argument is that this could be justified if it does assist with relocation away from the coast in a more planned and orderly manner.

Benefits

As stated earlier, there are a number of reasons for supporting rollback since it is believed that this could lead to a number of benefits which includes: community cohesion, local services being sustained (which can support economic development or regeneration), and maintaining the housing stock in a particular area. These issues are discussed below in relation to the pathfinder projects.

Keeping the community together in one location through a managed process has typically been seen as a benefit of rollback approaches to secure **community cohesion**²² (referring to the

²² NB there are different definitions of community cohesion. The Community Cohesion Delivery Framework (2009) by DCLG refers to three key ways of living together in a which reflects community cohesion including, including a shared future vision and sense of belonging,

strong and positive relationships which exist amongst the community, it is widely held that this can result in positive benefits for society as a whole). Only one of the pathfinder projects (Waveney) however has sought to keep a group of people together in the sense of a community. Scarborough may also try to keep the Knipe Point community together however, due to difficulties in agreeing a new location, this may not happen in practice. On the whole, the pathfinder project found that the community itself did not have an overwhelming desire to remain together and instead their priority was on finding the optimal solution. Generally this is the best solution financially or in terms of meeting their 'wish list' i.e. in terms of finding the best site, rather than to secure community cohesion itself. In a number of cases (e.g. Scarborough), this is due to the fact that a number of the tenants are second home owners and as such the community ties do not appear to have been strong. Interestingly North Norfolk's approach allowed individuals to use the money received to locate where they wish but they were still able to maintain the size of the community through the provision of a site nearby which can deliver a similar number of homes to those lost. Our view is that community cohesion should not be an overriding factor in informing a preferred approach and indeed a desire to keep a community together has led to difficulties in some cases (e.g. Scarborough). This suggests that the assumption that rollback projects should seek to keep individuals together in the same location should be reviewed.

There are economic benefits associated with maintaining the size of the settlement, which can **sustain local services** and contribute to the vitality of a local area. However, only North Norfolk has sought to maintain the size of the existing settlement in or close to the locality affected by coastal erosion through the pathfinder programme. Other projects appeared to focus on much smaller communities with little existing services and as such it may not have been feasible or desirable to achieve this objective. Furthermore, in these cases planning policy is being used to support housing growth across the borough as a whole. Clearly, the size of the existing settlement in areas affected by coastal erosion together with the existing provision of services and the economic prosperity of the area are key considerations in understanding the extent to which there are benefits in maintaining the size of the existing settlement.

Sustaining local services can have positive benefits in terms of supporting economic development or regeneration. Only one of the pathfinder locations (Jaywick in Tendring) is seriously in need of regeneration however, being the most deprived locality in the country. Whilst Happisburgh is not significantly deprived, it could be argued that maintaining the size of the settlement will help to prevent any future decline in the economic prosperity of the area which could occur, and also address issues around access to services (a key indicator of multiple deprivation) which affects a number of smaller more remote settlements.

Three of the pathfinder projects have sought to replace properties, whilst Scarborough and Waveney have sought to do this elsewhere; North Norfolk has replaced properties within the same community. Whilst there are benefits in terms of **maintaining housing stock**, this issue needs to be considered within the wider context. There is already a significant shortage of housing in the UK, and the relatively small number of properties lost to erosion is unlikely to make a significant impact compared to other larger influences (e.g. migration). Furthermore, local authorities can take account of the reduction in the number of properties due to coastal erosion and allow for replacement of these through the LDF process. However, the Pathfinders that have sought to replace properties have developed useful models that could be refined and applied elsewhere in future.

Barriers

focus on commonalities (whilst recognising differences) and strong and positive relationships. The latter is most important in this context).

Key difficulties in implementing rollback appears to be: the time taken to gain consensus on a preferred way forward (this was particularly the case in Scarborough) and difficulties in finding suitable sites. These issues need to be tackled through other ways such as planning policy. Funding rollback (as identified above) is also a key issue.

“Buy and Lease Back”

Buy and Lease Back is the purchase of property at risk of coastal change by the local authority (or through another public sector body such as a Registered Social Landlord). The property would then either be rented by the previous owner, an unrelated tenant or be used as a holiday let.

A number of Pathfinder areas have considered ‘buy and lease back’ schemes but this has not been implemented for a number of reasons which are explored further below:

- **Tendring:** existing housing 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 relative to rental values and the risk to the council too significant.
- **East Riding:** three properties have come forward to be considered for buy and lease back but it is unlikely that these will be viable. This is largely because of the aging nature of the housing stock on the coast and the often non-standard construction used which makes the cost of upgrading properties to the decent homes standard too costly. If these properties were put up for sale on the private housing market, a significantly higher value could possibly be realised, which could undermine any offer that could be made using buy and lease back. There have also been issues with buy and lease back, with owners not wishing to lose their ownership rights to properties when they become a tenant. East Riding is now considering removing the residential status of properties, which would allow these to be used for commercial use (e.g. storage of agricultural use) which would prolong the life of the property and allow an income to be generated.
- **North Norfolk:** commissioned property consultants Bruton Knowles to complete detailed research into the possibility of implementing a buy and lease scheme focusing on properties with a 20 to 100 year life at Happisburgh. Financial modelling showed that proposals could break even if the HM Treasury discount rate is applied (at 3.5%). However, there were too many risks and considerations which prevented North Norfolk from taking this forward:
 - North Norfolk DC had disposed of its housing stock and hence was no longer a housing authority which places limitations on its ability to manage houses. A key issue was therefore whether anyone else could take on the management of the stock. 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 too short life therefore limiting any potential investment.
 - There may be substantial breaks in the tenancies which would result in a substantial loss if tenants could not be found.
 - The maintenance of properties is a key issue. A number of the financial models assume that tenants would maintain the property which would be difficult to enforce and they could fall into disrepair.

An Analysis of Buy and Lease Back

The key barriers to Buy and Lease Back appear to be the cost of bringing properties up to a standard which meets the decent homes standard and identifying parties able or prepared to manage the properties since there are a number of risks to the council if they were to manage the properties. This appears to have led to buy and lease back being unfeasible to implement. However, this is not to say that this approach should be ruled out entirely as it may be workable in certain locations where housing at risk is more suitable to being rented out and managed by for example a Registered Social Landlord. Also, other approaches could be considered such as the potential for the private sector to manage the properties (which would reduce burdens such as achieving the decent homes standard and the costs associated with this). If there was demand for buy and lease back, government could consider allowing greater flexibility as regards the decent homes standard and other regulations for local authorities in areas affected by coastal adaptation issues.

In terms of private sector involvement, it may be difficult for local authorities to outsource management of properties to the private sector since it may be difficult to retain control of the properties and for them to be too prescriptive. However, in theory the private sector could carry out buy and lease back without public sector involvement. We are not aware of this happening, though it is possible that individual properties at risk have been purchased for use as holiday let or for long term rental.

Programme Achievements and Impacts

Overview of Achievements

We summarise below the key achievements for each of the Pathfinders focusing on key outcomes and additional benefits such as the removal of properties at risk and community cohesion. Where possible, we have tried to attribute monetary values to these and this is considered below.

Table 3-4 Overview of Achievements

	Tendring	Scarborough	East Riding
Protection / Removal of Properties at Risk	4 households removed from risk at Jaywick. Historic tourism attraction as well as café and car park removed from risk (Crag Walk).	15 residential properties could be removed from risk in the future (if successfully implemented).	7 households accepted support for relocation.
Local Amenity Benefits	Brooklands Gardens contributed to greenspace.		
Community Cohesion	Community development worker at Jaywick has reportedly led to stronger and more positive relationships amongst the community (community cohesion) through the Home Occupiers Group. Original intention of buy to demolish was in part to secure community cohesion through regeneration which did not occur in practice.	Rollback can lead to reduced community cohesion at Knipe Point (negative achievement).	
Increased knowledge and understanding of coastal change	700 people attended opening of Crag Walk and this is a successful visitor attraction, educating people on coastal erosion. Jaywick attempts made to communicate coastal risks but residents were resistant to them, partly as they did not see any options for responding to the risk.	Significant exposure of Knipe Point in press which has raised awareness and understanding but due to landslide not Pathfinder.	Residents have a better understanding of roles of teams involved in coastal service delivery. Councillors and management have greater appreciation of issues.
Lessons in adaptation which can inform future delivery of programmes	Difficulty in communicating coastal risks where residents have few options for responding to the risk – tendency to resist the message. Crag Walk – example of a defence that allows erosion to continue and acts as an amenity benefit.	Assumption that keeping the community together is a key aim of rollback has been challenged. Difficulties and time taken to secure community consensus in relation to rollback.	Lessons in rollback/buy and lease back explained above – review of LDF policies. Developed an approach which allows local authorities to assess and target communities most at risk - could potentially be rolled out.
Increased Adaptive Capacity			Financial contribution has helped some households to adapt/relocate.
Environmental Benefits		A SSSI area and so there will be positive benefits in the future if people move away from area.	
Tourism Benefits	Potential to increase tourism at Crag Walk.		

	Waveney	North Norfolk
Protection / Removal of Properties at Risk	9 properties will be removed from risk at Easton Bavents through a "rollback" scheme.	9 residential properties at risk will be removed. Also potential to remove a community centre and caravan park from risk (if successfully implemented).
Local Amenity Benefits	Range of projects at Corton (including improved access to beach and new facilities such as cafe and parking) are expected to improve amenity for residents and businesses.	Reinstatement of beach access and cliff top enhancement at Happisburgh will result in positive use for residents and the realignment of the Cromer Footpath.
Community Cohesion	Through provision of a site for residents to relocate to is expected to result in a positive contribution to community cohesion (leading to a stronger and more positive community and well being benefits).	Replacement of 9 houses in Happisburgh will maintain levels of housing and preserve the size/character of the community. Coastal Heritage project has generated community buy in, which in turn has led to a stronger and more positive community in the face of coastal erosion.
Increased knowledge and understanding of coastal change	Schools project in Corton has raised knowledge of coastal change.	Coastal Heritage Project has been instrumental in educating local, regional and national audiences about the importance and dangers of the erosion process. Understanding and acceptance of coastal erosion already high in Happisburgh.
Lessons in adaptation which can inform future delivery of programmes	Lessons in rollback which can inform future approaches.	Lessons in rollback/buy and lease back espy through research prepared to inform decisions.
Increased Adaptive Capacity	Work on rollback could inform future approaches.	Property acquisition scheme has enabled affected householders to plan more effectively. This model could be used in other locations in future.
Environmental Benefits		
Tourism Benefits	Potential to increase tourism at Corton due to wide range of projects delivered.	Potential to increase tourism at Happisburgh with package of improvements. Potential to increase tourism around Marams footpath.

Value for Money (VfM) Assessment

A value for money assessment has been carried out for key projects supported through the Pathfinder programme. Due to the limited time available for completion of the report and difficulties in accessing information from pathfinder projects (largely as this has not been collected or because the projects are still at an early stage with only 32% of pathfinder funding spent for the five largest pathfinder projects) it has not been possible to carry out value for money calculations for all projects. Where possible, we have tried to calculate the value for money of rollback schemes.

The key indicators are shown below and further information is provided in the sections which follow. The key points to note are:

- The rollback project at Waveney performs better than all other projects (with a Public BCR as defined in Chapter 2²³ of 1.9:1). If successful (it has not been implemented to date and there is potential that the costs could be greater than anticipated, particularly if households require support to develop new homes), the Waveney scheme could be replicated at other locations.
- A number of the schemes have a negative benefit cost ratio²⁴ (East Riding and Tendring schemes). It is worth noting that the wider benefits associated with these programmes (e.g. regeneration benefits) have not been assessed due to the fact that information has not been collected. However, due to the limited number of households supported (due to the timescales and other factors) we would envisage that these benefits are fairly low.
- The public BCR for Happisburgh is negative. Nevertheless, it is recognised that there are some strengths to this approach and that it may be possible to improve the benefit cost ratio, for example by reducing costs or increasing the return to the council which would count as an additional benefit.

It is important to reiterate that there are a number of issues with assessing the value for money of these schemes (as set out in Section 2). The key issues which need to be reiterated are a) the difficulties in predicting what the do nothing scenario might be and b) 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 eventual benefits are not clear at this stage.

²³ i.e. Societal Net Present Value divided by costs to public budgets. To allow fair comparison, subtract 1 from a “traditional” BCR for a defence scheme (see Chapter 2).

²⁴ Note that because the numerator of the public “BCR” here is Societal Net Present Value, a project which is not worthwhile for society as a whole (NPV<0) will automatically lead to a public BCR which is also negative. The use of NPV as a numerator rather than gross benefit (as for traditional coastal defence activities) is necessary because of the presence of private costs in the typical benefit-cost balance for Pathfinder activities.

Table 3-5 Value for Money Assessment

	North Norfolk		Scarborough	Tendring		Waveney	East Riding
	Happisburgh "Rollback"	Trimingham Village Hall	Scarborough "Rollback"	Jaywick "Rollback"	Crag Walk	Easton Bavents rollback	Enhanced Assistance
Societal Benefit Cost Ratio (=Societal Benefits / Societal Costs)	0.7:1	1.0:1	1.1:1	Negative	0.2:1	1.3:1	Negative
Public "Benefit Cost Ratio" (= Societal NPV* / Public costs)	Negative	Negative	0.1:1	Negative	Negative	1.9:1	Negative
Societal cost per property replaced or demolished	£132,300	£292,500	£103,000	£15,000	n/a	£143,300	£10,100
Public cost per property replaced or demolished	£58,100	£270,000	£56,500	£44,000	n/a	£23,700	£10,100
Blight Effects							
Impact on wider cohesion/regeneration							
Impact on local amenities							

Source: Regeneris Consulting, drawing upon information provided by each of the Pathfinder areas

Key: impact positive (green), neutral (amber), negative (red)

* Where Societal NPV = Societal Benefits minus Societal Costs.

Key Lessons

What Worked Well

Allowed new approaches

The Pathfinder project has allowed new approaches to be trialled to tackle coastal erosion which is an issue affecting many parts of the UK. Models were developed – especially for rollback – which could be refined and replicated elsewhere in the future. The Happisburgh adaptable beach access ramp and the Crag Walk were examples of innovative physical solutions which could be repeated elsewhere.

Partnerships

A number of the Pathfinder areas have demonstrated the benefits of forming strong partnerships to tackle issues associated with coastal adaptation. The East Riding model is one which appeared to work particularly well and could be replicated elsewhere. An East Riding coastal officers working group was established which included representatives from planning, housing, building control, civil engineering, highways, environmental management and legal services. Cross-authority working has been beneficial in increasing awareness of the issues associated with coastal erosion within the council and in using different powers and services to respond to the situation.

Use of Planning Policy

On a number of occasions, planning powers have been used successfully to support coastal adaptation. In particular, 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. If successful (it is still early days), North Norfolk's EN12 policy could be replicated elsewhere to facilitate rollback. East Riding is another local authority looking at using planning powers, including 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. East Riding has also reviewed their rollback policy to incorporate business properties (that is tourism infrastructure).

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 ESCROW legal work which Waveney has 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.

Rollback

Some local authority areas have carried out significant work to look at rollback and how to implement this locally. The research which has been gathered will help inform other coastal areas at risk and the lessons generated will help to improve learning. In particular, North Norfolk has commissioned a number of studies which set out a clear methodology and approach to rollback which could be applied elsewhere.

Monitoring of those at Risk and Consistent Definition

East Riding has developed and adopted a consistent definition of households at 'imminent risk'. Previously properties were identified on an ad-hoc basis and their level of risk established on a case by case basis and using advice given by the Council's coastal engineers. The risk based approach ensures consistency and allows transparency, which has led to greater acceptance of decisions amongst the community. This could be replicated in other areas where the risk of coastal erosion affects the whole borough rather than specific communities (as long as a coastal monitoring programme is in place).

Community and Business Benefits through Adaptation

The Defra Policy document (Adapting to Coastal Change: Developing a Policy Framework) sets out a definition for adaptation which is "*the process of becoming adjusted to new conditions, in a way that makes individuals, communities or systems better suited to their environment.*" The document also recognises that the definition of successful adaptation will depend on perspective. For example, a community facing permanent loss of assets or infrastructure may see things differently to communities who are not immediately at risk. Similarly, successful adaptation will depend on a wide variety of socio economic conditions. Some locations have high levels of social well-being with other locations facing greater levels of deprivation.

In Happisburgh, the cliff top enhancements (new car park, toilets, beach access ramp) will help an area to adapt in a location where confidence was low due to the imminent and highly publicised threat of coastal erosion. The improvements have led to clear signs of investment through the Pathfinder which will improve confidence in the area. This is likely to lead to increased tourism in the area which will benefit nearby tourism businesses and could lead to a less steep decline in the prices of residential properties nearby. Similar approaches to adaptation have been taken elsewhere, for instance in Waveney a number of projects are being implemented at Corton (improved beach access, new toilets/café and parking) which it is expected will maintain, if not increase levels of tourism. In this case, the threat of coastal erosion is less imminent and evident in the area and as such an overriding aim is to secure economic development rather than adaptation. In Tendring, derelict and at risk land has been put to positive use as greenspace. Whilst there are clear benefits associated with this, these are difficult to quantify.

Increased Understanding and Awareness of Risks

A number of the Pathfinder areas that we spoke to felt that throughout the delivery of the Pathfinder programme there is evidence that there is an increased level of understanding about coastal erosion and importantly that people are aware of the risks of coastal erosion prior to purchasing a property which has often not been the

case previously. This has been achieved through a co-ordinated and cross authority approach to coastal erosion (East Riding) and through educational projects (Crag Walk) amongst others. In Scarborough, there is evidence of increased awareness but this may have been due to the landslide at Knipe Point rather than the Pathfinder itself.

What Worked Less Well

Timescales

A number of the Pathfinder areas have reported that the timescales for implementing the programmes have been very tight which have impacted on the potential to deliver and test new approaches which are genuinely innovative. In a number of cases (Scarborough in particular), it has taken much longer than expected to secure buy in from the community and to agree an approach which can be taken forward. The bid process also needed to be carried out over a tight timeframe which meant that some local authorities did not have as much time as desirable to put together a strong bid (and they were tied to certain projects/approaches which they may not have otherwise implemented due to the community support received).

'Ring-Fencing' of Funding

Some Pathfinder areas have indicated that the funding should actually have been ring fenced (the reason for not ring fencing funding relates to government policy regarding grants to local authorities). Whilst the purpose of this has been to enable local authorities to trial innovative approaches to coastal adaptation, this could mean that funding could be spent on other activities delivered by the council and has made it difficult to track how the funding has been spent. Some local authorities have indicated that ring fenced funding would have ensured that activities which tackle coastal erosion are supported.

Market Failure

Any intervention by the government needs to have a clear market failure rationale. Whilst the programme as a whole does 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 which can guide delivery of projects. Due to the fact that funding was not ring fenced this has meant that it was not a requirement for this process to be followed in delivering the project. This has led to issues where there is not a clear market failure rationale for intervention and it has not always been clear what the final objectives are. 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 a number of cases, households are second home owners and therefore delivering social equity benefits is not a clear argument.

Linked to this, it has not always been clear whether the projects are aimed at tackling coastal erosion or regeneration objectives. This has led to issues in Scarborough where the project is supporting second home owners and not vulnerable individuals and the Pathfinder contribution could be seen as compensatory. In Tendring with the implementation of a programme of buy to demolish at Jaywick, the overall rationale

appears to be linked to regeneration objectives and not coastal erosion objectives due to the fact that the former is more apparent than the latter.

Additionality

In a number of cases, it appears that the Pathfinder programme has delivered activities which may have been implemented 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 CC) would have been used to trial a buy to demolish scheme since this was linked to regeneration objectives which were deemed 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 (though insurance would not cover the full cost, and the local authority indicated that many would not be in a position to build their own home). It is not clear in the case of North Norfolk or Waveney if rollback of properties would have occurred to the same extent.

Eligibility

Programmes have not always set out a clear eligibility criteria or means testing for individuals benefitting from the Pathfinder programme and restrictions on funding. For example, in Tendring home owners at Jaywick have been landlords with a number of properties and have 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 struggled with the idea of second home owners and whether they should benefit. In Scarborough, the eligibility criteria was 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 which could not access the full support available to more 'vulnerable' residents.

Compensation

The issue of compensation and whether the pathfinder projects have in effect been compensating individuals for the loss of their home is a complex one. The government has always taken the position that it will not compensate individuals for the loss of their property due to coastal erosion.

Compensation can refer to situations where households have received financial support which is above the at risk value of their property and as such it is possible 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" has been awarded to these households. However, the argument here is that the local authority wanted the households to move quickly and so in this sense they are in a weak bargaining position and will need to pay more. A programme operating over longer timescales might be able to avoid paying compensation to the same extent.

It is also possible that financial support at the 'at risk value' amounts to compensation if this is not recovered elsewhere. In Tendring for example, properties

are at risk of coastal erosion have been bought through the pathfinder project (though the key driver for the scheme was to tackle regeneration) and this could amount to compensation. 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.

The East Riding case is not as straightforward. In this case, individuals are receiving an incentive to relocate (with the argument being that households being made homeless through other means would not receive this). They 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 unfair. However, again, the counter-argument is that this could be justified if it does assist with relocation away from the coast in a more planned and orderly manner.

Buy and Lease Back

As set out above, a number of local authorities have considered implementing buy and lease back in their local authority areas. However, this has not worked for a number of reasons, largely due to the cost of bringing properties up to a suitable standard which can be leased out and due to a lack of interest from Registered Social Landlords or other suitable organisations which can lease out the properties. This has not worked to date which is a valuable lesson for relevant organisations planning for coastal change.

Demolition of Properties

A number of the Pathfinder areas do not appear to have accessed separate funding available to support the cost of demolition (in some cases, this was because the properties were not eligible since they were being demolished prior to the properties becoming at immediate risk). It is also apparent from speaking to Pathfinder areas that the cost of demolition varies considerably from property to property and that in many cases this has been a lot higher than anticipated and higher than the coastal erosion assistance grant which is 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 the choice of contractor (one pathfinder indicated that they had to use a preferred supplier selected by the local authority).

Lack of available sites

The Pathfinder programmes have highlighted the difficulties in finding suitable sites for rollback. East Riding for example has had difficulties 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 site due to the fact that again there are limited sites available which are not at risk from coastal erosion. This has led to significant delays in the project and dissatisfaction from the local community that do not appear to be happy with the Council's preferred site (and would prefer a site which is not compliant with planning policy). In Happisburgh, there have been difficulties in identifying suitable sites for

business uses (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 uses, however this was selected since there was a lack of suitable available sites allocated for housing.

Lack of Guidance on Legislation

The Pathfinder projects have allowed local authorities to explore what is possible within current legislation and to learn lessons throughout this process. East Riding for example has used building control powers to support coastal adaptation activities. Further information is required for local authorities on the legislation which can be used to support coastal adaptation and in addition, these powers may need to be reviewed and tailored to the requirements of these areas. For example, there is a lack of guidance around voluntary demolition agreements (Section 80 notices) and housing regulations such as the need for a 21 year rental period for homes managed by the public sector, could potentially be reviewed in coastal areas.

Lessons for Future Policy and Programmes

Rollback and Buy and Lease Back

Whilst none of the Pathfinder areas have fully implemented a **rollback** programme, good progress has been made in a number of areas, developing workable models which could be refined and applied elsewhere. This appears to work well for businesses (where they can fund rollback or obtain a loan). The Waveney rollback scheme performs better than other projects in terms of its benefit cost ratio (public “BCR” 1.9:1). This provides a model which could be replicated elsewhere. However, this model relies on householders affected by erosion having the means to fund rebuilding of their properties elsewhere (and it is too early to say whether this will work in practice). None of the projects suggested that rollback schemes could be implemented without some subsidy from the government. However, North Norfolk’s 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). This approach may not be appropriate in other areas where property/land values are low (for example in Jaywick). The North Norfolk model also demonstrated how a rollback scheme could be integrated with other adaptation projects to bring benefits to the wider community.

To conclude, there are elements of good practice within all of the projects being trialled and combinations of these (for example the Waveney and North Norfolk approaches) may deliver models which add value and could be replicated on a larger scale.

Buy and lease back does not appear to work in practice due to the costs involved and the risks to the local authority. The government could carry out some further work to investigate whether this is feasible and whether legislation (e.g. housing regulations) may 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. However, our conclusion is that buy and lease back does not appear to 'stack up' financially and as such may not be an appropriate mechanism to tackle issues associated with coastal erosion.

Other Lessons

Our research has pointed to a number of other lessons which can inform delivery of future programmes. These are set out throughout the report and summarised below.

- There is a need to **plan ahead** to ensure that a more planned and co-ordinated approach is being taken 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 policy using monitoring information on the level of land required. This is in response to difficulties identified in finding suitable sites. It is likely that this may be easier for residential properties rather than business premises (due to their specific requirements), though 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 able to inform prospective buyers in a way which is informative and effective. Local authorities also have a role to ensure that they have up to date and accurate information on coastal erosion and the impacts on properties.
- 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. This would help local authorities to use existing mechanisms to support adaptation since it is felt that the potential exists but people do not know how to use these mechanisms. This could be provided by government or under the new localism agenda, pathfinder local authorities themselves could do this (perhaps in partnership with government). As identified above, there is a particular need to consider how **planning policy** can be used to support coastal adaptation. East Ridings attempt to remove the residential status of properties and North Norfolk's rollback policy are two examples of this.
- Due to the comments made by a number of Pathfinder areas, the government may need to consider the assistance with **demolition costs** provided which appears to be low and not very flexible. This was reported by a number of the pathfinders including East Riding and Tendring. As a result of the pathfinder projects, these areas now have greater levels of evidence on the cost of

demolition and East Riding is preparing a report which will set out further information on the cost of demolition.

- A **partnership approach** should be encouraged in tackling coastal erosion. For example, the East Riding Coastal Officers Working Group could be replicated across locations at risk. Our work has suggested that there are benefits of ensuring a joined up approach where key council services such as planning, housing and building control work together to tackle issues associated with coastal erosion. This has not worked as well as it could in some areas (e.g. Scarborough).
- The approach to **monitoring and assessing risk** and targeting support at those within the most imminent risk category could also be replicated (East Riding). This will ensure that support is targeted where it is needed most.
- Finally, the Pathfinder programme points to the need to set a clear **market failure** rationale at the start of a project supported by government funding and with SMART objectives. There is a need to set out clear impacts and outcomes which can be used to measure the success of the programme and to monitor the delivery of programmes against these on an ongoing basis and at the end of the project.
- Linked to this, there is also a need to specify what the intended community and regeneration benefits and to consider whether and how these can be captured and appraised.
- It is clear from the pathfinder projects that there is no 'one size fits all' approach to tackling coastal erosion and that this needs to reflect local needs, with a clear understanding of the level of risk locally.
- Much of the money allocated to the five largest pathfinder projects has not yet been spent therefore it is too early to assess the benefits.

4. Tendring Coastal Change Pathfinder Project

Project Overview

Rationale, Aims and Objectives

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. In addition to facing marine and geophysical challenges, Tendring is host to a number of severely deprived areas, including the Brooklands and Grasslands area of Jaywick which has been demoted to the most deprived area within the country (2010 IMD, using Lower Super Output Area), and in addition suffers from some of the negative issues associated with tourism economies.

This combination of socio-economic need and threat from coastal change is identified by the Council as a priority for intervention and a suite of projects was proposed accordingly in its application for Pathfinder funding, each of which will inform the Local Development Framework process and new regeneration and tourism strategies.

Three of five proposed projects were awarded Pathfinder Funding and these are described below together with their rationale:

- **Jaywick:** a programme of acquisition of properties at risk from coastal flooding. The issue here is that flood risk is preventing development of new homes at Jaywick (as a result of PPS25) and hence a programme of buy to demolish has been 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 help improve economic wellbeing. There was an ambition to reduce dwelling densities and crime. The purchase and demolition of properties would also slow the transition of dwellings from owner occupation to private rented and remove poor quality housing that contributes to poor health. A study²⁵ was carried out in 2006 which recommended compulsory purchase of properties at Jaywick should be implemented.
- **Walton on the Naze:** development of the Crag Walk; an educational revetment or defence project and walkway which provides support to protect heritage and key infrastructure assets (residential properties are at risk in the longer term). The Pathfinder funding was originally intended to support the education of visitors on issues related to coastal erosion (in reality the project has supported more than this, including the defence elements of the project).
- **Tendring Peninsula:** Via a feasibility study which identifies regeneration and tourism related opportunities for investment and development (this project received funding but has not yet gone ahead).

Two projects formed part of the original bid but were not supported via the Pathfinder project (due to the fact that these did not fully support the wider objectives of adaptation) and these included a **Marina Development** and **Harwich Heritage Assets** were also proposed in the bid

²⁵ Jaywick Regeneration Framework , Llewelyn Davies Yeang with Environment Trust Associates, Knight Frank and WSP Development, August 2006

but did not receive support. These were intended to identify suitable sites for a new marina facility and regenerate Beacon Hill Fort.

Actual Delivery

Jaywick

Pathfinder funding was used to **acquire four properties** at Jaywick and these were subsequently demolished at the expense of Essex CC. 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 or other sources that 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.

The Pathfinder project also supported the construction of **Brooklands Gardens** which is located in Jaywick (and 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 site is a former brownfield area approximately 25m from the sea defences in Jaywick. It is located at the heart of the neighbourhood and was owned by EEDA (now owned by Tendring DC) but has been derelict for a number of years. It is effectively blighted land as it is not possible to redevelop the land for residential uses due to PPS25 and as such the scheme represents a way of bringing land into a use that is compatible with local planning policy and flood risk management. The project demonstrates how land use can be adapted away from residential settlement to alternative uses.

A Community Development Worker has been recruited within the Jaywick Neighbourhood Team to advise residents on coastal adaptation 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. 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 PPS25 and the development restrictions which this affects.

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

Crag walk is a 150 metre long rock revetment in front of the cliffs adjacent to the Naze Tower. It forms a viewing platform and includes interpretation boards to educate 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 of the interpretation boards learn about coastal erosion processes and the environmental changes occurring in the area. Crag Walk construction began in November and was opened in April 2011, with an official opening in June 2011.

Pathfinder funding was originally intended to support the educational elements of the scheme, however in reality the funding has been 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.

The Naze Heritage Project steering group oversaw the project and this comprised of a number of bodies supported by DEFRA and the Haven Gateway Partnership (HGP). These included: Essex Wildlife Trust, Tendring District Council, Naze Protection Society, Essex County Council, Naze Tower, Frinton and Walton Town Council and local landowners.

Tendring Peninsula

This project was not delivered through the Pathfinder programme. The proposal was to commission a tourism study for the area, however Tendring DC is currently awaiting the publication of the Shoreline Management Plan (SMP) and is also reviewing its draft Local Development Framework, (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.

Costs and Funding

Tendring District Council was awarded £1 million to deliver its Pathfinder programme overall. This consisted of £853,598 capital and £146,402 revenue spend. An additional £641,711 was contributed by other funders, as shown in the tables below, giving a total of £1,641,711 for the scheme. The key points to note are as follows:

- There is 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 proposed that Pathfinder funding would be used to support the educational elements of Crag Walk but this appears to have also supported defence.

Table 4-1 Total Costs and Funding for the Pathfinder Project - Actual

	Pathfinder	Other Funding				
		ECC	TDC	FWTC	HGP	NPS
Jaywick						
Jaywick Adaptive Solutions	£175,542					
Purchase of Properties	£116,000					
Green Spine	£50,000					
Other costs (studies)	£9,542					
Demolition		£60,000				
Community Development Worker	£46,402					
<i>Total Spend Jaywick</i>	<i>£221,944</i>					
Crag Walk						
Scoping, Consultancy, Planning and Surveying Work			£13,143	£5,275	£10,000	£29,309
Educational/Interpretation Boards				£4,700		£646
Construction Work	£520,000	£355,476				£163,164
<i>Total Spend Crag Walk</i>	<i>£520,000</i>	<i>£415,476</i>	<i>£13,143</i>	<i>£9,975</i>	<i>£10,000</i>	<i>£193,118</i>
Total Spend to Date All Projects	£741,944					
Future Spend	£258,056					

Source: Tendring District Council
 NB: ECC (Essex County Council), TDC (Tendring District Council), FWTC (Frinton & Walton Town Council), HGP (Haven Gateway Partnership), NPS (Naze Protection Society)

Achievements and Impacts

Overview of Achievements

The key achievements are summarised below:

- Protection/Removal of properties at risk:
 - Four households in Jaywick have been removed from risk of coastal erosion
 - The Crag Walk project has prevented the imminent loss of the grade II listed Naze Tower, which stands only 60 metres from a cliff edge which prior to the revetment

was eroding at a rate of approximately 2 metres 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 (we understand that these were not insured). 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 we would not expect this to be the case.
- 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 has been well accepted within the community and that this has helped to strengthen community cohesion (creating strong and positive relationships). However, there are already a number of other community representatives working within the area which is also supporting this objective.
- 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. There are plans for Phase II of the project which will include a Visitor Centre and more signage which will further increase the potential to attract visitors to the area.

Additionality

It is thought that the **demolition and acquisition programme** may have been implemented even in the absence of the Pathfinder programme since this was a key objective of the council relating the regeneration aspirations for Jaywick.

It is thought that Pathfinder funding has 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.

Value for Money (VfM) Assessment

Jaywick Removal

- It is 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
- The Intervention results in a negative cost benefit value – 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’ intervention this is neutral.
- Clearly, however, the VfM 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.

Table 4-2 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: Regeneration 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 (colour coding denotes largely positive, neutral or negative impact)	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 impacts on regeneration would be limited.	The project has some regenerative potential, in reducing the number of low quality properties in Jaywick. However, the regenerative impact is limited given the 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.
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)			
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),			

It needs to be made clear that that the primary aim of the project was to reduce the number of properties in Jaywick and this has made some progress towards this aim. The project sought to achieve wider regeneration objectives (such as reduced crime, blight and levels of deprivation) which have not been measured and which are likely to be low due to the small scale demolition which took place. Unlike other pathfinder areas, the properties in Jaywick are not at immediate risk from coastal erosion and as such this objective was secondary to the main objective.

Whilst there is a negative BCR, the intervention has led to some benefits, for example for one elderly owner the income received is being used to support them in a residential home. One property owner however was located overseas and so the income is not going to be used to lead to economic benefits for the UK economy. Another owner relocated to another property in Brooklands and as such these individuals themselves have not been reduced from risk (although the total number of households at risk has reduced slightly as a result of the project).

Crag Walk

A quantitative assessment of the costs and benefits of the project is set out in the table below. In order to understand the net benefits / costs, we have 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 main assumptions made in the analysis are set out the table.

The impacts related to the project are varied and in some cases intangible. As such, in some cases it has not been possible to quantify the impacts. In these instances, the nature of the impact has been described and colour coding allotted to indicate whether the impact is largely positive (green), neutral (amber) or negative (red).

		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 <i>(source: Regeneris calculation)</i>	£315,000 (E-D)		
	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.
<p>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.</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>			
<p>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.</p>			

Key Lessons Learned

What Worked Well

Jaywick

One of the key strengths of the project is the **partnerships** which have been created. A collective approach to tackling the issues at Jaywick has been taken between Essex CC and Tendring DC and this was not the case previously. It is proposed that the Community Development Worker which was recruited will be embedded within the Tendring DC Regeneration Team in the future and this will further increase buy in from the County Council.

Elsewhere, existing links with the Environment Agency and County Planning officers have been strengthened through work to develop community awareness events and a communication plan to deliver public messages on the emerging Shoreline Management Plan. It is possible that links such as these might be able to assist in generating a joint approach to planning and other services in the area.

The **Jaywick Development Worker** has been instrumental in developing key relationships with and between community members via the Home Owner Occupiers group (HOO). This has facilitated improved dialogue between the community and Council and encouraged the increased energy of other groups including the Jaywick Community Forum. As a result of both the efforts of the Development Worker and support for the HOO and Community Forum, local community members are now increasingly aware of the issues facing their area and are more engaged in the Pathfinder project.

Crag Walk

Crag Walk is an **innovative project** since it creates a rock structure which is designed to be used by the public and which has their safety at the forefront of the scheme. It provides some enhanced natural stabilisation for the cliff and its heritage, residential, business and infrastructure assets. Whilst the erosion process will continue, the Crag Walk structure will allow the cliff material to stabilise with a lower gradient and is intended to be extended in the future to prevent against outflank as the cliff recedes gradually. It is reported that there is not another structure like this in the UK.

As well as protecting assets, a key element of the project is to allow visitors to better understand coastal erosion and its impacts through a viewing platform and interpretation boards.

Tendring DC has been successful in delivering a major scheme through a **strong partnership** including local authorities, the Haven Gateway Partnership and the Naze Protection Society. It has been able to attract significant match funding and benefited from a major support campaign, led by the Naze Protection Society. The campaign has been a key factor in generating widespread support and match funding for the project and has also generated significant media attention with over 700 people attending an opening event.

It will allow Crag Walk to continue to attract visitors and the partnership has begun work on the second phase which will design, cost, fund and build a visitor centre and additional interpretation.

What Worked Less Well

Jaywick

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 be 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 to coastal erosion since the money being paid to households is not being recouped elsewhere.

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 are also reported to be a high proportion of landlords at Jaywick who benefit financially from these properties and there was reported to be widespread public resistance from landlords to 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 is heightened by a lack of financial means to adapt. The Development Worker found that residents do not accept the issues should change their lives because of existing works by EA, the misunderstanding of a 1 in 200 year flood, and the lack of flood or sea level rise in their lifetime. The local authority felt that the fact people were unable to move out of the area drove them to ignore or deny the risk.

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.

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 consultations. Early involvement of the community development worker may have prevented this.

The Council wanted to consider **Buy and Lease** back. However, existing housing proved 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.

Whilst education can raise awareness of the need for coastal change, unless the erosion/climate change affects are apparent and immediate it is very difficult to get **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.

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, this would lead us to question whether the funding could have been used to support other projects which could have helped communities to better adapt to coastal change (e.g. rollback schemes), though it should be recognised that Tendring District Council did consult with Defra on whether to fund this project.

Lessons for Future Policy and Programmes

There are a number of lessons from Tendring's experience which are important. The first is 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 Tendring 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.

It is vital that consideration is made for the political and social context of areas, with Tendring District Councils response reflecting their own unique circumstances. Jaywick has socio-economic and regeneration issues which are considered more deep seated and urgent (at least by residents) than coastal flooding issues; the problem is perceived to be first and foremost a housing problem which is stressed by a coastal change issue, although in reality the latter massively compounds and 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.

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.

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 if this is not carried out in a planned and co-ordinated way. Furthermore, there was no means testing or eligibility criteria for beneficiaries with some second home owners benefitting as well as those whose homes were burnt down anyway (though the purchase price did reflect this).

Though not within the remit of the Pathfinder programme, the regeneration issues at Jaywick are also important. The issues at Jaywick are extremely complex and a planned and co-ordinated approach is required to tackle these issues. The acquisition and demolition of only four properties is likely to have made very little impact in tackling the social and regeneration issues which exist. Essex County Council and Tendring District Council recognise the need to work together to tackle the issues which exist but this must be done in a planned way.

5. Scarborough Coastal Change Pathfinder Project

Project Overview

Rationale, Aims and Objectives

Cayton Bay is located on the North Yorkshire coast approximately 3.5km south of Scarborough. The Knipe Point community comprise of 56 properties which are close to the crest of the Cayton Cliffs and which were developed in the 1980s. The site was originally a holiday village which was converted to temporary holiday accommodation. The majority of homes are reported to be occupied by elderly residents (most are between 65-85 years) and a number of these are second homes.

In April 2008, a large scale historic landslide was reactivated and within a short period three properties had to be demolished in the interests of safety. Other properties nearest to the receding coastal slope remain at risk in the short term. The land affected is privately owned by the National Trust and Knipe Point Freeholders Ltd.

Following the landslide in April 2008, the Council initially secured grant aid from the Environment Agency to undertake a site investigation to establish the causes and mechanisms of the coastal landslide to inform accurate assessments of the risks to property. The resultant report²⁶ identified properties at risk in various failure scenarios and 15 properties at Knipe Point were identified as being at immediate risk (within 0 to 1 year)²⁷. The report also considered options for defending the area but with a cost of £20m for a preferred scenario relative to the benefits of protecting residential properties at risk, valued at £8.4m this was deemed as not offering good value for money.

A Pathfinder bid was submitted to seek funding to initially purchase land in proximity to Knipe Point but not at risk of coastal erosion or land instability. This funding would be drawn down once a parcel of land was identified. Planning permission would then be obtained to re-dedicate the land to permit residential development. At risk property owners would then be offered the option of rebuilding their homes on the new development. This offer would be conditional and the exact terms and conditions were to be worked up as part of the project but likely to include a resale/lease restriction to prevent profit gain.

The Pathfinder was specifically set up to look at bridging the gap between the payments people receive from their insurance companies for the loss of their properties (insurance companies pay out for landslides but not for coastal erosion) and the lack of cover for the loss of the land that their properties stand on. The grant is specifically tied into providing replacement land for people to then use any money received from their insurance companies to build a new home (which can be developed on a “rollback” site elsewhere).

The bid was one of three options submitted to Defra and the other two (financial recompense to individuals at Knipe Point for their loss of homes and assisting those at immediate risk with relocation and demolition costs) were refused.

²⁶ Cayton Bay Cliff Stability Assessment Ground Investigation and Appraisal of Engineering Stabilisation Options, April 2009

²⁷ In reality the rate of slippage has been slower and no further properties have been lost to date

Actual Delivery

Delivery to Date

Community Engagement

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 those properties at immediate risk (initially 0-1 year) of which there are 15. Eleven of these are second homes.

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.

Originally, it was the case that only where properties are the sole residential properties of the homeowner could they be eligible, that is if the property was a second home, a buy to let property or other investment property they would not be eligible. However, following consultation with residents the eligibility criteria was amended by the council to include second home owners. The reasoning for this was that the Pathfinder project is seeking to assist residents adapt to coastal change where no coast protection scheme is feasible. However, if a scheme was feasible this would have provided protection for second home owners.

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.

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 all preferred the council to purchase a communal plot.

Site Appraisal

The next stage was therefore to identify a suitable site. A sites options appraisal study, which aimed to identify a suitable site was completed in 30 April 2011²⁸. The council carried out the assessment, and each site has been assessed against key criteria which includes 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).

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 identified which had already reached Outline Planning consent. The three sites which were considered in more detail included the following:

- **Middle Deepdale:** owned by Kebbel Homes and Scarborough Borough Council on the southern boundary of Deepdale (near Scarborough). This site, which totals 45.8ha is able to accommodate 1,200 homes. Land is allocated in the local plan and submission of a planning application was anticipated for late April 2011.

²⁸ Coastal Change Adaptation Pathfinder Site Options Appraisal, Scarborough Council (30 August 2011)

- **West Garth:** owned by Barrett Homes and situated to the south of West Garth and west of Station road Cayton the land is currently in agricultural use. The site is 6.4ha in size and the development would comprise 170 homes. The land is allocated for housing and full planning permission has been obtained. Construction is expected to commence in late 2011.
- **Muston Road, Filey:** the majority of the site is in the ownership of Coast and Country Homes, with the remainder being in the ownership of Scarborough BC. Coast and County Homes are attempting to purchase the Council's land ownership. A total of 300 homes are proposed. The site has obtained full planning permission.

These additional sites were identified by residents and these included the following:

- **Rosedale Caravan Park:** located around ½ a mile to the South East of Scarborough, over 9 hectares of land is available which has planning permission for 19 statics or log cabins on approximately 1.21ha. The park was rejected as a housing site in the LDF on the grounds that the development would result in the expansion of the town.
- **Saxon Park:** a designated Site of Importance for Nature Conservation (SINC) offering the opportunity to relocate to eco-friendly, energy efficient luxury timber lodges, located approximately 4 miles from Scarborough. The site has planning permission for 27 holiday chalets with restrictions on occupation. The site can only be used for holiday accommodation and cannot be occupied for periods exceeding one calendar month at a time by the same occupants. They are not supposed to be used as the main place of residence. Conversion to residential / 12 month occupancy would require a new planning application which it is thought would be unlikely to be accepted. The infrastructure is likely to require upgrading and the cost is above that proposed by the council. This is the residents preferred site.
- **Land adjacent to Knipe Point, Filey Road:** owned by Scarborough Council and immediately next to Knipe Point Drive. The site is not allocated for housing in the LDF and is currently used as agricultural land. The land is leased to a tenant farmer. Although the site is located outside the current Coastal Erosion Zone, it is merely metres from the cliff's edge near to the coastal road and as such it is deemed as inappropriate to locate a new residential development within this area.

The report recommends that Muston Road, Filey is considered as the preferred site. Initial discussions have indicated that residents are not happy with Muston Road since they do not wish to be part of a larger housing development. It is considered to be far away from facilities such as hospitals and in close proximity to a school (and the potential disruption which may be caused by being located close to school children). There are also reportedly concerns over the fact that some social housing will be provided as part of the scheme. Residents 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 Way site and have engaged planning consultants to do this on their own behalf.

Future Delivery

At this stage, it is not clear how the project will be delivered in the future and 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 Way which will allow them to relocate to their preferred site. Scarborough Council have

indicated that they are not opposed to giving the money back to Defra if an acceptable solution for all parties involved could not be found.

Costs and Funding

The costs for the Pathfinder bid is shown below and this includes the following:

- A project management fee of £22,500 to cover Scarborough Borough Council's involvement in the project from its beginning to end encompassing officer time, public and stakeholder meetings, liaison with Defra and insurance companies, the development of a risk register and its maintenance, the development of communication plans and the development of a 'lessons learnt' log.
- Estimated costs for the purchase of land and installation of services. The bid also included funding to cover the cost of demolition for the 15 properties (£5,000 per property was allocated to the project).

To date, only £16,900 has been spent on project management. It is expected that the future costs of purchasing a site will be below that originally expected (£750,000). Scarborough received £1m from the Pathfinder project and it is not clear at this stage how the remaining money will be spent.

Table 5-1 Scarborough Pathfinder Project			
	Pathfinder Funding Spend to Date		Pathfinder Funding Future Proposed Spend
	Proposed	Actual	
Purchase of land for property rebuild	£500,000	-	£750,000
Installation of Services	£500,000	-	
Project Management	£22,500	£16,900	£5,600
Total	£1,022,500	£16,900	£755,600
Source: Scarborough BC and Pathfinder bid			

In addition, the bid referred to the other sources of funding which include £75,000 per property for insurance costs, and site monitoring/analysis costs incurred by the National Trust (£44,000) which most likely would be carried out anyway.

Achievements and Impacts

Overview of Achievements

To date, the project has not achieved what it set out to do and it is difficult to point to clear and measurable achievements, though there is one:

- 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 the number of enquiries to the Council about levels of risk associated with properties. This is likely to be due to the landslide itself and the subsequent issues rather than the Pathfinder itself.
 - A 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.

Instead, there appears to be some **negative impacts** which have occurred:

- Lessons in adaptation which can inform future delivery
 - Whilst the project has encountered a number of difficulties which have hindered the potential to demonstrate clear outcomes, the project does demonstrate the difficulties of getting community buy in to a rollback scheme and the time taken to gain consensus and deliver. This also challenges the assumption that rollback schemes should aim to keep members of the community located together since this turned out not be a priority for residents at Knipe Point. The lessons should inform other programmes.
- Community Cohesion (negative impacts)
 - Following on from the landslide at Knipe Point and during the delivery of the Pathfinder project, there have been negative impacts around community cohesion. There have been particular difficulties between the council and residents at Knipe Point with residents reportedly unhappy with the slow progress made by the Pathfinder and their perception that it is not delivering their desired outcome.
 - 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 Expected Achievements

Below, we try to consider what the expected achievements of the project might be if successfully implemented in the future (however it needs to be recognised that it is not clear at this stage whether this will in fact be implemented).

- Protection / 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 is a SSSI area and there are positive environmental benefits of moving people away from the area.

Value for Money (VfM) Assessment

Scarborough Rollback

A quantitative assessment of the costs and benefits of the project is set out in the table below. In order to understand the net benefits / costs, we have 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 main assumptions made in the analysis are set out the table.

The impacts related to the project are varied and in some cases intangible. As such, in some cases it has not been possible to quantify the impacts. In these instances, the nature of the impact has been described and colour coding allotted to indicate whether the impact is largely positive (green), neutral (amber) or negative (red).

Whilst this project does appear to achieve a fairly good benefit cost ratio, it is important to bear in mind the points below 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.

Table 5-2 Scarborough Rollback of 15 Properties

		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 and 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)	£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	Societal Cost	£103,000 (B/D)		

	Property (unit cost)	Public Cost	£56,500 (C/D)	
Other Impacts (colour coding denotes largely positive, neutral or negative impact)	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.
	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>				

Additionality

A lot was already being done to support the community at Knipe Point, for example the EA 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.

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 reported that a number of these 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 the Pathfinder might provide. Since some are second home owners anyway (with properties in West Yorkshire), some may not have needed or wished to purchase another property.

Key Lessons Learned

What Worked Well

The Pathfinder project and the issues which have arisen at Knipe Point as well as the resulting publicity have helped to **raise awareness of the risks** associated with purchasing coastal properties. Knipe Point has been the subject of much media coverage, both positive and negative and it is now widely acknowledged that Scarborough has a “crumbling coastline”. This has resulted in an increase in the number of enquires to the council from individuals wishing to purchase coastal properties and greater consideration of whether these properties might be a good long term investment. The general perception of defence at any cost for everyone has also been reduced. However, this is likely to be due to the landslide which occurred and the loss of properties.

One of the **eligibility criteria** was that properties needed to be purchased before the Pathfinder consultation document was launched in June 2009. This has prevented the speculative purchasing of at risk properties.

As a result of the Pathfinder, there has been **improved working with other council departments** such as planners but there is still some way to go with this. Previously planners not engaged at all with coastal risk management and now they have a stronger awareness of the situation and are more willing to engage with coastal risk management. Despite the issues acknowledged below with regards to community engagement, it should be recognised that council officers have worked very hard to engage with the community and significant time has been dedicated to consultation and engagement with individuals.

What Worked Less Well

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.

It has **taken longer than originally expected by residents to remove them from risk**. The targeted population was supposed to be at risk within 0 to 1 year, and to date none of the properties has been lost. It is reported that some residents have been waiting to see what the Pathfinder project would offer before relocating away from the area. 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 feels that it would have been better to select the land without any consultation and then offer it to residents on a take it or leave it basis and to draw down the funding following on from this (residents are reported to have seen the fund as their money). This would remove the element of doubt and reduce protracted negotiations.

The extent to which this can be **applied to other coastal areas** is however limited since these areas will not receive insurance payments. This could however be replicated where individuals have the ability to pay themselves.

There has been no **means testing** as part of the programme. The criteria which was 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, however they 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.

The **different agendas and needs** between second home owners and those who aren't may not have provided the best result and this has meant that those vulnerable residents have not been supported as quickly as they should.

There have been more difficulties than first thought with payments from **insurance companies** and this has not been consistent. Some insurance coverage only pays out on actual loss whereas other cover has paid out in advance of loss. The effect of not paying out until the loss occurs has had the effect of trapping residents which are at risk and made relocation impossible until the property is actually at risk. Many insurance companies have reviewed their exposure to risk in the area and may have increased premiums, cancelled policies or offered settlements below what they are entitled to. One person was contacted by their insurance company to say that their firm was going to cancel the contract. They were taken to court and lost the case but were given £20,000 as a good will gesture. The quality of the insurance coverage and what this includes varies widely across the site.

In the early stages of the project, the community at Knipe Point 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 is allocated for housing in the core strategy. This has helped to delay the process, though the removal of urgency (the properties were originally supposed to be lost within a year) has also allowed extended debate on the preferred site. A number of factors have 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.

It is taking longer than expected to gain consensus from residents and **community engagement** does not appear to have been a strength of the project. There has been some concern throughout the project over whether the views of the community representative are the same as those of 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.

During the evaluation, it has been indicated that the situation would benefit from an **independent mediator** which could work with the community and Scarborough Council to resolve the situation.

The Scarborough Pathfinder project has not sought external support throughout. One area where this may have been beneficial is in carrying out the site appraisal study. If this was **commissioned independently**, it would perhaps have given this the necessary authority and independence required to carry weight.

Lessons for Future Policy and Programmes

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.

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 are doing so with a full understanding of the potential threat that they may lose their home.

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. They are discussing with planners 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 be unfeasible for the council to purchase sites unless council tax could be increased to raise funds locally to cover this cost.

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 need for eligibility testing where the government intervenes, since there does not appear to be a strong market failure argument in these cases.

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.

6. East Riding Coastal Change Pathfinder Project

Project Overview

Rationale, Aims and Objectives

East Riding of Yorkshire Council has a track record in developing new approaches to the challenges of coastal change. The Council was the first local authority to develop an ICZM Plan in 2002 and was amongst the first to develop and adopt specific adaptation mechanisms in the form of rollback policies for both residential properties and caravan / holiday home parks. In combination with this, East Riding Elected Members and officers have continued to lobby Central Government for financial assistance to support coastal communities at risk from coastal erosion in the East Riding.

The Pathfinder project was focused on taking a risk based approach to providing practical support and guidance to those groups and isolated individuals who have been identified as most vulnerable. A key objective was to ensure that the Pathfinder does not provide compensation for loss but rather provide assistance to those who are seeking to adapt to the impacts of coastal change and to ultimately remove them from risk. The bid also hints at the fact that part of the rationale is in helping residents to stay in the area in which they live where appropriate.

The bid set out the following aims:

- Support communities and in particular vulnerable groups to ensure the sustainability of coastal communities and raise awareness of this across the wider East Riding.
- Use the Pathfinder to promote partnership working and draw in contributions from other funders, partners and stakeholders.
- Seek to maximise the engagement and involvement of local communities through the further development of the recognised best-practice approach, Integrated Coastal Zone Management (ICZM).
- Mesh any developed adaptation measures with wider and longer term initiatives such as the SMP2 action plan and subsequent reviews and spatial planning approaches (in line with PPS25).

The Holderness Coastline is the area most at risk from coastal erosion in the East Riding. From Bridlington in the north to Spurn Point at the southernmost point of the Holderness Coast there are some 22 settlements that are immediately at or are within close proximity to the coast and have outlying properties that are immediately at risk from coastal erosion. Ongoing coastal monitoring confirms an average rate of erosion along the East Riding coast of between 1.5 and 2.5m per year with isolated individual losses in excess of 20m recorded in some years.

The council could have pursued an area specific programme aimed at supporting a particular coastal community. However, due to the fact that rapid erosion rates affect the majority of the East Riding coast (and that most at risk properties are widely dispersed) it was considered more appropriate to offer support which could be applied to any number of coastal communities.

Actual Delivery

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 meets on a monthly basis to discuss the broad strategy for dealing with coastal erosion/PF 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, with the council allowing those who are at risk of losing properties to erosion rebuild elsewhere, (although no financial assistance has been provided). 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 has 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). 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 1950s.
- 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

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 Enhanced Assistance Package is now available to level 3 (lower risk) applicants.

Depending on the level of risk assessed, a personal Pathfinder plan will be produced which details the level of assistance available from either the relocation package or the adaptation package with support specific to their needs (for example some may simply receive help with demolition costs). Second home owners will only receive help with demolition costs and cannot access the support below.

At Level 1, the following **relocation package** is available:

- 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
- Provide essential second hand furnishings and white good for new dwelling through support from the third sector (up to £3,000)

At Levels 2 and 3, it is proposed that for those residents located in permanent dwellings at higher risk, the following **adaptation package** would be available or access to Relocation Package as detailed above:

- Buy and lease back option (see below)
- Erosion adaptation assistance grants, awarded by an ICZM panel to provide financial assistance where residents feel they are able to adapt their living environment rather than move out of the property immediately (up to £2,000).

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 existing rollback policies. In relation to delivery of the Enhanced Assistance Package, the Council envisaged exploring rollback where there was a need to relocate an entire community. However, this did not occur in practice and the key reasons for this are identified below (lessons learned).

Buy and lease back was offered to residents as part of the enhanced assistance package. Three people came forward to be considered, however initial discussions with the council have suggested that it is unlikely that these will be viable.

For a number of reasons, the Buy and Lease Back component of the Enhanced Assistance Package has proved more difficult to test within the Council's corporate structure and wider legislative and policy framework than had been anticipated. In recognition of the barriers to delivering the Buy and Lease Back option (described below) the Pathfinder explored alternative property acquisition models to enable further testing of property acquisition models. The alternatives considered were:

- **Buy to demolish:** due to the prevailing No Active Intervention SMP policy in the locations being considered, it was felt by East Riding that this option represented compensation rather than adaptation. As this option would not be available to those at imminent risk where there was no choice but to demolish it was rejected as an inequitable option. Furthermore, this approach was already being tested by another Pathfinder authority; therefore further investigation would have represented duplication.
- **Realising the rollback value of the property:** it was felt that this approach would encourage an inappropriate incentive for the acquisition and use of these sites to secure relaxation of planning restrictions in other areas by developers (though this appears to be untested). In addition it was felt that this would represent a substantial variation from the original bid and require greater resources than were available. Furthermore, this approach was already being tested by another Pathfinder authority, therefore East Riding did not wish to duplicate this option.
- **Removing the residential status of the property being considered:** the aim of this approach would be to enable the development of a buy and lease back scheme for commercial use only, in order to avoid the difficulties associated with residential buy and leaseback. This would be achieved by valuing the property or its land based on any commercial value it may have for temporary use (e.g. for agricultural purposes such as storage of equipment). This option was considered to provide the resident with some financial assistance as well as remove the burden of demolition and land restoration costs. The drawback of this approach was that the anticipated amount of capital available to the resident would be considerably less than the market value of the property. It was considered that this approach was consistent with that being advocated through PPS 25 and the proposed introduction of Coastal Change Management Areas (CCMAs) (i.e. appropriate temporary uses within the coastal zone). This planning policy has been introduced under PPS25. Following Pathfinder recommendation the approach received approval from the Council's Cabinet on 15 March 2011, though this has not been fully implemented to date.

Some Buy and Lease Back applications are now being reassessed based on the preferred option above (option 3) and will be progressed in due course, dependent on uptake from residents. It is still early days to determine whether this will work in practice. The case study below provides further insight into the process for considering rollback and buy and lease back. **[Case study removed to protect personal information]**.

Following further consideration of possible alternative approaches, the Council is now in the early stages of scoping the feasibility of supporting the provision of new build **social housing** in coastal locations not at risk. If successful, this would provide a limited number of properties where allocation priority would be given to those who can demonstrate their need is as a result of loss due to coastal change. Investigations by Sustainable Development, Asset Strategy, Housing and Planning are at a very early stage. For the proposal to be successful there would need to be fundamental changes made to the council's corporate housing policy which requires extensive internal and external consultation.

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 will be progressed in winter 2011, in light of ongoing changes to the Council's corporate website where the ICZM toolkit will be imbedded.

Costs and Funding

To date, the East Riding Pathfinder has spent £478,336 of their Pathfinder money. The remaining £727,273 has been allocated to continuing activities, focusing particularly on the Enhanced Assistance Package.

Table 6-1 East Riding Pathfinder Spend			
	Amount Spent to End of September '11	Committed Spend to March '12	Total Spend
Workshops, Consultations, Publications	£5,091	£34,909	£40,000
Staffing (Yr 1 and 2)	£32,690	£62,919	£95,609
Rollback Review and Links to LDF	-	£40,000	£40,000
Vulnerable Groups Priority Outcome / Enhanced Assistance (inc. relocation and adaptation)	£440,555	£553,200	£993,755
ICZM Adaptation	-	£36,245	£36,245
Managing Flood Risk	-	unknown	unknown
Total	£478,336	£727,273	£1,205,609
Source: East Riding Pathfinder			

The following table provides a breakdown of spend on the Enhanced Assistance Package (including relocation and adaptation) and this demonstrates that the majority of funding has been spent on demolition and site restoration costs.

Table 6-2 Enhanced Assistance: Financial Breakdown by Project	
Activity	Total allocated or defrayed spend up to end of September 2011 (£)

A-demolition and site restoration costs	£347,777
B-relocation costs	£2,882
C-hardship payment	£525
D-private tenancy costs including bond	£9,220
E-management/agent fees	£571
F-essential furnishings and white goods	£25,670
G-buy and lease back option	0
H-erosion adaptation assistance grants	£2,000
Small Grant Funds	£48,000
Exceptional Claims	£3,910
Total	£440,555
Source: East Riding Pathfinder	

The project required significant time from officers at East Riding to provide support, above levels anticipated at the start of the programme. **In kind support** provided throughout the programme is estimated to be in the region of £57,807.

Although not directly attributed to the delivery of the Pathfinder, funding of £22,500 was secured from the Environment Agency. This has been provided to carry out community engagement work which will complement and follow up engagement carried out as part of the Pathfinder but currently falls outside its remit.

Achievements and Impacts

Overview of Achievements

- Protection/Removal of properties at risk:
 - To date, 12 households have accepted support for relocation via the Enhanced Assistance Package and there are 3 households pending a decision:
 - 11 have moved into Council-owned accommodation
 - 1 into private accommodation (plus 1 pending)
 - 2 are expected to purchase new properties to be relocated to in the future
 - 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
 - 43 structures have been removed from risk (including temporary buildings and caravans)
- Increased knowledge and understanding of coastal change:

- The Pathfinder has helped to develop a better appreciation and understanding of the issues related to coastal change both within the Council and amongst coastal residents. 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.
- To date, 76 households have been engaged in the pathfinder, together with 9 businesses and 1 community group.
- Lessons in adaptation which can inform future delivery of programmes:
 - There have been particular lessons around rollback and buy and lease back, which are explained in more detail below.
- 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 Communications Tool will provide resources and information which can help residents to adapt to coastal change in the future.

Future Achievements

It should also be recognised that there is remaining Pathfinder funding available which will result in additional benefits in the future. This may include buy and lease back and will include the continuation of the enhanced assistance programme.

Value for Money (VfM) Assessment

It is important to note that, as with Jaywick, 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, again, 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.**

The Intervention results in a negative cost benefit value – 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’ under the Intervention this is neutral. The scale of the negative cost benefit reflects the scale of the project – the project involves the demolition of ten times as many properties compared to Jaywick.

Clearly, however, the VfM model does not take into account numerous other, relatively intangible impacts around issues of regeneration. **Whilst 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) have driven the case for Intervention, it has not been possible to monetise these impacts.**

Table 6-3 East Riding Demolition

		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 properties would not be replaced.	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 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 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 <i>(colour coding denotes largely positive, neutral or negative impact)</i>	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.
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, 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.
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.			

Additionality

The Pathfinder funding has allowed the council to take a more pro-active and co-ordinated approach and enabled them to trial new approaches where previously they would not have been able to afford to do so (e.g. trialling the enhanced assistance approach). The Council does not have any statutory duty to provide financial support for those at risk from coastal change. Where the 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 Enhanced Assistance Package (including the Small Grants Fund) has exceeded the standard support available through the Council, for example support for relocation via the Council's housing register. It is 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, for example 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.

It is not clear whether the coastal erosion grant could have been used to support demolition and removal of structures. However, it does appear that a significant part of the enhanced assistance package has been used to support the removal of structures in East Riding affected by coastal erosion.

The review of planning policy would have happened anyway but may not have been as effective without the Pathfinder, particularly since this led to greater collaborative working amongst council departments.

Key Lessons Learned

What Worked Well

One of the lasting benefits of the Council's approach to coastal management has been the development and adoption of a **consistent definition of 'imminent risk'** established as part of the Enhanced Assistance Package assessment. Previously properties were identified on an ad-hoc basis and their level of risk established on a case by case basis and using advice given by the Council's coastal engineers. While this approach appropriately considered relevant environmental factors (including cliff height) and monitoring information, it did not provide a consistent approach which could easily be applied regardless of location. The risk based approach ensures consistency and allows 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 place.

Whilst to date, there are no examples of **buy and lease back** being successfully implemented in East Riding, it is positive that the council has considered a range of different approaches, some of which have been extremely innovative (change of planning use) and will inform future thinking in this area.

There has been **strong demand for the enhanced assistance package** (facilitating relocation away from risk and adaptation). By reducing the financial burden associated with property demolition and relocation, the enhanced assistance package has provided an incentive for households to relocate away from unsafe properties, particularly if their properties are at higher rather than imminent risk for coastal erosion. Limited financial resources have been needed to facilitate relocation and this appears to have been successful.

One to one support provided through the Pathfinder to those at risk is considered to be essential and necessary in delivering the enhanced assistance package. In addition we feel that one-to-one visits are the only appropriate and reliable way in which to explain the issues that a given resident faces and also to sensitively deal with the very emotive changes that might need to be made e.g. demolition of someone's home and potentially moving away from their community.

Through engagement with coastal communities, **understanding of risk** and the process that takes place around the serving of property demolition notices has increased. Through the Pathfinder there have been clear signs of residents accepting the levels of risk faced to their properties, most clearly demonstrated by households accepting assistance to relocate from coastal locations to safe accommodation elsewhere in the East Riding of Yorkshire and beyond. Whilst expectations around funding for sea defences and compensation for loss have been high throughout the project, it is thought that the Pathfinder has generated understanding of coastal

processes and local coastal change management techniques which can be built on moving forwards.

An indirect benefit for the Pathfinder has been for coastal communities to gain a **better understanding of council functions**. The extent of the engagement which has taken place and the co-ordination of project delivery by the Coastal Officers Working Group mean that residents now understand the roles of teams who are involved in coastal service delivery. The increased levels of engagement and generally increased awareness have helped to build a generally positive relationship between residents involved and the Council. This has led to positive information on the Pathfinder being spread by word of mouth within affected coastal communities.

An integral part of the support delivery process is to gain **feedback from residents** receiving support through the Pathfinder programme. 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. Resident feedback interviews are planned for Autumn 2011 and this will inform an internal report for the council.

Partnership working and group structures is a real strength of the East Riding Pathfinder with greater cross authority working to tackle issues around coastal erosion. For example, sharing site specific information within the Coastal Officers Working Group has helped housing issues to be anticipated and resolved at an early stage. By identifying areas where properties are most at risk, housing officers were given more time to carry out preliminary searches for appropriate social housing options, based on the needs of particular residents. This has resulted in residents having a greater choice in terms of relocation options which would not have been available if their situation had not been anticipated at an early stage. This has highlighted where rapid housing support is required. There are a number of examples where other departments such as Building Control and Transport have worked closely together as well.

The East Riding Pathfinder has been particularly successful at securing **political buy-in** to fully meet the project's aims. The Pathfinder's proposed bid were approved by the Council's Cabinet on 15 September 2009 and further approval for the Pathfinder approach was gained in February 2010, with further amendments being approved in March 2011. This has allowed the awareness of coastal management issues to be raised with Elected Members who represent wards outside the coastal zone, creating greater levels of understanding and support for future coastal change initiatives. Elected Members have been further engaged through updates, briefings and a site visit. This raised awareness will be an advantage if future coastal change initiatives are forced to compete with other day to day priorities for funding.

What Worked Less Well

In East Riding, the Pathfinder has significantly **raised the expectations of residents** with regards to coastal change assistance however there is no guarantee that funding will be available in future. 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. In addition, residents may now expect even more support than the Pathfinder has been able to offer.

Whilst the council has made some progress in reviewing its rollback policies as part of its LDF, there have been limited examples of **rollback** being implemented in practice and none under

the Pathfinder programme. Key lessons on rollback include the need for the planning approach to provide sufficient flexibility for schemes to be tailored to the specific needs of coastal residents. The Pathfinder has highlighted potential barriers to the successful delivery of residential rollback including lack of financial capacity which is inevitably made worse when capital is lost through loss of property due to erosion. It has also prompted the Council to consider whether a more flexible approach could be taken in certain circumstances to allow some residential development to take place between the 50 and 100 year SMP lines as long as certain criteria are met. Such criteria 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.

This is especially relevant where the coastal residents wishing to Rollback have a genuine need to remain in the coastal zone (e.g. they are from a farming background and have their main or only land holding at the coast). These approaches may be consistent with the messages set out in the draft Coastal Change Policy and PPS25 and they will be fully explored when the review element of East Riding's local spatial planning approach is taken forward via the Pathfinder study. It is felt that the current changes being consulted via the draft National Planning Policy Framework may confuse the way in which such coastal change planning guidance can be developed locally.

There are individual cases where rollback can work, particularly with businesses such as caravan parks where they can afford to move. The Council will continue to promote rollback however technical support is required around planning issues.

A significant proportion of funding on the enhanced assistance package has contributed to the demolition and site restoration costs for structures affected by coastal erosion and it has only been possible to recoup the Basic Assistant Grant for **demolition** of properties on one occasion during the Pathfinder programme.

The level of funding per property and the overall national funding pot is considered by East Riding of Yorkshire Council 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. The **demolition of unsafe properties** has been complex particularly in areas where undercut cliffs and road closures have restricted vehicular access to worksites. The resultant demolition of several properties by hand has increased costs, as have asbestos surveys carried out prior to the demolition of non standard constructions. Some demolitions are further complicated by the presence of ex-ministry of defence structures (increasing costs when these are not always known in advance). Specialist contractors have also been required to deal with hazardous substances such as asbestos. This has all served to increase the costs of demolition and below we provide some indicative costings:

- £3k to £5k for less permanent structures including caravans
- £12k for a simple single storey dwelling
- £26k for the demolition of a substantial farm house

Once the Pathfinder is complete, the council plans to produce a specific report analysing the costs involved in providing 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.

Delivery of the Enhanced Assistance Package 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 Enhanced Assistant Package 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.

With regards to **buy and lease back** there have been a number of issues which 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 decent homes standard has to date been prohibitive. Initial assessments made by the Council's Property and Valuation team have identified the need for major works including re-wiring, damp proof coursing and re-roofing in properties being considered. As a result they have failed to represent a viable economic investment which would allow the Pathfinder to progress applications beyond this stage. It was 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.

East Riding's approach does lead us to question why households at risk from coastal erosion receive additional support to that received by other households which are 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.

Despite the programme's successes, **community engagement and communications** have remained key challenges throughout the Pathfinder. Throughout the project, workshops have not been very well attended and one to one consultations have been more effective. The issue of communications should be improved once the ICZM toolkit is launched. The programme could also have focused more explicitly on **educating local communities** and the wider public about coastal processes and coastal change management.

It is reported that there have been a **lack of opportunities for partnership working** with other Pathfinder areas. This may have involved linking to similar Pathfinder areas to share more directly the ways in which specific challenges are being met or linking to Pathfinders that were dealing with different but complimentary priorities (e.g. communications versus practical delivery). There may have also been a greater opportunity to integrate other **coastal management mechanisms** that have been moving forward nationally with the Pathfinders. For example, the 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. The Pathfinder also reported the need to ensure that any future Pathfinder funding is **ring-fenced** to ensure that this does tackle coastal erosion.

Lessons for Future Policy and Programmes

The Pathfinder project is expected to continue until the end of the 2011/12 financial year.

One concern is that the pathfinder programme has significantly **raised residents' expectations** with regards to coastal change assistance however 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.

The programme has highlighted the benefits of **partnership working** and a joined up approach in 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.

Their experience suggests that there is a greater need for a better understanding of how existing **regulations and powers** can be used to support coastal adaptation activity and potentially there may need to be changes 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.

The Pathfinder does suggest 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. 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. This Pathfinder has also highlighted the need to ensure that there are sufficient appropriate sites available to facilitate rollback since this can be a barrier.

Rollback appears to work for commercial properties such as caravan parks where owners are able to finance any move through their existing funds or a loan.

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).

7. Waveney Coastal Change Pathfinder Project

Project Overview

Rationale, Aims and Objectives

Waveney is situated in north east Suffolk and is the most easterly district in Britain. The Pathfinder Project proposes focusing activity in two different locations which are at different ends of the spectrum in terms of scale, type of impacts and time until erosion of assets. These are:

- Corton Village: the coastal strip at Corton is dominated by tourism infrastructure including four caravan parks, a holiday village, a holiday park and pubs and restaurants. The threat of coastal erosion is less obvious compared to Easton Bavents but nevertheless, there are already some impacts on coastal amenity. This presents an opportunity to explore the extent to which adaptation can be planned. Corton has a population of around 1,140 (mid-year population estimate for 2006) and there is a mix of retired individuals and working age people (working in Great Yarmouth or Lowestoft).
- Easton Bavents: coastal erosion here is long standing and there is an immediate threat (with erosion rates of around 2.6m per year). The community consists of a small pocket of relatively isolated properties and 9 are at risk (one of which is a second home) and home owners are likely to have considered the risk when purchasing their properties. It provides an opportunity to look at the type of issues surrounding an isolated or small number of properties where it is not economically viable to provide coast protection. There is also an interest in looking at complicating factors such as services and infrastructure.

The overarching aims and objectives of the Waveney Coastal Pathfinder project can be summarised:

- Engage with the two communities of Easton Bavents and Corton.
- Raise awareness of the impact of erosion on the long term viability of communities, businesses properties and infrastructure.
- Assist the community at Easton Bavents at immediate risk of loss of properties from erosion to relocate.
- Help Corton establish the impact of declining amenity quality of the beaches on the tourist economy of the village and make improvements to help sustain the local economy.
- Identify ways of funding adaption and relocation in the future.

The bid proposed a number of projects at Corton and a “rollback” scheme at Easton Bavents and these are discussed in more detail below.

Actual Delivery

Corton Village

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.

Delivery to date has been focused on the beach strategy projects though this differs from those which were set out in the original bid to reflect the priorities of local residents (which focused on wider economic development objectives 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. Want to encourage investment.

The key projects which have been delivered and which are planned in Corton are described in more detail below. It is likely that these will be implemented in Autumn 2011.

Table 7-1 Projects supported in Corton Village under the Pathfinder	
Project	Description
Improving access at Corton	<p>A beach access path at Corton has been reopened providing access to the seafront for walkers. This is in response to limited access to the beach which it is felt impacts on the number of visitors to the area.</p> <p>The pathfinder is also considering another project to the north of Corton which will also improve access.</p>
Tramps Alley - improved beach access to the south of the village	<p>There is currently a steep gradient which creates access difficulties. The project is focused on reducing the slope and widening access, which will improve use of the beach at Corton. It will also be made compliant with the Disability Discrimination Act (DDA).</p> <p>The improvements will also provide improved access for local fisherman.</p>
CCTV to improve beach safety	<p>There are a number of concerns about safety around Corton Beach and the Woods. Previously the beach was a naturist beach and even though this is no longer acceptable individuals still use the beach in this way. There is also reported to be lewd behaviour and it is hoped that CCTV will resolve this issue.</p>
Cliff Top Erosion Study	<p>Investigation into the causes of cliff top erosion (resulting from surface water run off) and subsequent action plan for stabilisation. The aim is to slow down the rate of erosion and protect the following: 4 holiday parks, Corton Inn, a shop and around 150 residents/properties.</p> <p>Cost of works £94,000. If no works are carried out then water induced erosion will continue and the cliff will continue to regress.</p>
Corton Woods	<p>A number of improvements are planned to Corton Woods which will improve use and facilitate tourism. There will be designated nature walks and interpretation boards (potentially focusing on wildlife/species but may include an element of coastal erosion).</p> <p>There are also plans to improve access between Corton and Gunton Warren.</p>
Improved beach quality	<p>The initial proposal was focused on the removal of redundant coastal defences. However, following consultation with</p>

	residents (and an understanding of the costs), the focus is now on increasing local amenity through providing viewing platforms, toilets, kiosk/cafe and parking.
Public Relations and Tourism Campaign	A PR and tourism campaign will be launched following the implementation of the projects above to encourage visitors to use the beach.
Corton Primary School Arts Project	A successful project aimed at improving awareness of coastal erosion amongst local school children.

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

A key project in Waveney involved testing of the rollback of households most at risk in Easton Bavents (9 in total). A planning firm was commissioned to oversee and implement the process and a report is available which sets out the key findings²⁹. This is summarised below:

- Pellings initially met with each of the residents individually. They were then invited to attend a workshop and sent a list of areas for discussion in advance of this. All but two of the households attended and this was aimed at explaining Pellings role and the scope of work as well as the process they were planning to go through. Six sites for relocation were identified by the property owners at the workshop.
- Following the workshop, priority themes were identified which are important in assessing each of the sites (drawing together preferences of residents and expertise of Pellings). These include: an open site with views preferably close to the sea; community based solution which meets individual needs including timescales; new design should be appropriate to location and in context; recognition that high infrastructure costs could restrict site choice.
- A site appraisal was carried out and two sites were identified as scoring joint highest. A Site Assessment Report was issued in July 2011, with a recommendation that Wangford Road (north) is the preferred site. Responses were requested from property owners and no objections were received (though some other sites were identified as being preferred as well). Further information about the site is shown below:

The site is immediately adjacent to the built up area on the edge of Reydon and is opposite relatively new homes built on the former high school. However, the site is not adjacent to the existing Physical Limits. The site just falls within the Blythe and Wang Tributary Valley Farmland Character Area as defined in the Waveney Landscape Character Assessment. Providing acceptable edge treatment is incorporated into the development, development of the site should not impede the achievement of the objectives for this landscape area. A single line of dwellings across the entire field frontage would fit nicely into the landscape and accommodate all the units with similar sized cartilages as they have now. Although this would result in a substantially lower density than the neighbouring new development, it is more in keeping with the general density of properties alongside Wangford Road. At the western extremities of the site single storey accommodation would be preferable. The road along the site frontage has a pavement which

²⁹ Easton Bavents Pathfinder Project, Phase 1 Completion Report by Pellings (September 2011)

provides safe pedestrian access to services in Reydon. [Source: Phase 1 Completions Report by Pellings]

- The planning consultants have been in touch with the landowners and they are willing to enter discussions about the site.
- 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.

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. 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 clawback. The council may look at delivering 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.

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. These have not been as successful as hoped and this is explained in more detail below.

The pathfinder project also helped to fund a review of rollback policy, particularly focusing on the ownership rights of those at risk of losing their home. Further information about this is provided below.

Costs and Funding

The key costs are shown below. Only £330,352 has been spent to date and the remaining amount (£1,204,203) has been committed to a number of key projects in Corton and in Easton Bavenes. A closer look at pathfinder spend by priority does show that 38% of Waveney’s funding has contributed to economic development objectives and only 9% to delivering adaptive solutions which reflects the priorities of residents at Corton which were interested in ensuring that the economic fortunes of the area are not negatively impacted by changes to shoreline management plan policy.

Overall activity	Spent	Committed and Pending	Total
Administration	£2,354	£480	£2,834
Staffing and Related	£108,535	£44,455	£152,994
Community Engagement	£140,732	£91,210	£231,942
Corton Projects			
Improving access at Corton	£43,798	£25,000	£68,798

Tramps Alley & Amenities (inc. Slipway)		£400,000	£400,000
Cliff top Stabilisation (inc. Engineering)	£10,885	£313,050	£323,935
Corton Wildlife Walks		£90,000	£90,000
Grant to Corton Woods Group		£30,000	£30,000
Easton Barents			
Land Purchase Assistance		£109,254	£109,254
Demolition Costs and Fees	£23,889		£23,889
Engineering Consultancy	£159		£159
Total	£330,352	£1,204,203¹	£1,534,555¹
Source: Waveney Pathfinder Project ¹ includes contingency of £100,750			

Waveney District Council has contributed significant in-kind contributions through time spent supporting the project. Waveney DC has estimated that 2,225 hours of officer time has been dedicated to the pathfinder project which is equivalent to £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 completes. There may also be some private sector funding from Warner Leisure.

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 centrinio leisure.

Achievements and Impacts

Overview of Achievements

- Protection/Removal of properties at risk:
 - If the scheme is successfully concluded, 9 properties will be removed from risk at Easton Barents through a “rollback” scheme.
- Removal of Blight
 - It is envisaged that the removal of the 9 properties at Easton Barents 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 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.
- Increased knowledge and understanding of coastal change:
 - The schools project in Corton is a particularly good example of how the pathfinder 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. This is difficult to quantify.

Additionality

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.

At Easton Bavents, 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.

Value for Money (VfM) Assessment

- The Waveney Rollback scheme performs the strongest of all the Rollback schemes, with a relatively strong cost benefit ratio.
- This largely reflects the fact that the public sector cost of the intervention is relatively low. Significantly, the council did not need to purchase the existing properties to facilitate the rollback (as was the case in North Norfolk). The council also hope to recoup the cost of the land in future years – this would further strengthen the cost benefit ratio associated with the project.

Table 7-3 Waveney Rollback

		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 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		<p>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 –</p> <ul style="list-style-type: none"> • 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 <i>(colour coding denotes largely positive,</i>	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.	

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. 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.			

Key Lessons Learned

What Worked Well

Corton

The proposals at Corton should help to **stimulate the tourism economy locally** and sustain beach access for longer. A range of projects are proposed which will provide improved facilities and access for visitors to the area, making this area easier to use by tourists. The works at Corton are also expected to help build trust amongst the community and with some parts of the business community. This long term relationship could help develop rollback plans in the future.

The pathfinder is proposing to carry out a detailed case study looking at the impact which coastal erosion has on **property values** locally. This is something which has not been well researched to date. The initial proposals to remove redundant defences would be expensive (£950,000) and may not have achieved the desired result so it is positive that the pathfinder changed their plan.

The **cliff top stabilisation measures** will help to slow the rate of cliff loss and will sustain beach access for longer. This will protect a number of properties including homes, a pub and hotel.

The project has led to a **shared understanding of good practice** in tackling coastal erosion amongst a range of partners including EDC, SCDC, SCC, LGA Coastal SIG East Anglian Coastal Group. Whilst there have been some difficulties with engagement, the process has secured a good platform for ongoing dialogue in an area where there has been little dialogue about coastal erosion in the past.

Engagement with a **primary school in Corton** was not part of original bid but proved to be a valuable way of increasing awareness of coastal processes. The pathfinder has indicated however that they should have taken an opportunity to celebrate and publicise this.

Easton Bavents

The **process for securing a site** at Easton Bavents appeared to work well (despite some criticism from the community due to the timescales and some negative press). Planning consultants were engaged to find a suitable site and to secure planning permission. This appeared to lead 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.

The process has led to 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. 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 formulated and adopted planning policies to allow for the replacement and relocation of properties at risk from erosion to land safe from erosion.

The council has developed **ESCROW Legal Work** – essentially developing 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. This sets out the rights of households to rebuild a property on another site safe from coastal erosion (including those not allocated for residential use). A *Supplementary Planning Document* is being prepared which will address such issues and provide clarity on policies for future planning cases.

What Worked Less Well

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

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.

Business relocation discussions at Corton did not work as well as expected. It was difficult to engage firms, particularly where they are part of a larger organisation where it is difficult to speak to the main decision maker (e.g. if their head quarters are based elsewhere). There is also an issue where 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. They also tried to speak to banks to encourage them to lend to private sector firms. Many had already achieved their return on investment and were not too concerned if they were to lose their assets. It appears that the pathfinder could have gone a bit further, for example in identifying suitable sites for businesses, though it is difficult as they will have specific needs.

The Waveney Pathfinder did 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.

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 dialogue around coastal issues. In the past, there has been 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 their fundamental view. This shift has taken considerable time and resources to achieve and has been a key difficulty for the pathfinder project.

It was difficult to encourage the community to **consider long-term plans** to sustain the economic viability of Corton and consider the rollback of properties and infrastructure. The community members that engaged with the process generally wanted shorter term measures such as the improvement of the local environment and beach access/facilities.

There was a **lack of agreement amongst 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 weren't at immediate risk presented a major problem in identifying where the pathfinder money should be best spent.

The pathfinder project did not anticipate the level of resource and range of skills required within Waveney DC 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. It is felt that initial funding is required from the 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).

The **procurement process** for procuring the services of a firm 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 (e.g. some firms did not provide the relevant certificates). This resulted in a larger firm being awarded the contract (an engineering firm with less experience of community engagement) which in hindsight was probably not the best solution. The pathfinder and the community were of the opinion that a smaller firm from Suffolk may be more appropriate to carry out the work.

Easton Bavents

At **Easton Bavents**, there is an expectation that pathfinder has failed to deliver and frustration that the process has taken longer than expected. During the lifetime of the project, properties were lost at Easton Bavents. 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 frustrations around how long it took to get started and engage in meaningful discussions. There is also concern from the residents over how the rollback of properties might be funded.

There may be difficulties in **negotiating with land owners**. Now that a preferred site has been identified, the owners may think that they are in a stronger bargaining position to charge what they like for the site.

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 real and immediate for some). The pathfinder has questioned whether it would have been better to have a resident on the management board/more involved in the project.

Difficulties which remain to be resolved includes 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.

Lessons for Future Policy and Programmes

The ESCROW Legal work which Waveney 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. This allows households to rebuild a property on another site safe from coastal erosion (including those not allocated for residential use).

The approach to rollback offers the highest benefit cost ratio (14.2) compared to all other 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 public sector will need to contribute in the future.

8. North Norfolk Coastal Change Pathfinder Project

Project Overview

Rationale, Aims and Objectives

The North Norfolk Pathfinder application was submitted as three packages aimed at demonstrating methods for the management of coastal change, which together will help mitigate its impacts on coastal communities. The three packages include the following:

- **Bid A:** mutually supportive interventions to manage impacts of coastal change within the community most affected (Happisburgh) facilitate community adaptation and foster resilience. This bid includes relocation of buildings and buy and lease back options as well as infrastructure improvements. Eleven properties are predicted to be lost by 2025 as well as a caravan park, lifeboat house, public car park and site for public toilets (recently closed). This has led to local households being unable to sell their properties, residents and businesses being unable to raise money against them and unwilling to invest in premises. This has had a detrimental impact on the entire community.
- **Bid B:** mitigating impacts of blight and disinvestment resulting from predictions of coastal change over the wider coast. Impacts may not be apparent but uncertainty is undermining investment decisions on coastal businesses, community facilities and dwellings. Bid B includes advice and financial support for businesses, buy and lease back options, roll back and establishment of a mechanism for securing business and private contributions towards LT cost of coastal flood defence along Wolferton Creek-South Hunstanton.
- **Bid C:** infrastructure works, responding to coastal change and improve economic prospects of district. This includes the safeguarding and relocation of infrastructure important for the viability of coastal communities (e.g. car parks, beach access, coastal footpath), and physical shoreline management works (e.g. remove redundant defences,).

These were intended to be carried out over the period January 2010 to March 2011. The combined legacy of these actions is intended to support coastal communities, understand coastal change and address the blighting impact of the emerging SMP coastal change predictions as well as be more resilient to its future impacts. In particular, this would help generate confidence among local communities and businesses about future prospects and help in developing planning policies to permit relocation and roll back.

Actual Delivery

Whilst the three overall packages above remained intact, elements of each package were scaled back because the Pathfinder award was less than the bid. This included reductions to business support, house purchase (particularly purchase 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 Manor Caravan Park in Happisburgh. A more detailed breakdown of what Pathfinder funding has been used for can be found by package below.

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 Aug 2010-July 2011).

The **property acquisition for 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.

Roll back 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. 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 are developed and are close to implementation. 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 3 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 Trimmingham Village Hall: an **agreement** is in place to assist in funding the relocation of the village hall and a **land purchase** 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 Runton Road to Cromer public footpath, (the Marram's Path) is now complete with the process for amending public right of way initiated. Final arrangements are to be complete by 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.

Costs and Funding

The overall original Pathfinder Bid was for £5,786,760 funding of which £3 million was made available. Approximately £2.8 million was identified in the original bid for property acquisition and relocation including £800,000 for the acquisition of residential property. Projects were prioritised as appropriate due to the difference in funding. There are a couple of points to note including that:

- The Buy and lease back project did not go ahead due to low interest from RSLs, too high a level of risk to the Council and a low calculated return on investment according to Green Book methodology (as explained in more detail below).
- The caravan park roll back project funding has been allocated in the programme whilst the owner develops the roll back plan and secures a relocation site. The availability of the funding will be reviewed periodically.

The table below shows that £1.3 million has been spent to date and that £1.7 million is committed to existing projects. The remaining amount (£36,858) includes contingency funding.

	Pathfinder Funding	EEDA	Actual Spend (PF)	Future Spend (PF)
Happisburgh (as shown below)	£1,641,610		£759,757	£881,853
Cliff top Enhancement and Relocation of Infrastructure	£355,000		£41,592	£313,408
Removal/relocation of dwellings at risk	£856,000		£641,700	£214,300
Property Acquisition for Lease Back	£20,000		£8,490	£11,510
Removal of Beach Debris	£170,000		£6,545	£163,455
Coastal Heritage	£80,300		£60,300	£20,000
Relocation of Caravan site	£160,310		£1,130	£159,180
Business Support (as shown below)	£711,807*	£10,000	£152,017	£569,790

Business Advice	£171,000		£89,300	£81,701
Business Support	£504,000		£17,022	£486,978
E Norfolk Tourism Marketing	£46,807		£45,695	£1,112
Infrastructure Package	£264,432		£108,836	£155,596
Relocation of Trimmingham Village Hall	£206,260		£64,760	£141,500
Marram's Footpath	£45,000		£30,904	£14,096
Removal of Beach Debris	£13,172		£13,172	£0
KL & WN BC	£20,000		£20,000	£0
Wolferton Private Contribution for Beach Defence	£20,000		£20,000	£0
Programme	£325,292		£222,492	£102,801
Total	£2,963,142**	£10,000	£1,263,102	£1,710,040

Source: North Norfolk District Council

* It was noted in the bid that c.£190,000 p.a. of existing technical expertise, capacity & knowledge was used from NNDC. Pathfinder interviews suggested this might have been exceeded in reality.

**excludes £10,000 (note that actual spend plus future spend includes £10,000)

Achievements and Impacts

Overview of Achievements

The key achievements are summarised below:

- Protection/Removal of properties at risk:
 - The Buy to Demolish project on Beach Road will eventually enable the removal of 9 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 residential property acquisition and replacement scheme is not necessarily intended to re-home existing tenants and owner-occupiers, the replacement of the 9 houses on Beach Road on a different site in Happisburgh will maintain the level of housing present in the district already and will serve consequently to preserve the character and size of the community.
- Removal of Blight
 - Although not all properties planned for have entered into the BtD 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 in a different location.

- 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 any further threat 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; the project has been useful in stimulating and pump priming a number of adaptation initiatives however which otherwise would not have taken place. Business engagement across the whole of the risk zone has been 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 which can inform future delivery of programmes:
 - Extensive use of the property consultancy Bruton Knowles 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 schemes, 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 (develop 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 give access to capital which would otherwise be unobtainable via property sale on the open market.

- Enable the Council to realise uplift in the property value through implementing the roll back 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 investments attracted
 - There is evidence that mainstream banks are entering into discussions with local businesses and facilitating access to loans.
 - Although there is no actual 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 to Happisburgh and along the coastline more generally. Existing attractions such as the lighthouse, Caravan Park and Happisburgh town (pub, etc) are likely to benefit financially from this.
- Retention or Enhancement of wildlife habitats
- Landscaping on cliff tops will enable to re-establishment of wildlife habitats.

Additionality

In the main, projects supported under Pathfinder were those that the Council aspired to undertake but had no funding due to other priorities. There had been a programme of work with coastal communities over previous years therefore Pathfinder was an opportunity to build on past work. The acquisition of houses for demolition or lease back could not have been undertaken without an initial injection of capital.

The support that has been given to businesses has begun to 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.

Removal of old defences at Happisburgh beach would not have occurred given historic funding priorities. The Pathfinder has enabled the Trimmingham relocation fund to be set up to effect a timely relocation that can be properly planned and ensured the continued benefit to the community. Otherwise, a rushed decision on a replacement would occur once the asset was lost, providing funds were available for this.

Value for Money (VfM) Assessment

Happisburgh Removal and Relocation

The intervention case sees the construction of a new development with 9 replacement properties. However, it is important to note that this development is yet to be undertaken. As such, accurate information on the likely costs and value of any new development is not yet available. As a result of this, all costs and benefits in the Value for Money Assessment for Happisburgh are high level estimates, based on initial scoping work by Bruton Knowles.

Table 8-2 Happisburgh Removal and Relocation

		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 would not be activated collectively for the 9 households. It is assumed that 50% of EN12 rights would ultimately be activated.	The project involves the purchase by the council of the EN12 opportunity from the current property owners. The acquired rights would be used 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 <i>(source: Pathfinder)</i>	9 (existing)	9 (new) (D)	
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 <i>(source: Regeneris calculation)</i>	£929,300 (F-E)		
	PV of Benefits (net of 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> <ul style="list-style-type: none"> • 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). • 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. 	
Other Impacts (colour coding denotes largely positive, neutral or negative impact)	PV Blight Effects	<p>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.</p>	<p>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.</p>
	Impact on Wider Cohesion / Regeneration	<p>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.</p>	<p>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.</p>
	Impact on Local Amenities	<p>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.</p>	<p>The project would ensure that the properties are replaced in the local area thus maintaining demand for local amenities.</p>
Overall Comments	<p>The 'do nothing' scenario would result in a number of negative impacts which it is not possible to quantify.</p>		<p>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>
<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>			

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.

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).

Trimingham Village Hall

- It is important to note a number of additional factors when considering the impact of the intervention:
 - The intervention is still in its early stages – work to find a suitable location for the replacement Village Hall is taking place.
 - The anticipated total cost of the intervention (£324,300) includes a requirement for additional grant funding to be levered in on top of the funding from the Pathfinder. This additional funding is yet to be agreed.

Table 8-3 Relocation of Trimingham Village Hall

		Do Nothing	Pathfinder Project
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,	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.

neutral or negative impact)	Impact on Wider Cohesion / Regeneration	Under the 'do nothing', the village of Trimingham would eventually be left without a village hall - an important community asset.	The project ensure the replacement of the Trimingham 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 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.
<p><i>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.</i></p>			
<p><i>NOTE 1 – All figures rounded.</i></p> <p><i>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).</i></p>			

Key Lessons Learned

What Worked Well

Happisburgh Projects

There are a number of strengths to the council's approach to **rollback**. The process of property valuation was kept transparent throughout negotiations. The use of a property consultant to develop a methodology ensured a robust process by which a 100% no risk property valuation was never entertained. The methodology is detailed below. Furthermore, it is hoped that North Norfolk District Council will be able to recoup c. 60% of the cost of the uplift in value of the replacement site for the properties purchased for demolition. This will arise from the transfer (sale) of EN12 or from the sale of new properties once they have been developed. Two Housing Associations (Broadland Housing and Victory Housing) have each confirmed their organisation's interest in Happisburgh as a potential development location and it may be possible to deliver some element of social housing in such a scheme if repeated.

The package of **beach and cliff top enhancements** has served to increase the desirability of the Happisburgh beach area, pointing to increased visitor numbers and the reinstatement of the area as a coastal resort. The debris removal at Happisburgh Beach has served as a catalyst for the wider scheme to replace the car park, create an access ramp and create footpaths and new amenities.

Community buy-in and raised awareness of coastal erosion has been considerable and has had a significant impact on the success of the Coastal Heritage project in particular. The recruitment of the Heritage project officer, whilst happening some five months into the project, has been instrumental in building these community and wider relations. This is reflected in the employment of the officer by the Council to continue the work underway in Happisburgh.

The whole settlement approach at Happisburgh is reported to have worked well and has ensured the involvement of the entire community. This has helped to improve community confidence in the area which had been in decline due to the high levels of risks of coastal erosion affecting a number of properties.

Business Support Projects

There is evidence that mainstream banks are entering into discussions with local businesses and facilitating access to loans. This will serve to increase business confidence, enable businesses to forward plan, invest and consequently retain/lever new clients. Overall, it was felt that the business support element of the project has been successful so far. This is particularly the case since it has helped to address low levels of take up for business support. Although there was anecdotal evidence that the project has helped support businesses in adapting to coastal change, the support has improved wider business confidence.

Infrastructure Projects

As well as protecting enhancing the beach environment, this suite of projects can point to the provision of a number of specific community benefits:

- a replacement village hall, which is likely to be larger and encompass a greater range of uses and facilities than previously (if delivered in the future).
- a replacement footpath to Cromer and work to remove the previous footpath designation which would have stalled the creation of a new right of way.
- improved beach access and an enhanced living environment overall, increasing desirability with the potential to lever additional investment.

Development of Methodology for housing purchase and implementation of Rollback

One particular benefit of the North Norfolk Pathfinder Programme has been the development of the methodology for valuing and purchasing properties in the 5-10 year risk of loss period. 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 (however, other approaches such as that adopted in Waveney would offer better value for money). 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 Planning Policy EN12 which includes a presumption that the current owner of an affected site will be able to obtain planning permission on a site adjacent to a Selected Settlement where planning would not usually be permitted. The policy only applies to properties within the 0 to 20 year risk zone (as shown below). The figure is apportioned between the owner of the plot (40%) and the purchaser (60%). A worked example is show 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 occupier), 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). A low discount rate (3%) has been used to minimise the effect. PSP did not apply in the case of one of the houses which were acquired after the change in coastal defence policy.

It is worth noting that the estimated No Risk value is used in the calculation for the Pathfinder Supplemental Payment.

In practice a number of **sequential steps needed to be taken in implementing rollback** to reduce the risk to the council, which were in line with policy EN12 set out in their local plan (see below). Bruton Knowles advised on the steps which should be taken as follows:

- Hold ‘without prejudice’ discussions with the owner of the preferred site to solicit his approval for a sale, in principle (with an appropriate profit-share overage or partnership arrangement) and gain his 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 North Norfolk DC 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 former landowner. NNDC would then ‘recycle’ its share of the proceeds of the sale to develop further coastal change adaptation/management projects.
- The developer would submit an application for full planning permission or approval of reserved matters. The permission would then be implemented by the developer.

Policy EN12: Relocation and Replacement of Development Affected by Coastal Erosion Risk

Proposals for the relocation and replacement of dwellings affected by erosion will be permitted provided that:

- The development replaces a permanent dwelling (with unrestricted

occupancy), which is affected (or threatened) by coastal erosion within 20 years of the date of the proposal.

- The new dwelling is comparable in size to that which it is to replace.
- The relocated dwelling is within or adjacent to a selected settlement and is beyond the coast erosion constraint area.
- The site of the dwelling it replaces is either cleared and the site rendered safe and managed for the benefit of the local environment or put to a temporary use that is beneficial to the well being of the local community as appropriate. The future use of the site should be secured (by legal agreement) in perpetuity. Interim use as affordable housing will be considered beneficial to the well-being of the community in interpreting this clause.
- Taken overall (considering both the new development and that which is being replaced) the proposal should result in no detrimental impact upon the landscape, townscape or biodiversity of the area, having regard to any special designations.

NB: the policy also sets out separate policies for the relocation of community facilities, commercial and business uses.

What Worked Less Well

Happisburgh Projects

The **planning policy** associated with rollback is fairly inflexible and requires a series of steps to be taken which has increased the level of risk for the council. 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.

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. In some cases, owners anticipated a larger payment than was offered, although this was not a majority with a few admitting the offer price to be higher than expected.

In North Norfolk, some aspects of the payment to residents at risk does appear to be **compensatory** since a “supplementary payment” has been awarded to these households, this was to assist with removal costs and disturbance as per the compulsory purchase rules. However, the argument here is that the local authority wanted the households to move quickly and so in this sense they are in a weak bargaining position and will need to pay more.

There has been a recurring issue with nesting sand martins which has **complicated the removal of debris**. Furthermore there was apprehension that the process of removing beach debris would actually increase the rate of erosion along Happisburgh beach. Although there is no evidence as of yet of compounded erosion, any possible negative impact has been partially mitigated for via extensive awareness raising and community engagement from the outset (which is positive).

One of the proposals in the bid was to consider **land banking for business premises**. This has been difficult to do since there are reported to be a lack of suitable sites in some situations and the timescales involved in identifying sites and obtaining consent are beyond the project timeframes. It is also noteworthy that specific requirements of different firms make it difficult to bank land in advance. In the case of the caravan site at Happisburgh for example, it has been difficult to find a suitable site for their relocation given the lack of suitable sites in Happisburgh. 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.

Buy and Lease Back

Buy and Lease Back has not worked in practice in North Norfolk for a number of reasons. However the detailed work carried out in this area will be valuable for future policy and for any other local authority that feels a buy and lease back approach could be suitable for their areas. Bruton Knowles completed a detailed report which compared different approaches in which buy and lease back could be implemented in Happisburgh focusing on the properties within a 20-100 year lease. It was recommended that this should not be taken forward largely due to levels of risk to the council and the key considerations and conclusions are explored further below:

- One key issue was whether any other organisations were willing to take on the management of purchased properties, thereby releasing NNDC from day to day management. NNDC had disposed of its housing stock and hence was no longer a housing authority. This places limitations on its ability to manage houses it acquires.
- 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 tenants are to 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 with any maintenance deducted from the value paid but this may reduce the appeal of selling to the owner.
- Due to the limited budget of Pathfinder (£170,000), the scheme would probably only have been able to apply to one or two properties. Such a small scale trial would have provided limited benefit to the lessons to be learnt from the Pathfinder. Furthermore, the aspirations and personal circumstances of those likely to take part in such a scheme are likely to vary widely.

In terms of the financial return, if central government 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 was ‘negotiated’, reviewed every 3 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.

North Norfolk District Council is therefore investigating other options.

Business Support Projects

Whilst provision of support and engagement itself has been successful, the implementation of the loan and grant schemes has been protracted and complex and therefore considerably behind planned timescales.

Infrastructure Projects

Although this suite of projects has progressed effectively and whilst there are immediate benefits in terms of improved access and environment, it is unclear 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.

Lessons for Future Policy and Programmes

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.

The use of existing **planning and other policy** to embed the activity of Pathfinder has been beneficial and has enhanced the support provided to communities. This has included Planning Policy EN12 (in the 2008 Core Strategy), the use of the social housing register to help relocate residents from Beach Road and the reduction of Council Tax for affected properties. It is felt that without a suitable planning framework and pre-planning that attempts at coastal adaptation will fail.

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 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.

In particular, the use of **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.

The value for money assessment suggests that the costs of North Norfolk’s rollback programme may outweigh the benefits. However, it may be possible to adjust the model to provide an approach which can offer a better return in the future. This may include the payment of a lower purchase price to households (e.g. excluding the supplementary payment). This may be achievable in the absence of restrictive delivery timescales.

Project officers reiterated the **challenging nature of the two year Pathfinder timeframe** in terms of securing community buy in, ensuring planning and other pertinent policy was in place or could be developed. To some extent, 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. Relocation and planning permission able to be given only if property exists and is at risk within 20 years.

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** has been influential in helping to make the way for collaboration and closer working across teams such as engineering, planning and legal.

As might be expected with any non-ring fenced funded programme, there is some blurring of the boundaries between generic support and regeneration/economic development and genuine adaptation activity. There needs to be a clear distinction (in the case of North Norfolk, the business support scheme and tourism enhancement projects in particular) between these discrete but related activities.

Appendix A: Value for Money Calculations

Happisburgh Removal and Relocation

Pathfinder Intervention - Assumptions

Main assumptions –

- The project involves the purchase by the council of the EN12 rights from the current property owners. The acquired rights would be used collectively to ensure the provision of ten replacement homes in one development. It is assumed that the development would be completed in 2 years.
- The total value of the properties when completed has been estimated at £2.3 million (information from Pathfinder). The benefit of the intervention is therefore calculated as the **present value** of this capital value. This is estimated at £2.1 million.

Counterfactual (The Do Nothing) - Assumptions

Main assumptions –

- The estimated total no risk value of the 9 existing properties is £1.5 million (information from Pathfinder). It has been assumed based upon information from the Pathfinder that on average the 9 properties under consideration would 'fail' in 10 years time (in reality, some would fail sooner, some later). The benefit of the properties over this 10 year time period is estimated by converting the property value into an income stream. In the absence of detailed information upon the likely value of the properties under the do nothing, this income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate³⁰. Again, this is a standard assumption – in reality, the income stream would vary from this from property to property.

³⁰ This approach is consistent with the former Defra FCDPAG3 "Alternative method" for estimating coastal erosion prevention benefits based on rental values rather than capital values.

- Once their property was in imminent risk of failure, each individual would own the EN12 right. It is assumed that 50% of property owner will activate the EN12 right and build a property worth the same value as that projected under the Intervention (i.e. the estimated value of replacement properties under the do nothing is half of the £2.1 million stated under the intervention case). It is assumed that new properties would be completed within 4 years of fail.
- The benefit of the Do Nothing is calculated as the net present value of the income stream and capital value described above. This is estimated at £1.2 million.

Cost Benefit Analysis

The present value of costs for the Do Nothing and Intervention has been estimated based upon assumptions agreed between Regeneris and DEFRA and information provided by the Pathfinder. These figures have been used to assess two different types of net financial cost:

- The Net (present value) Societal Cost – This takes into account all costs associated with the intervention – i.e. both public and private sector costs. However, analysis excludes all costs associated with acquisition of at-risk property – this is seen as a transfer value (the cost being exactly offset by benefit to recipient).
- The Net (present value) Public Sector Cost – This takes into account only those costs borne by the public purse. This analysis includes any costs regarded as transfers in the society-wide analysis, such as property acquisition.

It is recognised that other costs may also exist under the do nothing scenario – including ongoing blighting and time costs. However, we have not sought to quantify these as part of this analysis.

The Net Present Value of the Benefits is calculated by subtracting the net present value of costs (both societal and public) and the present value of the ‘Do Nothing’ benefits from the present value of the ‘Intervention’ benefits

The societal cost benefit ratio is calculated by dividing the present value of benefits by the present value of costs. The public cost benefit ratio is calculated by dividing the NPV of societal benefits by public costs.

Summary Table

Bearing in mind the above assumptions and methodology, the table below summarises the cost benefit analysis for the Happisburgh Removal and Relocation scheme.

Table -1 Happisburgh Removal and Relocation		
	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 right would not be activated collectively for the ten households. It is assumed that 50% of EN12 rights would ultimately be activated.	The project involves the purchase by the council of the EN12 rights from the current property owners. The acquired rights would be used collectively to ensure the provision of ten 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 <i>(source: Pathfinder)</i>	9 (existing)	9 (new) (D)	
Fiscal 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.		
	PV of Benefits <i>(source: Regeneris calculation)</i>	£929,300 (F-E)		
	PV of Benefits	Net Societal Costs	-£393,900 (F-E-B)	
	Cost Benefit Ratio	Societal CBA	0.7:1 ((F-E)/B)	
		Public CBA	NEGATIVE FIGURE	
	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> <ul style="list-style-type: none"> 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). 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. The public cost benefit cost ratio would improve but would remain negative. 		

Scarborough Rollback

Pathfinder Intervention - Assumptions

Main assumptions –

- The intervention involves the provision of 15 new properties to replace 15 properties at risk from coastal erosion.
- It is assumed that the new development would be completed in 2 years time and that the total value of properties on the development would be £2.25 million (information provided by

Pathfinder). The benefit of the intervention is therefore calculated as the **present value** of this capital value. This is estimated at £2.0 million.

Counterfactual (The Do Nothing) - Assumptions

Main assumptions –

- The 15 properties under consideration would 'fail' in the next 5 years.
- The total value of the 15 existing properties is estimated at £2.25 million (information from Pathfinder). The benefit of the properties over this 5 year time period is estimated by converting the property value into an income stream. This income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate. Again, this is a standard assumption – in reality, the income stream would vary from this from property to property.
- After fail, it has been assumed that some of the insurance money received by the property owners (totalling £1.13 million across the 15 properties) would then be reinvested in property. In the absence of any clear information on what happens in the absence of the intervention we have made the assumption that only 50% of the insurance money would be reinvested in property.
- It is assumed that new properties would be completed within 4 years of fail. The benefit of the intervention is therefore calculated as the **net present value** of this value. This is estimated at £0.58 million.

Cost Benefit Analysis

The present value of costs for the Do Nothing and Intervention has been estimated based upon assumptions agreed between Regeneris and DEFRA and information provided by the Pathfinder. These figures have been used to assess two different types of net cost:

- The Net (present value) Societal Cost – This takes into account all costs associated with the intervention – i.e. both public and private sector costs. However, analysis excludes all costs associated with acquisition of at-risk property – this is seen as a transfer value (the cost being exactly offset by benefit to recipient).
- The Net (present value) Public Sector Cost – This takes into account only those costs borne by the public purse. This analysis includes any costs regarded as transfers in the society-wide analysis, such as property acquisition.

The Net Present Value of the Benefits is calculated by subtracting the net present value of costs (both societal and public) and the present value of the 'Do Nothing' benefits from the present value of the 'Intervention' benefits.

The societal cost benefit ratio is calculated by dividing the present value of benefits by the present value of costs. The public cost benefit ratio is calculated by dividing the NPV of societal benefits by public costs.

Summary Table

Bearing in mind the above assumptions and methodology, the table below summarises the cost benefit analysis for the Scarborough Rollback scheme.

Table 2 Scarborough Rollback of 15 Properties

		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)	
Fiscal 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 Property per (unit cost)	Societal Cost	£103,000 (B/D)	
Public Cost		£56,500 (C/D)		

Jaywick Removal

Under this Pathfinder, the main benefits of the Intervention relate to intangible impacts such as the removal of blight. It has not been possible to quantify these impacts. As such it is recommended that for this Pathfinder, stronger weighting / emphasis is placed on qualitative forms of analysis rather than on the results of the quantitative analysis.

Pathfinder Intervention - Assumptions

Main assumptions –

- The intervention involves the removal of 4 properties in Jaywick. As the properties are not replaced, it is not possible to monetise future benefits as a result of the intervention.

- The main benefits of the Intervention relate to intangible impacts such as the removal of blight. It has not been possible to quantify these impacts.

Counterfactual (The Do Nothing) - Assumptions

Main assumptions –

- The 4 properties under consideration would not fail for 30 years (the current sea wall is expected to remain until then).
- The total value of the 4 existing properties is estimated at £210,000 (information from Pathfinder). The benefit of the properties over this 30 year time period is estimated by converting the property value into an income stream. This income stream is assumed as the potential annual rental value of the properties. This income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate. Again, this is a standard assumption – in reality, the income stream would vary from this from property to property.
- The benefit of the Do Nothing is calculated as the net present value of this income stream. This is estimated at £135,182.

Cost Benefit Analysis

The present value of costs for the Do Nothing and Intervention has been estimated based upon assumptions agreed between Regeneris and DEFRA and information provided by the Pathfinder. These figures have been used to assess two different types of net cost:

- The Net (present value) Societal Cost – This takes into account all costs associated with the intervention – i.e. both public and private sector costs. However, analysis excludes all costs associated with acquisition of at-risk property – this is seen as a transfer value (the cost being exactly offset by benefit to recipient).
- The Net (present value) Public Sector Cost – This takes into account only those costs borne by the public purse. This analysis includes any costs regarded as transfers in the society-wide analysis, such as property acquisition.

The Net Present Value of the Benefits is calculated by subtracting the net present value of costs (both societal and public) and the present value of the ‘Do Nothing’ benefits from the present value of the ‘Intervention’ benefits

The societal cost benefit ratio is calculated by dividing the present value of benefits by the present value of costs. The public cost benefit ratio is calculated by dividing the NPV of societal benefits by public costs

Given the absence of any monetorised benefits under the Intervention, this results in a negative cost benefit ratio.

Summary Table

Bearing in mind the above assumptions and methodology, the table below summarises the cost benefit analysis for the Jaywick Removal scheme.

Table 3 Jaywick Removal of Properties

	Do Nothing	Pathfinder Project
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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	-	£176,500 (B)	
Assets	No. of Properties <i>(source: Pathfinder)</i>	4 (existing), 0 after fail in 30 years (C)	0	
Fiscal 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 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)		

Trimingham Village Hall

Counterfactual (The Do Nothing) - Assumptions

Main assumptions –

- It has been assumed for the purposes of the economic model that the existing village hall would not fail for 30 years. In reality, the property may fail sooner or indeed last longer.
- The value of the village hall is estimated at £310,000 (information from Pathfinder). The benefit of the property over this 30 year time period is estimated by converting the property value into an income stream. This income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate. Again, this is a standard assumption, made in the absence of accurate information on what the ongoing value of the property might equate to under the Do Nothing.
- The benefit of the Do Nothing is calculated as the net present value of this income stream. This is estimated at £154,200.

Pathfinder Intervention - Assumptions

Main assumptions –

- The intervention also involves the provision of a new village hall for Trimingham.

- Under the intervention, there are no plans to demolish the existing Village Hall. As such, under the Intervention, the income stream assumed under the Do Nothing (£154,200 –see above) remains valid.
- The estimated value of the new village hall is £310,000.
- The benefit of the intervention is therefore calculated as the **net present value** of the capital value, along with the Net Present Value of the Income Stream from the existing Hall. This is estimated at £433,800.

Cost Benefit Analysis

The present value of costs for the ‘Do Nothing’ and Intervention has been estimated based upon assumptions agreed between Regeneris and DEFRA and information provided by the Pathfinder. These figures have been used to assess two different types of net cost:

- The Net (present value) Societal Cost – This takes into account all costs associated with the intervention – i.e. both public and private sector costs. However, analysis excludes all costs associated with acquisition of at-risk property – this is seen as a transfer value (the cost being exactly offset by benefit to recipient).
- The Net (present value) Public Sector Cost – This takes into account only those costs borne by the public purse. This analysis includes any costs regarded as transfers in the society-wide analysis, such as property acquisition.

It is recognised that other costs may also exist for Trimmingham PC under the do nothing scenario (including ongoing administration and maintenance costs). However, we have not sought to quantify these as part of this analysis.

The Net Present Value of the Benefits is calculated by subtracting the net present value of costs (both societal and public) and the present value of the ‘Do Nothing’ benefits from the present value of the ‘Intervention’ benefits.

The societal cost benefit ratio is calculated by dividing the present value of benefits by the present value of costs. The public cost benefit ratio is calculated by dividing the NPV of societal benefits by public costs.

Summary Table

Bearing in mind the above assumptions and methodology, the table below summarises the cost benefit analysis for the Trimmingham Village Hall scheme.

Table 4 Relocation of Trimmingham Village Hall			
		Do Nothing	Pathfinder Project
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	1 existing, 0 after fail in	1 (D)

	<i>(source: Pathfinder)</i>	20 years(C)		
Fiscal 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 VALUE	
Cost per Property (unit cost)	Societal Cost	£292,500 (A/D)		
	Public Cost	£270,000 (B/D)		

Crag Walk

Pathfinder Intervention - Assumptions

Main assumptions –

- The intervention involves the provision of additional defences to protect the clifftop assets for a longer time period. It is estimated that the enhanced defence would last for 50 years.
- The enhanced defence would protect three main clifftop assets during this period – the Naze Tower (valued at £450,000), a Cafe (valued at £100,000) and a car park (valued at £205,000). All information from Pathfinder.
- The benefit of these assets going forward is estimated by converting the asset values into an income stream. This income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate.
- The benefit of the Intervention is calculated as the **net present value** of the total income stream over the 50 years and the residual value. This is estimated at £619,800.

Counterfactual (The Do Nothing) - Assumptions

Main assumptions –

- The Naze Tower, Cafe and Car Park would fail after 7, 20 and 15 years respectively.
- The benefit of the assets over these periods is estimated by converting the asset values (Naze Tower - £450,000; Cafe - £100,000; car park – £205,000) into an income stream. This income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate.
- The benefit of the Do Nothing is calculated as the net present value of the three income streams over the respective time periods. This is estimated at £304,700.

Cost Benefit Analysis

The present value of costs for the Do Nothing and Intervention has been estimated based upon assumptions agreed between Regeneris and DEFRA and information provided by the Pathfinder. These figures have been used to assess two different types of net cost:

- The Net (present value) Societal Cost – This takes into account all costs associated with the intervention – i.e. both public and private sector costs. However, analysis excludes all costs associated with acquisition of at-risk property – this is seen as a transfer value (the cost being exactly offset by benefit to recipient).
- The Net (present value) Public Sector Cost – This takes into account only those costs borne by the public purse. This analysis includes any costs regarded as transfers in the society-wide analysis, such as property acquisition.

The Net Present Value of the Benefits is calculated by subtracting the net present value of costs (both societal and public) and the present value of the 'Do Nothing' benefits from the present value of the 'Intervention' benefits

The societal cost benefit ratio is calculated by dividing the present value of benefits by the present value of costs. The public cost benefit ratio is calculated by dividing the NPV of societal benefits by public costs

Summary Table

Bearing in mind the above assumptions and methodology, the table below summarises the cost benefit analysis for the Crag Walk scheme.

Table 5 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)
Fiscal Benefits	Estimated Property Benefits (see technical note in Appendices)	Naze Tower - £181,400; Cafe – £21,400; Car Park – £102,000; Total – £304,700 (D)	Naze Tower - £369,400; Cafe – £82,100 Car Park – £168,300; Total – £619,800 (E)
	PV of Benefits <i>(source: Regeneris calculation)</i>	£315,000 (E-D)	
	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	NEGATIVE VALUE
	Cost per Property (unit cost)	Societal Cost	-
		Public Cost	-

Waveney Rollback

Pathfinder Intervention - Assumptions

Main assumptions –

- 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. It is assumed that the development would be completed within 5 years.
- The total value of the properties when completed has been estimated at £3.38 million – in the absence of bespoke projections, this is based upon the average cost of property in the locality as stated by the Pathfinder (£375,000)
- The benefit of the intervention is therefore calculated as the **present value** of this capital value. This is estimated at £2.84 million.

Counterfactual (The Do Nothing) - Assumptions

Main assumptions –

- The 9 properties under consideration would 'fail' in an average of 12 years time (some would fail sooner, other would fail later). The estimated total value of the 9 properties is £3.38 million – in the absence of bespoke projections, this is based upon the average not at risk cost of property in the locality as stated by the Pathfinder (£375,000). The benefit of the properties over this 12 year time period is estimated by converting the property value into an income stream. This income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate.
- It is assumed that none of the 9 properties would be replaced after failing.
- As such the benefit of the Do Nothing is calculated as the net present value of the above income stream. This is estimated at £1.14 million.

Cost Benefit Analysis

The present value of costs for the Do Nothing and Intervention has been estimated based upon assumptions agreed between Regeneris and DEFRA and information provided by the Pathfinder. These figures have been used to assess two different types of net cost:

- The Net (present value) Societal Cost – This takes into account all costs associated with the intervention – i.e. both public and private sector costs. However, analysis excludes all costs associated with acquisition of at-risk property – this is seen as a transfer value (the cost being exactly offset by benefit to recipient).

- The Net (present value) Public Sector Cost – This takes into account only those costs borne by the public purse. This analysis includes any costs regarded as transfers in the society-wide analysis, such as property acquisition.

The Net Present Value of the Benefits is calculated by subtracting the net present value of costs (both societal and public) and the present value of the 'Do Nothing' benefits from the present value of the 'Intervention' benefits

The societal cost benefit ratio is calculated by dividing the present value of benefits by the present value of costs. The public cost benefit ratio is calculated by dividing the NPV of societal benefits by public costs.

Summary Table

Bearing in mind the above assumptions and methodology, the table below summarises the cost benefit analysis for the Waveney Removal scheme.

Table 6 Waveney Rollback			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 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)
Fiscal 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)	Net of Societal 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)		

	<p>Sensitivity Testing</p>	<p>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 –</p> <ul style="list-style-type: none"> • 50% of the land costs were recouped, the societal cost benefit ratio would increase to 1.37:1 and the public sector cost benefit ration would increase to 2.71:1. • 100% of the land costs were recouped, the societal cost benefit ratio would increase to 1.41:1 and the public sector cost benefit ration would increase to 4.1:1.
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East Riding Demolition

Under this Pathfinder, the main benefits of the Intervention relate to intangible impacts such as the removal of blight. It has not been possible to quantify these impacts. As such it is recommended that for this Pathfinder, stronger weighting / emphasis is placed on qualitative forms of analysis rather than on the results of the quantitative analysis.

Pathfinder Intervention - Assumptions

To assess the value of the counterfactual, we have made a number of assumptions. All assumptions have been agreed with DEFRA –

- 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 result of the intervention.

Counterfactual (The Do Nothing) - Assumptions

To assess the value of the counterfactual, we have made a number of assumptions. All assumptions have been agreed with DEFRA –

- Pathfinder information states that 34 properties are at imminent risk and will fail at some time in the next 5 years. The other 9 properties are at 'higher' risk, projected to be lost at some point before 2025. In the absence of more detailed information, it has been assumed that those properties at imminent risk will last for 2.5 years and those at higher risk will last for 10 years. Based upon this, we have assumed that the 43 properties under consideration would fail after an average of 5 years. **It is important to note that in reality, some properties will fail sooner than this average and some would fail later.**
- It has not been able to access detailed information on the value of the 43 properties. As such, it has been necessary to make an assumption about the average value of the properties. The total value of the 43 existing properties is estimated at £5.8 million – in the absence of bespoke projections, this is based upon the average cost of property in East Riding, according to statistics from the Land Registry (£135,148). **Again, it is important to note that it has been necessary to make this assumption in order to complete the cost benefit analysis. In reality, the value of individual properties may not reflect the figure assumed.**
- The benefit of the properties over this 5 year time period is estimated by converting the property value into an income stream. This income stream is assumed as the potential annual rental yield of the property. This has been assumed at 3.5% - the accepted social time preference rate.
- The benefit of the Do Nothing is calculated as the net present value of this income stream. This is estimated at £918,400.

Cost Benefit Analysis

The present value of costs for the Do Nothing and Intervention has been estimated based upon assumptions agreed between Regeneris and DEFRA and information provided by the Pathfinder. These figures have been used to assess two different types of net cost:

- The Net (present value) Societal Cost – This takes into account all costs associated with the intervention – i.e. both public and private sector costs. However, analysis excludes all costs associated with acquisition of at-risk property – this is seen as a transfer value (the cost being exactly offset by benefit to recipient).
- The Net (present value) Public Sector Cost – This takes into account only those costs borne by the public purse. This analysis includes any costs regarded as transfers in the society-wide analysis, such as property acquisition.

The Net Present Value of the Benefits is calculated by subtracting the net present value of costs (both societal and public) and the present value of the ‘Do Nothing’ benefits from the present value of the ‘Intervention’ benefits.

The societal cost benefit ratio is calculated by dividing the present value of benefits by the present value of costs. The public cost benefit ratio is calculated by dividing the NPV of societal benefits by public costs.

Given the absence of any monetorised benefits under the Intervention, this result in a negative cost benefit ratio.

Summary Table

Bearing in mind the above assumptions and methodology, the table below summarises the cost benefit analysis for the Relocation Package of the Enhanced Assistance Package.

This table summarises only the quantitative analysis for the East Riding Pathfinder. As highlighted above, it is recommended that for this Pathfinder, stronger weighting / emphasis is placed on qualitative forms of analysis rather than on the results of the quantitative analysis. This is outlined in the main body of the report.

Table 7 East Riding Demolition			
		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 properties would not b replaced.	The intervention involves the removal of 43 properties in East Riding. As the properties are not replaced, it is not possible to monetorise future benefits as a 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
Fiscal 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 ((E-D)/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)