# CCATCH - Beaulieu to Calshot

## Working together to adapt to our changing coastline.

## Adaptation Plan

## Final December 2011

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# 1 Introduction

## 1.1 Background

Hampshire County Council has been working for a number of years to address the impacts of climate change on its services and the wider community it serves. A combination of drivers such as sea level rise, coastal erosion, increased storminess and Government policy has highlighted the need for better, more sustainable, management of coastal sites. One of the areas that the County Council has recognised as an area at risk from coastal change is the stretch of coast from Beaulieu to Calshot where Lepe Country Park and Calshot Activity Centre have experienced regular flooding of car parks and facilities and private landowners have concerns about future erosion of their land.

DEFRA selected a Hampshire County Council project based on this stretch of coast as one of fifteen coastal pathfinders to test new and innovative approaches to planning for coastal change. The Pathfinder Programme is intended to:

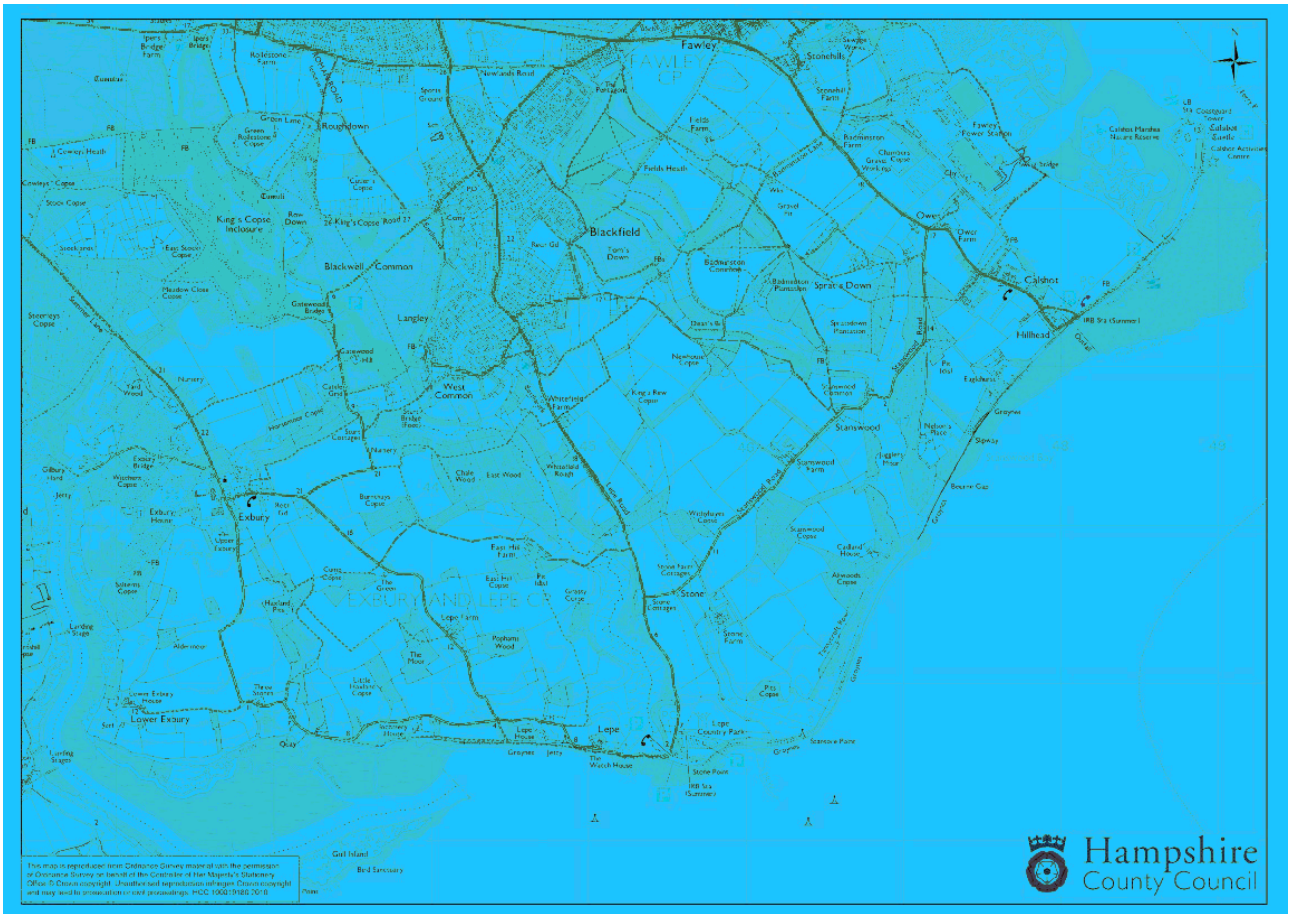
- Improve understanding of how coastal communities can adapt to coastal change and what the costs and benefits of different approaches are; and
- Provide practical lessons and examples that can be shared with other practioners, particularly on community adaptation planning and engagement and delivery of adaptive solutions.

Hampshire's pathfinder project is known as 'Coastal Communities Adapting to Change' (CCATCH – Beaulieu to Calshot), and it covers a 10km stretch of the New Forest coastline from the Beaulieu River to Southampton Water (see map). The project aimed to raise awareness and understanding of coastal change and through this, engage stakeholders in developing strategies that enable adaptation and increase resilience. The project started in Jan 2010 and the work programme was overseen and guided by a steering group of key stakeholders (Appendix 1).

The objectives of the CCATCH – Beaulieu to Calshot project are:

- To engage the local community in all aspects of coastal change and how it will impact on existing residents, businesses and visitors.

- To provide an economically and environmentally sustainable adaptation strategy to safeguard the long term future of Lepe Country Park and to integrate the strategy into a wider plan for this stretch of coastline.
- To bring together different concerns and priorities into a shared understanding which will be the basis for agreeing joint action.
- To provide educational and interpretational opportunities that can communicate coastal change and build a high level of understanding within the local community.




During 2010 and 2011 engagement has taken place with the community and key stakeholders in order to explore their understanding of vulnerabilities and risks, explore opportunities and to find ways of adapting in the future. This has led to the production of this Coastal Adaptation Strategy.

More details of the CCATCH – Beaulieu to Calshot project can be found in Appendix 2 – Project Initiation Document.

The project also forms one of the case studies within the wider CCATCH – *the Solent* project, which is part of the EU Interreg IVa 2 seas funded 'Coastal Communities 2150 and

beyond' (CC2150) project. CCATCH – the Solent will carry out community engagement on coastal change at 7 sites. Work undertaken though the Pathfinder project has been a trial for the other sites and lessons learnt and best practise will be useful in determining methods to engage other communities in the Solent area.

## 1.2 Context

### 1.2.1 General Description

The coastline is rural in character, with vegetated cliff slopes and geologically important cliffs dominating the shoreline between the Beaulieu River mouth and Calshot. The frontages at Darkwater, Stansore Point Stanswood Valley and Calshot Spit are low lying and constrained by the surrounding hinterland topography. The area is largely free from urban development with scattered properties at Inchmerry House, Lepe House, Coast guard cottages, Cadland, Eaglehurst, Hillhead (a small settlement consisting of 15 dwellings situated on cliffs overlooking Stanswood Bay). Lepe Country Park is situated on higher ground, with some facilities at beach level. The shingle bank of Calshot spit extends out into Southampton Water and provides protection to Calshot marshes behind; the overall site including the castle and activity centre is of historic and recreational interest. The coastal road which runs from Blackfield and Langley in the north down to Lepe beach and along the coast to the west before heading inland to Exbury, provides the only access to the Country Park. Coastal defences vary from natural coastline to timber breastwork, groynes and seawall; the majority of which are privately owned and maintained.

The whole area is within the New Forest National Park. The National Park designation ensures that the natural beauty, wildlife and cultural heritage of the Park is protected, opportunities for understanding and enjoyment are promoted and the social and economic well-being of local communities are fostered. National Park designation confers the strongest possible level of protection for the landscape and its special qualities, but does not make it immune from coastal change.

### 1.2.2 Coastal Processes

Calshot spit was formed by longshore transport of sediment from west to east, and the future continued stability of the spit will depend on the continued supply of sediment from the west. Historical maps show that the tidal inlets at Darkwater, Stansore Point and Stanswood Valley have changed considerably, following land reclamation and drainage and barrier beaches

naturally forming or being built and maintained. Analysis of historic aerial photographs indicate that the shoreline over the past 100 years has experienced low rates of erosion, and low rates of sediment transport. With rising sea levels the shoreline from Lepe to Calshot will experience some further changes in the future. At Lepe, erosion of the foreshore and cliffs and rising sea levels and increased storminess will continue to lower the beach area and cause localised flooding, but increase sediment supply to downdrift frontages .

New Forest District Council Coastal Group with the Channel Coastal Observatory undertake regular monitoring of the beaches and nearshore zone for the study area, and continually monitors the wave climate and tide levels and surges as part of the South East Strategic Regional Coastal Monitoring Programme (www.channelcoast.org). The Coastal Group also undertake defence asset inspections of public and private defences to monitor condition and residual life of defences. These data provide important information when determining coastal management and planning for the region.

### 1.2.3 Political

Government policy provides funding for defences where the benefits clearly exceed the costs. In general, it is likely that defences protecting urban areas would attract a higher the majority of funding; defences protecting largely agricultural or recreational assets would attract less. The aim is to take a holistic approach to managing coastal risk as set out in the Government's strategy for flood and coastal erosion management, Making Space for Water (Defra 2005) and DEFRA's *Adapting to Coastal Change – Developing A Policy Framework,* by avoiding and reducing the risk from coastal change, and helping communities adapt to its effects.

The North Solent Shoreline Management Plan which is agreed between various statutory bodies set out the coastal defence policies. The management issues within the West Solent are complex particularly with regard to maintenance of public and private defences and nature conservation. The Plan has a 'hold the line' policy for Calshot spit for the next 50 years, however elsewhere along the Beaulieu to Calshot frontage this policy would be unsustainable in the long term on economic and environmental grounds. The policy for the remaining coastline is 'no active intervention'; this was strongly opposed by the private Estates and the County Council raised objections to this policy particularly due to the likely effects at Lepe Country Park. Private individuals have certain permissive development rights to protect their own property and to continue to maintain existing coastal and flood defences to enable continued use of existing structures while they are structurally sound. Key

components of the policy intention were to discourage further introduction of additional defences and to allow the undefended sections to erode and provide sediment to the vulnerable low-lying frontages in order to minimise tidal flood risk. The Plan clarified that Landowner's rights to maintain defences remain, irrespective of the SMP policy, as is currently the case. However, landowners are advised to contact their Local Planning Authority before undertaking any works.

### 1.2.4 Natural Heritage

The stretch of coast has series of designations protecting its vulnerable habitats and species, these include:

- Solent Maritime Special Area of Conservation (SAC) which includes the Beaulieu Estuary, the intertidal mudflats and gravel and sand substrates and the saltmarsh of Calshot Spit.
- Solent and Southampton Water Ramsar site covering the intertidal shoreline for wetlands and waterfowl habitats
- Solent and Southampton Water Special Protection Area (SPA) which covers the intertidal habitats for birds.
- North Solent National Nature Reserve (NNR) which covers the Beaulieu Estuary and Lepe and possess a range of terrestrial and coastal habitats.
- North Solent Site of Special Scientific Interest (SSSI) and Hythe to Calshot SSSI,
- Site of Importance for Nature Conservation (SINC) – a number of SINCs are within the study area.

### 1.2.5 Social and Cultural Context

Land ownership is complex; some nine bodies and individuals are involved. The majority of land under consideration is in private ownership and a sizeable proportion is not accessible to the public resulting in extra pressure on the key areas of Calshot & Lepe where public access is available. The area includes Calshot Activity Centre, Lepe Country Park, important historic/heritage sites, and a number of large private estates. As well as the main landowners the communities involved include dispersed rural communities, urban-edge settlements, the general public and specialist interest groups.

Lepe Country park is managed by Hampshire County Council and attracts 250,000 – 300,000 visits a year, the facilities include car park, information office, toilets, café, play area, barbeque hire and the beach; there is also a nature reserve and education centre – the focus

of many group and school activities. The park also has a strong heritage value in terms of its maritime history, most notably in its prominent role as a D-Day embarkation point. Lepe Country Park acts as an important countryside resource for local communities and is one of the few points for public access to the coast in the New Forest making it a strategically important recreation resource.

Calshot Activities Centre at the eastern end of the project area is also managed by Hampshire County Council and is one of the largest in Britain, with over 15,000 people a year using the Field Studies centre alone. The beach has over 200 privately owned beach huts, and is used by a variety of recreational users.

Other attractions in the wider area include Exbury Gardens, Beaulieu Motor Museum and the remainder of the New Forest National Park which as a whole attracts an estimated 13.5 million visitor days annually.

There is industrial use in and around Fawley including the oil refinery and power station which represent major employers.

At the beginning of the project the community sectors were all at different levels of understanding and engagement with regard to coastal change. Some of the residents and landowners were well aware of the challenges presented by coastal change, and were not in agreement with the proposals made in the draft shoreline management plan; others have not yet had the opportunity to be engaged in any coastal change discussions.

## 1.3 Coastal Climate Change and Adaptation

### 1.3.1 Sea level rise

Sea level rise is considered to be one of the most significant effects associated with climate change to threaten the UK.  Sea levels have been rising for thousands of years since the last ice age and will continue to do so in the future due to the thermal expansion of sea water and melting of the polar ice caps. In addition, the UK is naturally ‘tipping’ into the sea, with south east England sinking as western Scotland rises. Scientists predict that by 2095 the average sea level in the English Channel could be between 0.12 and 0.76m higher than present. With

a predicted rise in the number of storms, the risk of flooding and erosion of land along the coast will increase.

### 1.3.2 Coastal change

Coastal Change describes the effects of a natural, ongoing process that has always happened. As sea water meets cliffs and shores, sediment or rocks are broken down and washed out to sea. Sometimes, this material is moved to a different part of the coast and deposited, causing 'accretion' - the opposite of erosion - where shorelines may build up with sediment over time. Within the study area, the beaches are comprised of sand and shingle as a product of this process, and need a continual supply of material. The rate of erosion tends to increase when waves are powerful and water levels are high - for instance during storms or in high winds. It is therefore likely that the rate of coastal change may increase under rising sea levels.

### 1.3.3 Planning for future coastal change

As a response to climate change the primary mechanism over the last 20 years has been that of mitigation and in particular a reduction in greenhouse gas emissions has been and is at the forefront of the environmental and political agenda. Whether mitigation can be effective or not, it is imperative that communities and Government respond to the threats of climate change through the alternative process of adaptation.

Numerous definitions may be cited with regard to the nature and meaning of *adaptation*. It has its origins in natural sciences and broadly refers to the characteristics which enable organisms to cope with environmental changes; however the concept has broadened in scope to include not only ecological responses to climate change but also socio-economic and political ones. The United Nations Development Programme (UNDP) report on Adaptation Policy Frameworks, Lim *et al*., (2004) state “adaptation is a process by which strategies to moderate, cope with and take advantage of the consequences of climate events are enhanced, developed and implemented”

Adaptation in the context of this report can be seen as a process of becoming adjusted to new conditions, in a way that makes individuals, communities or systems better suited to their environment.

An adaptation strategy must look beyond the short term and be based on a long term vision. It needs to take into account the dynamic nature of coastal processes, particularly in the light of climate change. Adaptation presents many challenges as to how to continue to deliver services and maintain infrastructure, and at the same time there will be considerable opportunities, such as potential improvements and the enhancement of landscape and nature conservation.

In the long term it is unlikely that we will be able to maintain all areas of the coast as they are today, so it is important to think realistically about what the coastline could look like in future, consider more sustainable solutions and plan for these changes and adapt.

# 2 Stakeholder Engagement Process

CCATCH has used stakeholder engagement to create this coastal adaptation plan which acts as a vision for the future. The project has used a phased approach and a variety of techniques in order to engage the full range of community members in developing a vision, thus taking a more holistic approach to community planning.

## 2.1 CCATCH Community Engagement Strategy

The stakeholders, members of the community and methods of engagement were determined at an initial stage of the project through the production of a Community Engagement Strategy. The aim was to:

- undertake a comprehensive stakeholder analysis to ensure that all relevant sectors were included
- determine key messages to communicate and to ensure an integrated view of the issues related to coastal change and coastal adaptation
- determine interpretation material/tools required (e.g. maps, models, displays, timeline)
- determine the most effective engagement approach and techniques for different sections of the community (drop-in sessions, exhibitions, focus groups etc)
- determine a programme of events

The CCATCH Community Engagement Strategy was produced by Resources for Change in June 2010 and determined the key aim of future engagement as

*'To initiate an engagement process that involves stakeholders in understanding the process of coastal change and through this to engage them in developing strategies that enable adaptation and increase resilience.'*

The strategy also identified that engagement should be undertaken around the theme of *'Coastal Change – past, present and future'.*

*'Coastal Change Conversations'* were key to the whole engagement process. Human interactions at the coast are often more understood than environmental change, it was therefore important that conversations between all the stakeholders took place to enable a successful Adaptation Planning process.

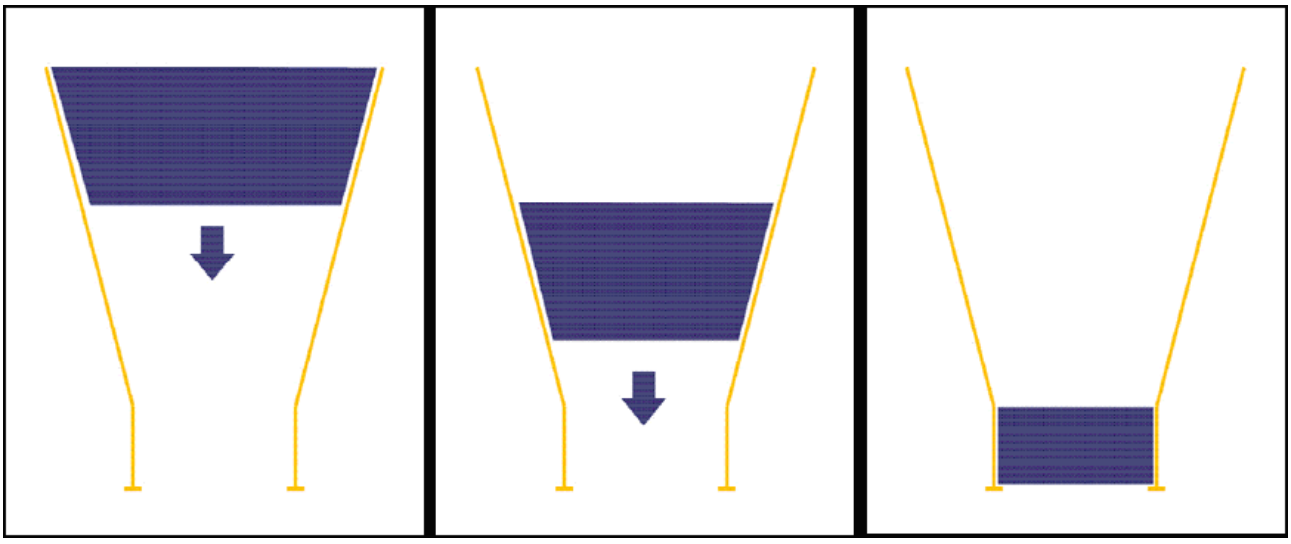
The strategy identified 3 phases of engagement:

Phase 1 - encourage people to be drawn in and get a 'feel' for the topic and the level of concern or interest.

Phase 2 - draw out more in depth information, engaging people in the topic through 'coastal change conversations'.

Phase 3 – using in depth discussion to gain commitment and engender long-term engagement, buy-in; turning 'attitude' into 'action'.

The diagram illustrates the process from broad conversations with a range of different stakeholders through to more detailed discussions to lead to an adaptation strategy.



Stakeholders were identified by considering their relationship to coastal change. The criteria of impact (impacted by coastal change) and influence (influence over the response to coastal change) was used to produce a Stakeholder Map which is summarised in Appendix 3.

## 2.2 Phase 1

### 2.2.1 Methodology

The Community Engagement Strategy was implemented by Resources for Change during the summer and autumn 2010 and the process and results were reported in the CCATCH the Solent Community Engagement Final Report Jan 2011.

The approach included a mosaic of different activities including; having stands and activities at existing events such as Marine Week, face to face interviews, drop in sessions, going into local community meetings and activities. The Lepe Friends Group was vital in the process and held tea and cake afternoons and assisted at events and activities.

The techniques were used to help people consider how important the coast is to them and how this might change in the future and included the following:

- Stories of Change – these were designed to capture people's imagination about what is important to them about the coast, in the past, present or in the future. They formed part of family activities, school sessions and could be submitted online. They have been presented as a booklet along with the timeline.
- Timeline – people were encouraged to bring photos/artefacts from the past along with stories which were displayed as a timeline to show the changes that have taken place along the coast since prehistoric times
- Beach art activities – various family activities were undertaken to enable coastal change conversations to begin.
- Interviews and transect walks – informal face to face coastal change conversations were held with a variety of key stakeholders at events, on site, door to door canvassing, or during walks along the coastline.
- Educational materials and activities – a range of activities were undertaken at the Country Park.
- Pin boards – marking the location of comments which were then mapped using Google.
- Google Map - the information gathered throughout the coastal change conversations (observations, local knowledge and opinions) was mapped on google map which gave a

geographical representation of people's relationship with, and understanding of the coast. This created a living document that provided a visual understanding and enabled the reader to see the links between one change and another and helps to bring a level of clarity by using the visual map along with the detailed text.

- Model & maps of Lepe Visitor Centre options
- Questionnaires

Resources developed to support the process included:

- Postcards – so that people could register their interest in the project. They were delivered to every house in the project area.
- Website – interactive to encourage comment and stories of change
- Pamphlet – information about coastal change
- Events information cards
- Editorial for local publications – promoting events and opportunities to get involved.
- Guidance and volunteer training on engagement.

### 2.2.2 Results of Phase 1

This Phase 1 engagement process was very innovative involving a lot of members of the public and stakeholders in broad conversations about coastal change. It resulted in a better understanding of who the communities are, how they perceive coastal change and what their aspirations for this area of coast are for the future and identified further work that would be necessary to take this forward into an adaptation plan.

Key issues related to specific geographical sites were raised:

- Future of Lepe Country Park and its facilities
- Future of Lepe Road
- Future of Calshot Beach Huts
- Future of Calshot spit and activity centre
- Restriction on private sea defences

Phase one also identified the following:

- Local knowledge of the coastal area and concerns for the future e.g. the timeline work has shown that the coast has always changed and the people living along the coast have adapted to accommodate this. Likewise the way people use the coast has changed over time producing an ever changing range of requirements that are placed upon the environment.

- What communities need to know more about e.g. frequency of past storms, information gaps
- Communities aspirations e.g. to maintain and increase the resilience of the communities so that they are better able to adapt to change.
- Need to identify what communities need to do now to ensure they can adapt in future e.g. increase local engagement and provide more information on what is changing, and how changes may affect them.
- Ideas for further engagement e.g. theatre workshops
- How do we keep having the conversations about coastal change beyond the life of the Pathfinder i.e. more focussed discussions with stakeholders was required to assist in exploring the key issues and preparing an action plan for inclusion in the adaptation plan
- Initial suggestions for possible future adaption e.g. develop the business models that will ensure that the infrastructure development is sustainable and develop a greater level of 'coastal literacy.

A more detailed list of the findings is outlined in Appendix 3

### 2.2.3 Resources prepared for Phase two.

The need for further information was identified in phase one. As such a number of tools and products were produced for use in phase 2 of the project. These included:

- Historical photos showing past coastal change
- Series of maps and aerial photos that sequenced past, present and likely future change in relation to future flooding and erosion along the coast
- Computer generated aerial flythrough showing future sea level change and possible flooding.

## 2.3 Phase two: deliberative dialogue

Phase one was effective at raising awareness and understanding, but to agree action a deliberative dialogue was needed. Dialogue Matters Ltd was commissioned to design and facilitate this.

### 2.3.1 Approach

Dialogue Matters drew on a wide range of participatory methods and techniques to design deliberative processes underpinned by the ethics and principles of Stakeholder Dialogue and Consensus Building/Conflict Management. This is regarded as a best practice approach to participation, ensuring that:

- Respect for stakeholders underpins all actions
- All forms of knowledge are valued, not just technical and scientific
- There is clarity about what stakeholders can influence

Discussion around coastal change was inherently sensitive with a wide range of views and strong concerns. Dialogue Matters used a range of design and participatory techniques to enable effective discussion combined with facilitation skills to foster cooperative behaviour and help people work effectively together in groups. This helped people explore information and perspectives and to develop ideas and potential solutions.

Deliberate design of process, workshops and tasks is a hallmark of effective stakeholder dialogue. Clear steps and stages are designed together so the process is coherent and structured. This helps provide a clear sense of direction for those taking part.

### 2.3.2 The process

**Stakeholder identification**

Based on the work carried out in phase 1 and on discussions held at the inception meeting with Dialogue Matters, the CCATCH project compiled a list of stakeholder groups for inclusion in this phase of work. This list included the types of organisations and interests listed below:

- Public Bodies
- Land Owners
- Commercial Interests
- Commercial shell fishers
- Safety and Rescue Agencies
- Local Community
- Local Councils

**Process design**

The dialogue process started in March 2011 with preparation activities and finished in September 2011 with submission of this adaptation strategy. Within these time frames (and the available resources) Dialogue Matters designed a two workshop process with the second workshop involving the same people and building on the work done in the first workshop. To help people through the key phases in a consensus building, the design took a staged approach:

**Stage 1:** This stage helped stakeholders move from positional stances and varying knowledge and perspectives of coastal change, to exploring and broadening their thinking and understanding.

Initial briefing material was sent out to stakeholders to set the scene and provide succinct background information to help speed them into the first workshop.

During the first workshop, resources from Phase 1 were available for participants to look at throughout the day. Morning activities included considering the benefits and challenges of coastal change, identifying current trends that need to be taken into account, and considering what is already being done well to adapt to likely changes.

**Stage 2:** This stage started in the afternoon of the first workshop and included looking in depth at priority topics identified by CCATCH from the Phase 1 engagement:

- Lepe Park
- Lepe Coastal Road
- Calshot Spit
- Calshot Beach Huts
- Private Sea Defences

People worked in groups to consider likely short and long term changes in relation to each of these topics and suggested a long list of ideas and solutions for adaptation. People then commented on the extent to which they could support recommendations and suggested ways of improving solutions further.

**Stage 3:** The final stage of the consensus building process narrowed the discussion back down again to the recommendations and actions people most wanted to see happen. People again worked in groups to plan implementation and had the opportunity to comment on each other's work. The final session focused on on-going communication and involvement post this process.

**Processing and using workshop outputs**

During workshops, the facilitation team recorded, in writing, the essence of what people said. CCATCH staff typed up the outputs and Dialogue Matters then sorted them into workshop reports that provide a detailed record of the views expressed. The clustering of points was done using a method called 'emergent processing'. This allows themes and subject areas to emerge rather than making the text conforms to a pre-judged set of titles or expectations.

The Workshop Reports stand as a record of the discussions and helped ensure that this report and the recommendations reflect what participants said.

**Review of process**

People who took part felt the workshops provided '*lots of opportunity for input and discussion'*. They considered the open facilitated discussions a positive way of discussing difficult subjects, raising awareness and enhancing acceptance as well as stimulating ideas for future action. Participants appreciated the structure, facilitation and time keeping. Feedback on the process was excellent with everyone who responded feeling they were heard and made a difference. People valued the opportunity, not only to be involved, but to shape the contents of the adaptation strategy.

# 3 Adaptation Plan

## 3.1 The long term vision for this coast

At the start of the workshop process participants were asked to share their vision for the coast. The responses fell into the following broad categories:

Natural and unspoilt

- A natural and unspoilt coastline
- Increased and varied habitats
- Dolphins and seals in fish filled water
- Trees

Fun

- People enjoying themselves
- Thriving activity centre at Calshot

Access

- Safe paths and increased access to the coast
- Improved Lepe road

Heritage

- Improved interpretation of heritage assets and paleogeography
- Heritage buildings conserved (Calshot)
- D-Day heritage protected

Attractive, green and resilient facilities

- An attractive and sustainable visitor centre on the cliff top at Lepe
- Sustainable energy
- Beach huts moved back (Calshot)

Hotspots and quiet areas

- Visitors and local business in discrete areas along the coast

The comments gathered can be synthesised into an *aspirational vision statement*:

> *We want a natural, beautiful and resilient coast, which provides attractive facilities for access and enjoyment. We want to sustain and celebrate the health and diversity of our natural and built heritage, whilst adapting to coastal change.*

## 3.2 Benefits and challenges of adapting to coastal change

The community identified the following benefits associated with adapting to coastal change:

- The opportunity to involve local people in preparing for and adapting to change, providing the additional benefits associated with local people taking ownership of the issues and proactively responding to them
- The potential to capitalise on new opportunities and new perspectives resulting from the predicted coastal change
- The cost benefit achieved by planning for change rather than adapting once change occurs
- The opportunity to undertake focussed and thorough facilities planning for the long term rather than simply responding as facilities fail to meet the communities needs or become compromised by environmental change
- Preventing inappropriate coastal development
- Taking advantage of the current funding available for the purpose of adapting to coastal change
- Managing and rationalising access to and along the coast by creating a network of paths that will survive the predicted changes

Challenges of adapting to coastal change were also discussed in workshops and the following points were identified:

- Coming up with a strategic vision that can be agreed and will be consistently implemented across sectors
- Developing policies for adaptation that fit with everyone's needs and wants
- Managing coastal habitats as they change and determining when and if management is even desirable
- Raising awareness and raising motivation throughout the whole community
- Overcoming natural resistance to change; i.e. acceptance of asset loss and preparedness for threats
- Making the long term meaningful to individuals and to agencies with fixed planning timeframes
- The costs associated with adapting
- The uncertainty of predicted changes; getting agreement on what changes will occur and the rates of change

## 3.3 What is already being done well to adapt to coastal change

The CCATCH project is seen as leading the way in terms of adapting to coastal change. They are seen to be changing attitudes to coastal change through awareness raising and the provision of education and interpretation materials. Shoreline Management Plans are also

seen as a good step in adapting to coastal change, encouraging people to think ahead and plan for change.

However, more can be done to build on the good work already undertaken:

- Learning from the past
- Gathering more evidence to make better predictions for change
- Additional promotion to encourage the participation of more people

## 3.4 Key topics and recommendations for adaptation

This section reflects the discussion and ideas of those who took part in the deliberative workshops to discuss and negotiate adaptation measures. A detailed action plan is in section 4.

### 3.4.1 Lepe Park

**Background**

People prize Lepe Park for its unique beauty, accessibility, history and naturalness. It is highly valued by the local community as well as visitors to the area with around 300,000 visits to the site annually (ref Friends of Lepe). The Park provides opportunities for varied leisure activities from ball sports to dog walking and windsurfing. Visitors appreciate the information and education opportunities it provides. It is included within the New Forest National Park and the foreshore and freshwater habitats are designated within a Special Protected Area, a Special Area of Conservation, a Ramsar wetland site and a Site of Special Scientific Interest.

**Changes**

Changes anticipated in the area relate to increased flooding, rising sea levels and erosion. There is concern about the road linking Lepe to Exbury (see separate section) and the footpath along the base of the cliff (a section has already been damaged by erosion). It is anticipated that the buildings and lower car park will be lost in the next forty years as will some of the iconic trees along the cliff top.

**Benefits and disbenefits of change**

Opportunities presented by the predicted changes at Lepe include replacement of the existing buildings with something more interesting and incorporating some new facilities such as a function room and a D-day museum as well as improved education facilities. There is

interest in using the new buildings as a testing ground for new 'sustainability' technologies. Although there is a perceived risk that any new development may be out of keeping with the current nature and feel of Lepe.

**Adapting to change**

Lepe Park staff and the CCATCH project are seen to be doing a great deal to adapt to change along the coastline including the large amount of engagement and education that takes place from the site. The Park has a great reputation and there is a great deal of confidence in the facility. Also the Council (HCC) are seen as being very proactive for their initiative in gathering data and statistics on the changes and seeking opportunities to fund improvements at the site.

Stakeholders have identified that more could be done including; firming up leasing arrangements and plans for the new buildings to create some sense of security at the site and ensure its longevity.

In the short term stakeholders would also like to see some flood-proofing of the existing facilities and some more development to facilitate quiet water sports in the area.

Some ideas put forward for adapting to changes in the longer term include:

- An implementation plan for the new facilities, including a new car park.
- To set back the path and facilities to secure them in the longer term.
- To combine the D-day memorial with new car parks located at the top of the cliff.
- Maintaining community engagement to ensure that adaptation plans are informed and broadly accepted.

### 3.4.2 Lepe Coastal Road

**Background**

The Lepe Coastal Road provides a crucial link between Lepe and Exbury;, it floods regularly and high water levels during storm or surge events results in stones and other debris cluttering the road surface, when waves overtop the HCC defences. HCC Highways carry out annual repairs following damage from winter storms. More information is needed about the costs and frequency of repairs to the road and the sea defences designed to protect it, and about how much use the road gets and whether the traffic is primarily local or related to tourist activity.

The EA maintained tidal sluice gate in the sea defence at the crossing of River Darkwater has been designed with tidal apertures to allow a controlled tidal exchange with the Darkwater floodplain; however, the outfall walls are not in good condition. The sea defences adjacent to Lepe Road are considered a good design however and have reduced the incidence of debris on the road.

**Changes**

It is anticipated that there will be increased damage to the Lepe Road, rising costs of maintenance and the need for temporary road closures.

In the longer term, maintaining access is considered by stakeholders as a priority. It is likely that the existing road will need to be replaced but stakeholders were enthusiastic about using this as an opportunity for innovation that would lead to the creation of a new feature. This might, for example, be via a tidal road utilising specialised vehicles or an elevated road with an iconic construction that would maintain business linkages and enhance tourism appeal and opportunities.

**Benefits and disbenefits of change**

The disbenefits are the risk of loss or constrained access. Changes to habitats resulting from more frequent inundation would have a positive benefit for wintering birds.

**Adapting to change**

Short term actions identified for adapting to change include; installing a traffic counter to determine how many vehicles use Lepe Road, bolstering the road to withstand tidal inundation, and removing the flap valve to allow tidal inundation upstream and the resulting habitat changes.

In the longer term, stakeholders would like to see a process for identifying options and building consensus for implementation. They want to make the most of the opportunity to be innovative and adventurous in responding to the changes at Lepe Road and gain a new feature and tourist attraction. Brainstormed ideas included a tidal road (e.g. to Osea Island in Essex), a floating bridge, an iconic structure, a special vehicle to ferry foot and cyclists across the gap.

Guiding criteria were developed as follows. The access solution should be:

- Affordable
- Innovative

- Visually pleasing
- Look at encompassing sustainable energy if possible
- Informed by long term vision for Dark Water Valley
- Meets the needs of those who want access (e.g. is it for cyclists, pedestrians, or vehicles).
- Maintain access when it is needed. Preferably 24 hour but recognise that dependant on demand and the solution chosen, it could operate effectively less of the time.

### 3.4.3 Calshot Spit and Beach huts

**Background**

The spit acts as a barrier helping to create the sheltered waters and habitats in the Solent. It is included within the New Forest National Park and the saltmarsh habitats are designated as a Special Protected Area, a Special Area of Conservation, a Ramsar wetland site and a Site of Special Scientific Interest. There is also a nature reserve.

The spit has high heritage and recreation value with a range of assets located on it, including the Castle, a lifeboat station for the area, and the Calshot Activity Centre, which is very important for young people.

HCC owns most of the buildings on the Spit, with the exception of the Castle which is owned by English Heritage. The land is owned by the Crown Estates Commissioners and leased to HCC.

Owners of the beach huts lease their site from one of two owners (Cadland Estate or New Forest District Council). Lease arrangements are different for the two landlords, for example people can sleep in the huts leased from Cadland but not those leased from the District Council who allows day occupation only.

The huts themselves do not currently flood as they sit on a ridge above the road, but the road does occasionally flood restricting access. The huts are currently protected from erosion on the seaward side by wooden revetment but the beach width and levels do change seasonally and following storms.

The Shoreline Management Plan policy for the spit is to 'hold the line' for 50 years and 'no active intervention' from 50-100 years. There is also a 1 m high sea wall to protect

Sunderland Hangar. It is noted that the plan and policies are due to be reviewed within 10 years.

**Changes**

Changes anticipated at the Spit over the long term include the road flooding from increasing storms which may eventually render the facilities on the Spit unusable.

It was a major storm that built the spit around 300 years ago and the perception is that outside of an event of similar magnitude, change will be minimal over the next 10 years. Stakeholders think there will be not much change at the Beach Hut sites over the next 10 years.

It is noted that any change in management of the cliffs to the west could cause problems. These cliffs are currently eroding and feeding material to the spit so any change in this may have a significant impact. The SMP policy intention is supported by the prevailing coastal processes. There is a perception that changes to the coastal processes could have an effect on the Stanswood Bay Oyster fishery.

It is likely that sea level rise will be perceptible in the longer term and could be significant. It will change the shape of the land and impact on the salt marsh. Changes could be slow but also could be very sudden with a significant, extreme storm event or if the spit breached . However, there is a high degree of uncertainty and the rate and type of natural processes may continue.

**Benefits and disbenefits of change**

Significant flooding and changes to the road would reduce access for the public with an associated reduction in revenue for the activity centre. From the point of view of HCC assets, the worst case scenario is that the activities centre is no longer viable and closes. Physical coastal change could also reduce the viability of beach huts and other assets.

Natural habitats would also change and adapt to new conditions but this may be beneficial for wildlife.

In the long term, if there were less human structures on the spit, it would change the character and feel of the place with more open views landward and seaward. There would be a reduction in the intensity of human use which may improve conditions for wildlife.

**Adapting to change**

Adaptive actions already being taken include:

- Beach defences and erosion management with groynes and revetments recently repaired / replaced and the shingle ridge built up
- HCC are reviewing the facilities and buildings to consider management options
- In the summer of 2011 English Heritage carried out a risk assessment to the Castle

There is a need for additional monitoring to quantify the risks in terms of storm frequency and sea level rise and enable better planning. Stakeholders want more information on the residual life of the defences and the road to inform decision making. The engagement of beach hut owners in identifying risks and responses is also seen as highly important.

In the longer term, several possible actions were identified for adaptation including; maintenance of the existing groynes, a fund to assist beach hut owners with maintenance or relocation, raising the height of the access road, planning for temporary road closures and ensuring that quality materials are used for beach replenishment. To inform decisions, people want a risk assessment on the access to the spit, the cost of engineering solutions and the viability of activities on the Spit in the longer term.

### 3.4.4 Private Sea Defences

**Background**

Most private estates have a rolling 3 year plan to manage their estates. By contrast, individual house owners seem to have an *ad hoc* and piecemeal approach to protect their homes and gardens and this could cause knock on problems along the shore. The need for a more coordinated approach is acknowledged. The establishment of the New Forest National Park Authority may provide a more coordinated framework for private sea defences.

**Changes**

It is anticipated that there will be an increased demand for private sea defences as the threats become more apparent and immediate. However changes in government policy and the planning framework may affect the options for private sea defence. This, along with the degree of uncertainty about climate change, sea level rise and erosions predictions, make it difficult to accurately plan long term.

**Benefits and disbenefits of change**

Opportunities resulting from the changes could be employment opportunities, bringing communities together to tackle the issues, landscape and habitat changes and the chance to learn from other areas before taking action.

**Adapting to change**

Awareness of coastal change is increasing and this CCATCH process has enabled forward planning and involved stakeholders, however there is more to be done. Landowners need help to understand the implications of different adaptation options and effects informed by up to date coastal information.

A strategic and coherent approach is crucial to avoid private defences having an adverse effect on neighbouring properties and guidelines are needed for new defences to provide clarity for applicants and avoid the negative impact of *ad hoc* approaches or poor design.

In the longer term the key strategy is long term planning including helping estates and private house owners to review viable adaptation measures. For the larger estates, adapting could also provide new opportunities for example new nature reserves and green tourism.

Englilsh Heritage have undertaken an assessment of the risks and options for heritage buildings and assets.

## 3.5 Nature and Cultural Heritage

During the Phase 1 engagement, people did not identify nature and heritage as priority topics for discussion in Phase 2, so they were not included as specific topics in the stakeholder workshops. However both assets were clearly valued and discussed in relation to other changes. Likely long term coastal change presents significant risks to heritage buildings and historic features and potential benefits for nature with the opportunity for new habitats to form or be created.

This adaption plan would not be complete without a brief summary of actions that are already planned by Natural England, English Heritage and HCC.

### 3.5.1 Nature

The nature conservation interest of this stretch of coastline is protected by numerous designations (see section 1.2.4) and there is a recognised need from stakeholders to maintain the diversity and quality of these coastal habitats in the long term. However coastal change is a continuing process and even without sea level rise the coastline changes because of the action of coastal processes. The normal response of an unmanaged ‘soft’

coast to coastal processes is landward movement of the shoreline with habitats migrating landward. A sustainable approach to the management of the coastline in rural areas is through limited physical interventions that enable a more sustainable coast to evolve that is then resilient to further change. This approach is likely to lead to changes in the natural environment as the mosaic of habitats and species, landscape features and recreational opportunities continually evolve. There is therefore a need to embrace changes that both conserve and use the natural environment and to accept that this may on occasion mean the loss of once valued environmental assets. However, what replaces these assets will in turn have a value of its own, and there will be a need to manage the process of change so as to maximise the opportunities that arise as the coast evolves. Changes that could occur along this stretch of coast include:

- Continued erosion of the soft cliffs
- Development of a natural estuary at the Darkwater
- Development of a natural estuary at Stansore Point
- Loss of Calshot spit

### 3.5.2 Cultural Heritage

This section of the coast has a long history of settlement and trading with evidence of habitation from Neolithic to the Romans. Smuggling was rife in the 1800's which led to the building of a coastguard station and watch house with coastguard cottages still in evidence today.

Lepe and the surrounding coastline played a vital role during WWII as it became the focus for the preparation of the invasion of France during D Day. Lepe itself had three important roles in the D Day landings; as a construction site for the floating Mulberry Harbour, the mainland base for the PLUTO pipeline and departure point for troops, vehicles and supplies.

Wessex Archaeology on behalf of the New Forest National Park Authority has undertaken a Rapid Coastal Zone Assessment of the New Forest coast as part of English Heritage's national programme. This Assessment identifies the vulnerability of the heritage assets to help inform future management of the coastal margin. The Mulberry Harbour site is regarded as of national importance however, recognising the effects of sea erosion the site has not been scheduled by English Heritage.

# 4 On-going communication

Stakeholders were asked, at their second workshop, to provide suggestions for ongoing communication as this adaptation strategy evolves and is implemented. The following paragraphs are synthesised from the comments collected at the workshop.

There was general agreement among the stakeholder group members that they would like an ongoing involvement in the project and at the very least to be kept informed as decisions are implemented and actions undertaken. People are willing to attend workshops when there are major decisions to make, and made offers of help to disseminate information and assist with future information sharing events.

It was agreed that maintaining momentum and generating interest in the project is important particularly among those groups not able to attend the workshops including the youth and representatives from the various small coastal communities.

The following sections consider recommendations at four levels of involvement:

- Providing information to stakeholders
- Collecting information from stakeholders to inform decisions
- Consultation to influence decisions
- Shared decision making to make decisions

### 4.1.1 Providing information (Education/awareness raising materials and activities)

Stakeholders want one of the ongoing legacies of this process to be education although would like this to be informal and subtle in nature. Suggestions include:

- A website detailing ongoing project activities with a space for viewers to add their own comments
- Interpretation boards at the visitor centre, perhaps showing a juxtaposition of the present with the predicted future
- Timelines into the future; such as signs in the car park at Lepe asking '*where will you park in x years time?*', lines marked showing predicted sea level in 2050 etc
- A single timeline of ancient history (England joined to the rest of Europe), through to the future predictions – to communicate that change is not something new
- Materials to encourage people to think about coastal change from a scientific and artistic perspective
- A photo point to encourage people to take their own photos into the future
- Models of erosion and accretion, a graphic demonstration

- Static and video material available as a mobile exhibition for visitors and the local community
- A calendar for the century with a competition to design the one last image, what does the future look like?
- Use of cartoons to communicate with youngsters
- Apps on smart phones for interpreting the environment
- A coastal erosion interactive game

### 4.1.2 Gathering views and perspectives

When information about the views and perspectives of others is needed to inform decision making, stakeholders suggested:

- Utilising existing networks and groups (such as Friends of Lepe and Residents Associations)
- The use of an interactive website that allows people to access information but also leave their comments and suggestions
- Formal surveys of particular stakeholder groups
- The use of volunteers to collect information from their networks and the broader community
- The use of volunteers to undertake monitoring to keep costs down

### 4.1.3 Consultation

It may be necessary to re-engage with the broader community as the adaptation strategy is finalised and implemented. This will be easier to achieve if a broad cross section of the community are kept informed about the project and what it is trying to achieve. For this reason maintaining a high profile for the project is important. Where there is opportunity for people to influence the outcome, consultation methods and events need to be tailored to the input needed and the groups or interests who can provide it.

### 4.1.4 Shared decision making

Participants in the CCATCH process have provided very positive feedback on the adaptation plan process, valuing the opportunity, not only to be involved, but to shape the direction and the final strategy. They recommend this approach when major decisions need to be discussed and agreed. This approach is seen to have particular value because it maintains links between agencies, authorities and *'ordinary people'* and because implementation is smoother if people are involved in proposals at an early stage and can influence and help shape the outcome.

Several stakeholder group members volunteered their time to assist in the delivery of these types of workshops to keep costs down and to increase the breadth of stakeholder involvement in decision making.

## 4.2 Information needs

Various information needs have been identified relating to the ability and incentive for adapting to coastal change. These are identified below along with the owners / agencies responsible for gathering and disseminating them (where this is known):

| Information Gap | Owner / Responsible Agent |
|---|---|
| **Coastal change** | |
| What impact is sea level rise going to have on our coast, how will it change / evolve and over what period? | Scientists/Coastal engineers |
| Visual modelling of change and the effects of and on any built structures | Scientists/Coastal engineers |
| An understanding of the reasons for limited change in living memory and the dramatic and catastrophic nature of future(predicted) change | Scientists/Coastal engineers |
| More research and evidence gathering to increase the certainty associated with predicted change | Scientists/Coastal engineers |
| More data on flooding in the area, actual and predicted | Environment Agency/scientists |
| Condition of existing sea defences and residual life | Environment Agency<br>NFDC<br>Private property owners |
| **People's views and perceptions** | |
| Perceptions of sea users – what would address their needs | Sea users |
| Perceptions and opinions of local residents and users of the coast | The community |
| Understanding the views of sea users | Sea users |
| Understanding the views of the broader community | Community |
| **Cost benefit analysis of adaptation actions** | |
| Cost benefit analysis of proposed adaptation actions | Statutory authorities |
| **Valued assets** | |
| What is the archaeology of the area? | English Heritage (web GIS)<br>NFNPA |
| Information on the use of Lepe Road, traffic density particularly but also a determination of whether traffic is mostly local or connected to tourism. Also, what are the diversionary routes? | HCC Highways |
| What is the maintenance schedule for Lepe Road? What is its residual life and how much is it costing to maintain at present? | HCC Highways |
| What is the residual life of the road and sea defences at Calshot Spit? | HCC highways<br>NFDC |
| A risk assessment for the entire spit so that adaptation planning can be meaningful in the longer term | HCC, NFDC |
| Data from ABP dredge activities | ABP |

## 4.3 Acquiring resources for implementation

The current work has been possible as it was funded through the Defra Pathfinder Project. The funding for this has now ceased. A number of options to take this forward exist:

- A number of the issues and actions raised in this adaptation plan relate to the ongoing and future management of the County Council's assets e.g. Lepe Country Park and Lepe Road, therefore, there may be opportunities to embed the adaptation plan actions and implement this plan through ongoing management.

- Some issues and actions raised in this adaptation plan relate to areas of work governed by other departments within HCC (e.g. Emergency planning) or other organisations (e.g. NFDC), or other landowners/stakeholders therefore there may be opportunities to embed the adaptation plan actions and implement this plan through ongoing management.

- The Plan identifies recommended actions for the short term and longer term. There are some existing funding streams that may assist with the delivery whilst other avenues for funding may not yet be available or known.

- This work has formed part of the 'CCATCH – the Solent' project (see section 1.1), it may be applicable to implement some of the actions in the plan as part of the ongoing work of the 'CCATCH - the Solent' as a means of demonstrating to other community projects the value and benefits of the work.

## 4.4 Implementation Evaluation and Review

It will be important to evaluate the implementation of the plan and review progress; it is suggested that this is undertaken every 5 years. An initial evaluation will be undertaken as part of the EU funded CC2150 project (see section 1.1).

# 5 Action Plan for implementation

## 5.1 Explanation

### 5.1.1 The action plan sections

These actions have been brought forward from Section 3 following the identification of adaptation measures. This section follows the same order as Section 3 with similar activities grouped together.

The section has been divided into three main sections:

- Recommended actions for valued assets and features
- Recommended actions for on-going communication
- Recommended actions for monitoring and review

### 5.1.2 Action Plan Structure

| Column number | Title | Explanation |
|---|---|---|
| 1 | Summary of Action | This column lists the action to be taken. It is a succinct version of what is written out more fully in Section 3. |
| 2 | Type of action | This sets out they type of action e.g.; collecting information, liaison, research, review |
| 3 | On-going, new or aspirational | On-going activities that are already in hand but noted here for completeness. New activities or actions are those identified through this process that could be taken forward through ongoing work. Aspirational activities or actions are those that would require further funding or commitment to enable them to be taken forward, it may be possible to take these forward as and when opportunities arise. |
| 4 | Lead organisations | This lists the lead organisations for the action:<br>HCC: Hampshire County Council<br>NE: Natural England<br>EA: Environment Agency<br>NFDC: New Forest District Council<br>EH: English Heritage |
| 5 | Others involved | This lists other key stakeholders e.g. NFNPA: New Forest National Park Authority |
| 6 | Time frames | The timeframes have been set for 10 years to 2021 although many of the actions will need to continue beyond this point. These are initially suggested, however it is recognised that the timeframes will depend on a number of unquantifiable factors. These timeframes will be revisited and updated periodically as further information becomes available. |
| 7 | Progress comments | This column is ready for succinct comments reporting on progress and currently is used to highlight where the action might be taken forward through other ongoing initiative e.g. CCATCH – the Solent and the HLF bid. |

## 5.2 (Recommended) Action plan for valued assets and features

### 5.2.1 Lepe Park

| Summary of Action | Type of action | On-going, new or aspirational | Lead organisations | Others to be involved | Time frame | | | | | | | | | | Progress comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | |
| **Sea defences** | | | | | | | | | | | | | | | |
| Inspection of sea defences | Review | Ongoing | NFDC | HCC Landowners, | → | → | → | → | → | → | → | → | → | → | |
| **Path** | | | | | | | | | | | | | | | |
| Complete feasibility study for the path (include consideration of parking) | Study | Happening now | HCC Landowners NE | Park users, NFDC, NFNPA. | → | | | | | | | | | | |
| Review options and discuss with key stakeholders | Consult | New | HCC Landowners | NFDC, NFNPA, NE | → | | | | | | | | | | Possible CCATCH – the Solent project (see section 1.1) |
| Implement the best if appropriate and funding available | Implement | Aspirational | HCC Landowners | NFDC, NFNPA, NE | | → | → | | | | | | | | |
| **Current Parking** | | | | | | | | | | | | | | | |
| Maintain revenue funding for annual repairs(2000 minimum to scrape and roll the car park) | fund | On-going | HCC | | → | → | → | → | → | → | → | → | → | → | |
| Collaborative negotiation about lease and period of lease | Negotiation | Happening now | HCC | Landowners | → | | | | | | | | | | |
| Maintain lease | | On-going | HCC | | | → | → | → | → | → | → | → | → | → | |
| **Alternate Parking** | | | | | | | | | | | | | | | Alternative parking will be considered within the revised HLF bid. |
| Find funds for a study into sea defences and when alternative car park will be needed | Find funds | Aspirational | HCC | | → | | | | | | | | | | |
| Commission study to collate data on maintenance costs and life of current defences | Study | Aspirational | HCC | | → | | | | | | | | | | |
| Consider results of study and discuss options with others | Consult | Aspirational | HCC | NE, NFDC, NFNPA | | → | | | | | | | | | |
| Implement agreed options | Implement | Aspirational | HCC | NE, NFDC, NFNPA | | | → | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Make current buildings flood resilient** | | | | | | | | | | | | | | | |
| Prepare plan for immediate flood response | Plan | New | HCC | HCC departments, emergency planning, NFDC, NFNPA | → | | | | | | | | | | |
| Implement resilience measures | Implement | New | HCC | Building occupiers | → | → | | | | | | | | | |
| Annual check that measures in place | Review | New | HCC | Building occupiers | | | → | → | → | → | → | → | → | → | |
| Move Buildings | Implement | Aspirational | HCC | Landowners NFNPA | | | | | | | | | | | (see actions re Lepe Park facilities) Will be considered within the revised HLF b |
| **Small Scale Facilities for quiet/wind powered water sports** | | | | | | | | | | | | | | | |
| Establish what facilities are required to encourage non-motorised water sports | Facilities study | Aspirational | HCC Solent Rescue Venturers NE | Windsurfing companies Park users, NFNPA,NFDC, NE | | | | | | | | | | | This action can be further considered in the longer term and will become more relevant Calshot spit becomes less accessible in the future |
| Implement appropriate small scale facilities for non-motorised water sports | Implement | Aspirational | HCC | NFNPA,NFDC, NE | | | | | | | | | | | |
| Implement zoning to reduce impacts of water sports on nature conservation areas and family use | Implement | Aspirational | HCC, NE | NFNPA,NFDC, NE, Associated British Ports | | | | | | | | | | | |
| Consider in any future plans for the Park | | Aspirational | HCC | NFNPA,NFDC, NE | → | | | | | | | | | | |
| **Lepe Park Visitor Centre** | | | | | | | | | | | | | | | |
| If resubmitted HLF bid successful work up detailed plans for an innovative green building | Plan | New | HCC | Landowners NFNPA | → | | | | | | | | | | |
| Implement plan | Implement | New | HCC | Landowners NFNPA | | → | → | → | → | | | | | | |
| **Actions for Lepe Park Visitor Centre (and plan B if HLF unsuccessful) Please see workshop 2 report section 7 for details.** | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pursue funding<br>- Seek smaller funding from multiple sources to add up to a workable fund<br>- Consider public/private commercial venture | Find funds | New | HCC | Landowners | | → | → | → | → | | | | | | |
| Review alternatives for building (extend life of existing buildings, extend facilities at the class room site, retreat to HCC owned land and Lepe Point, seasonal use) | Review | New | HCC | Landowners<br>NFNPA | | → | → | → | → | | | | | | |
| Develop more modest proposal<br>- Possible staged approach<br>- Modular approach<br>- New facilities that provide better version of what it there now ( bigger café and shop, class room, exhibition room) | Plan | New | HCC | Landowners<br>NFNPA | | → | → | → | → | | | | | | |
| **Adaptation of the natural environment** | | | | | | | | | | | | | | | |
| Consider managed realignment of habitats as opportunities arise | Plan | Aspirational | HCC | NFDC, NE, EA<br>Landowners<br>NFNPA | → | → | → | → | → | → | → | → | → | → | |
| **Adaptation of the heritage assets** | | | | | | | | | | | | | | | |
| Consider impacts of coastal change on the heritage assets and any opportunities for adaptation | Plan | Aspirational | HCC | EH<br>Landowners<br>NFNPA | → | → | → | → | → | → | → | → | → | → | To be considered within the HLF bid |

### 5.2.2 Lepe Coastal Road

| Summary of Action | Type of action | On-going or new | Lead organisations | Others to be involved | Time frame | | | | | | | | | | Progress comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | |
| **Hold discussions with HCC Highways** | | | | | | | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hold an initial meeting with HCC highways to understand current management and future plans for the road. Also determine whether elements of the further work could be progressed (as outlined below) in partnership with the CCATCH – the Solent project | Liaison | New | HCC Highways | | → | | | | | | | | | | Possible CCATCH – the Solent case study. (Roads may be a common issue in a numb of CCATCH – the Solent case study areas) see section 1.1 |
| **Gathering Information about the road to inform short and long term decisions** | | | | | | | | | | | | | | | |
| Undertake a study / review of data to determine:<br>- What is the current status / residual life of the road<br>- What is the status of the road foundations<br>- What is the current usage of the road<br>- What are the diversionary routes<br>- How frequent is the flooding | Review / study | New | HCC Highways | NFDC, Emergency services, NFNPA, Parish Councils | → | → | | | | | | | | | Possible CCATCH – the Solent case study see section 1.1 |
| **Short term access** | | | | | | | | | | | | | | | |
| Secure resources/funding for short term measures. | Find funds | New | HCC Highways | | → | → | | | | | | | | | |
| Develop emergency plan for Lepe coastal Road for temporary cut off and if a sudden major storm | Plan | New | HCC Highways | NFDC, Emergency services, NFNPA, Parish Councils, NE | → | | | | | | | | | | |
| Ensure there is sufficient and increasing budget for clearance of shingle and debris after flood event | Funds | Ongoing | HCC Highways | | → | → | → | → | → | → | → | → | → | → | |
| Determine affordable soft engineering techniques that would maintain the status quo ( recognising occasional flooding) | Study | Aspirational | HCC, NFDC | Highways | → | | | | | | | | | | |
| Implement appropriate soft engineering approaches to bolster the resilience of the road | Implement | Aspirational | HCC, NFDC | | | → | | | | | | | | | |
| **Long term planning** | | | | | | | | | | | | | | | |
| Review the information about Lepe Road to determine its importance | Review | Aspirational | HCC | | | → | | | | | | | | | Possible CCATCH – the Solent case study, see section 1.1 |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Undertake a habitat assessment for Dark Water Valley (change in habitat with inundation) | Study | ongoing | NE | | | → | | | | | | | | | Possible CCATCH – the Solent case study see section 1.1 |
| Secure funding for participatory planning process (see workshop 1 report 5.2.8 for process suggestions). | Find funds | Aspirational | HCC | | → | → | | | | | | | | | Possible CCATCH – the Solent case study see section 1.1 |
| In the light of information follow a consensus approach to generate innovative, adventurous and appealing options, and agree the best. | Process | Aspirational | HCC | Stakeholders | | | → | → | | | | | | | Possible CCATCH – the Solent case study see section 1.1 |
| Implement the best option | Implement | Aspirational | HCC | | | | | | | | | | | → | |

### 5.2.3 Calshot Spit and Beach Huts - Short term

| **Flood mitigation and flood resilience** | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ensure shingle cleared from slipway and placed on inner side of the spit is done in the best way | Protection | On-going | HCC | NFDC, MOD, NFNPA, NE | → | → | → | → | → | → | → | → | → | → | |
| Annual inspections of the sea defences | Review | On-going | FDC | | → | → | → | → | → | → | → | → | → | → | |
| Maintenance works of the sea defences | Implement | On-going | HCC/NFDC/landowners | | → | → | → | → | → | → | → | → | → | → | This is also applicable for other areas of sea defences |
| **Emergency planning** | | | | | | | | | | | | | | | |
| Establish what HCC already has in place in terms of emergency planning | Review | New | HCC Emergency planning | Coastguard, emergency services, weather forecasting, EH, Calshot Association, CAC users, NFDC, beach hut owners & leaseholders | → | | | | | | | | | | |
| If appropriate establish an emergency plan for assets and users of the spit and beach (e.g. annual plan for the management of temporary access, activity centre, utilities, beach huts, boat owners etc.) Generate a scenario which can be used to understand all procedures . (use of PEAR analysis People, Escalation, Assets, Reputation)<br>Consider a warning system | Plan | New | HCC emergency planning, EA | | → | → | | | | | | | | | |
| Raise awareness among beach hut lessees | Education / awareness raising | New + On-going | NFDC, Cadland Estate | Beach Hut Owners Association | → | → | → | → | → | → | → | → | → | → | |

### 5.2.4 Calshot Spit and Beach Huts - Long Term Planning

| Summary of Action | Type of action | On-going or new | Lead organisations | Others to be involved | Time frame | | | | | | | | | | Progress comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | |
| **Appoint a lead agency to run a risk assessment and planning project ( as set out below)** | | | | | | | | | | | | | | | |
| Appoint lead agency to lead the project to do the following (summarised here and in more detail below):<br>- Collect data and information – identify viability of the huts in the long term.<br>- Work with stakeholders to agree common objectives, thresholds and limits, cost/benefit, to inform long term adaption strategy<br>- Review with Calshot stakeholders opportunities, and risks<br>- Agree adaptation measures and strategy | Appoint project manager | Aspirational | HCC | HCC, EH + others | → | | | | | | | | | | Possible CCATCH – the Solent case study – se section 1.1 |
| **Gather information about risks/opportunities** | | | | | | | | | | | | | | | |
| Gather coastal change data including:<br>- Gather EA flood and coastal erosion data ( see workshop 2 section 4.1.1 for questions)<br>- Climate change/sea level rise data<br>- Coastal processes and likely changes to the spit and timelines<br>- Role and importance of the spit to the wider Solent and Southampton water | Data collation | Aspirational | NFDC | CCO, EA, HCC and specialists | → | → | | | | | | | | | |
| **Gather information about value of assets** | | | | | | | | | | | | | | | |
| Gather and refine asset valuation of buildings including beach huts and the activity centre to inform cost/benefit of protection | Study | Aspirational | HCC | NFDC, EA, NE, Beach hut owners, NFNPA | | → | | | | | | | | | |

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Value all assets not only in financial terms but also wellbeing, recreation and nature. | Study | Aspirational | HCC | | | → | | | | | | | | | |
| Identify legal obligations about loss/protection of assets | Study | Aspirational | HCC | NFDC, NFNPA, EA, NE | | → | | | | | | | | | |
| **Gather information about current defences** | | | | | | | | | | | | | | | |
| Establish who owns and maintains the existing defences & what is the maintenance plan into the future (establish who is obliged (and allowed) to do what) | Review | Aspirational | NFDC | HCC, landowners, EA, NE | | → | | | | | | | | | |
| **Use data for risk and opportunity assessment** | | | | | | | | | | | | | | | |
| Create risk assessment for assets and access (assessment must include facilities, including beach huts, and natural environment protected areas and include risks and opportunities) and review with stakeholders | Risk Assess | Aspirational | HCC | NE, MOD, Service providers | | → | | | | | | | | | |
| **Planning with stakeholders** | | | | | | | | | | | | | | | |
| Review information findings with stakeholders and work up a strategy :<br>- Agree objectives for the overall plan for the future of the spit and identify the limit/tipping point for action<br>- Work up mitigation measures in more detail (look for opportunities and bold solutions not just negative risks) | Review & Strategic Planning | Aspirational | EA | Stakeholders LA's, NFDC | | → | | | | | | | | | |
| Establish a time line for rolling review | Review | Aspirational | HCC | | → | → | → | → | → | → | → | → | → | → | |
| **Monitoring** | | | | | | | | | | | | | | | |
| Monitor the spit over time and reporting | Monitor | Ongoing | NFDC/CCO | | → | → | → | → | → | → | → | → | → | → | |
| **Planning with stakeholders** | | | | | | | | | | | | | | | |
| Secure funding for long term adaptation of the Spit | Find funds | Aspirational | HCC | | | → | → | → | → | → | → | → | → | → | |

### 5.2.5 Private Sea Defences

| Summary of Action | Type of action | On-going or new | Lead organisations | Others to be involved | Time frame | | | | | | | | | | Progress comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | |
| **Develop Understanding** | | | | | | | | | | | | | | | Possible CCATCH- the Solent case study |
| Information package for landowners on coastal processes and importance of coordinated planning and action to avoid impacts on others | Education | New | NFDC | HCC, Landholders, NE, NFNPA | → | | | | | | | | | | |
| Develop a cause and effect flow chart for landholders to refer to when planning works | Education | New | NFDC, NFNPA | HCCs, Landholders NE, NFNPA | → | | | | | | | | | | |
| Inform landholders on importance of salt marsh habitat | Education | New | NFDC | HCC, Landholders, NE, NFNPA | → | | | | | | | | | | |
| Produce a set of guidance notes for new defences | Guideline | New | NFDC, NFNPA, MMO | EA, NE, NFNPA | | → | → | | | | | | | | |
| **Landowner/manager reviews** | | | | | | | | | | | | | | | Possible CCATCH – the Solent case study (this area could be looked at as a pilot for rolling out to the rest of the Solent, with the potential for Solent Forum to take forward in the future) – see section 1.1 |
| Develop a process for annual reviews/seminars to keep landowners and managers aware of current coastal issues | Liaison | New | HCC | LA's, NE, DEFRA | → | | | | | | | | | | |
| Initiate a process of annual reviews | Liaison | New | HCC | CCATCH, Landholders | → | → | → | → | → | → | → | → | → | → | |

## 5.3 Recommended action plan for on-going communication (not specific to a particular topic[DP1])

| Summary of Action | Type of action | On-going or new | Lead organisations | Others to be involved | Time frame | | | | | | | | | | Progress comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | |
| **Keeping people informed** | | | | | | | | | | | | | | | |
| Produce a regular articles/updates as appropriate to be included in existing publications. | Newsletter | On-going | HCC/NPA coastal ranger | NFDC, NE, EA, NFNPA, HCC, Solent Forum, CAC | → | → | → | → | → | → | → | → | → | → | |
| Make educational resources available at Calshot Activity Centre to reach a broader audience | Education | On-going | HCC | | → | → | → | → | → | → | → | → | → | → | |
| Develop a place on the CCATCH website for disseminating information and collecting comments | Communication | On-going | HCC, Solent Forum | | → | | | | | | | | | | |
| Maintain database and email stakeholder group members every year with updates on the process and implementation of the adaptation plan | Communication | On-going | HCC/NPA coastal ranger | | → | → | → | → | → | → | → | → | → | → | |
| **Maintain relationships and links** | | | | | | | | | | | | | | | |
| Annual event to maintain links and relationships between ordinary people and the decision makers | Workshops / events | Aspirational | HCC/Solent Forum | | → | → | → | → | → | → | → | → | → | → | |
| **Review of the adaptation plan** | | | | | | | | | | | | | | | |
| Community meetings / workshop to present progress on the implementation of the adaptation plan and collaboratively review upcoming actions, as appropriate. | Workshops | On-going | HCC | NFDC, NE, EA, NFNPA, HCC, Solent Forum, CAC | → | → | → | → | → | → | → | → | → | → | |
| Evaluate, monitor and review the Plan to consider longer term strategy for communication monitoring and review beyond 2013. (include assessment of ongoing role HCC coastal work) | Review | On-going | CCATCH the Solent project (HCC) | NFDC, NE, EA, NFNPA, HCC, Solent Forum, CAC | → | → | | | | | | | | | |

# Appendix 1 Stakeholders who attended workshops for the adaption plan

The table below lists each of the attendees at the two workshops in the CCATCH process, the outputs of which have fed into this adaptation plan.

| Name | Interest or Organisation | Workshop 1 | Workshop 2 |
|---|---|---|---|
| Alan Inder | Solent Protection Society | ✓ | ✓ |
| Alison Steele | Hampshire County Council | ✓ | ✓ |
| Cameron Critchfield | Solent Rescue | ✓ | |
| Carol Green | Beaulieu Parish Council | ✓ | |
| Councillor Holtham | Fawley Parish Council | ✓ | ✓ |
| Dave Laurence | Friends of Lepe | ✓ | ✓ |
| Gillian Mills | Stanswood Bay Oyster fishermen | ✓ | ✓ |
| Graham Neal | Esso | ✓ | ✓ |
| Imogen Nicholson | Solent Forum | | ✓ |
| James Reynolds | Exbury Estate | ✓ | |
| Jo Hale | Hampshire County Council | ✓ | ✓ |
| Joanna Reece | Landmark Trust | ✓ | |
| John O'Flynn | Environment Agency | ✓ | |
| Karen McHugh | Solent Forum | ✓ | |
| Mike Cash | New Forest District Council | ✓ | |
| Nick de Rothschild | Exbury Estate | ✓ | ✓ |
| Nick Evans | New Forest National Park Authority | ✓ | |
| Pat Maxwell | Friends of Lepe | ✓ | ✓ |
| Peter Murphy | English Heritage | ✓ | ✓ |
| Phil Turner | Planning Aid | ✓ | ✓ |
| R Brearley | Beaulieu Residents Association | ✓ | ✓ |
| Rachael Gallagher | Hampshire County Council | ✓ | ✓ |
| Rachael Williams | Natural England | ✓ | ✓ |
| Simon Thompson | Natural England | | ✓ |
| Richard Birkenshaw | Calshot Activity Centre | ✓ | ✓ |
| Simon Hawkins | Heritage Lottery Fund | ✓ | |

## Appendix 2 Project Initiation Document

See separate document

## Appendix 3 Stakeholder Map

See separate document