# Jurassic Coast Coastal Change Pathfinder Project:

# Charmouth Scenario Planning Report

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## 1.0 Introduction

Dorset County Council, on behalf of a range of partners on the Jurassic Coast of Dorset and East Devon, submitted a bid to DEFRA's Coastal Change Pathfinder fund in September 2009. £376,500 was awarded 'to explore planning for, and managing, adaptation to coastal change on the Jurassic Coast'.

The overall objective of the Jurassic Coast Pathfinder project was:

> *'to ensure through meaningful engagement and participation that coastal communities are well-equipped to understand, debate and take part in decisions about coastal change, adapting and becoming more resilient to those changes as a result, based on sound science and local knowledge'.*

## 1.1 Scenario Planning

The basis for engaging coastal communities in adapting to change was provided by a series of workshops held in the six case study locations between October 2010 and April 2011. These used scenario planning to envisage a catastrophic future storm, and worked backwards from the scenario to identify possible adaptations which the community could consider to mitigate or avoid the impacts of such an event.

Scenario planning begins by choosing a plausible 'future event' or situation based on the best available information and advice. This 'future scenario' is then used as a starting point for discussion, and acts as a creative tool to help open minds and generate as wide a range o f ideas as possible.

The Charmouth scenario was presented in the form of an imaginary newspaper article in order to help workshop attendees understand and picture the events it describes. The Charmouth scenario is based on the occurrence of a 1 in 200 year storm event. The storm is imaginary but plausible, and would impact on the whole of the Jurassic Coast. The description of this 'storm' was developed by the Pathfinder Project Team and checked with relevant experts for plausibility.

Using the scenario, the first round of Coastal Change Pathfinder workshops asked participants to identify how coastal change might impact on their community (issues) and ways in which they could minimise the negative impacts of coastal change and maximise the opportunities (options).

Prior to engaging in the second workshop, the Pathfinder Project Team researched the feasibility of the options identified in Workshop 1 by assessing each against set criteria. The findings of this research were sent to all participants prior to them attending the second workshop.

During the second workshop, participants firstly prioritised a short list of options which merited further discussion from the longer list produced at the first workshop. Secondly, participants identified whether those options might be progressed and if so, how they may be progressed.

The scenario planning exercise concluded in summer 2011 with a public exhibition showing how coastal change may impact on the community in the future and the options available for adaptation to that change that have been identified by the community in workshops 1 and 2.

This paper presents the findings of the Charmouth scenario planning exercise:

## 2.0 Scenario Planning Workshop 1 outcomes

**Date:** 03/11/10

**Location:** Charmouth Village Hall

**Project team attending:** Rupert Lloyd, Alex Potter, Henry Aron
**Additional facilitators**: Peter Moore, Richard Edmonds, Jim Masters, Ken Buchan, Tony Flux

## 2.1 Workshop Aims

Two sessions were run during the workshop. The aims of these sessions were as follows:

Session 1

1. Identify the impacts that might arise as a result of an event such as the one described in the scenario
2. Explore the challenges and opportunities that these impacts pose to the community of Charmouth

Session 2

3. Are there ways to minimise the possible negative impacts?
4. Are there ways to maximise any opportunities and enhance the community?

## 2.2 Workshop Agenda

The workshop opened at 17:40 and closed at 21:10

1. Introduction – house-keeping, welcome and agenda outline
2. Background to scenario planning and the pathfinder project
3. Presentation on Charmouth's geology and coastal change

4. Presentation of coastal change visualisations illustrating how the coast at Charmouth may change in the future
5. Summary of the scenario
6. Workshop session 1 – issues, challenges and opportunities
7. Break
8. Workshop session 2 – solutions, actions and next steps
9. Feedback, summary and close

The scenario planning workshop followed a structure that will be used across all six Pathfinder case study sites along the Jurassic Coast.

## 2.3 Attendees

30 people took part in the two workshops. Attendees were divided into three groups (red, green and blue) for each of the workshop sessions. Each group included a mix of residents and representatives of organisations. A full list of attendees is provided below:

| Name | Group | Workshop leaders | Organisation |
|---|---|---|---|
| Barclay, Tracey | Green | Henry Aron/Tony Flux | Fossil Collector |
| Beardwood, Eddie | Blue | Alex Potter/Peter Moore | Woodroffe School |
| Beavis, David | Green | Henry Aron/Tony Flux | Emergency Planner DCC |
| Boon, Matt | Green | Henry Aron/Tony Flux | Environment Agency |
| Brierley, Geoffrey Cllr | Blue | Alex Potter/Peter Moore | Dorset County Council |
| Browning, Nick | Blue | Alex Potter/Peter Moore | WDDC Engineer |
| Ford, Anjana | Red | Jim Masters | Jurassic Coast WHS |
| Fortune, Mark | Red | Jim Masters | DCC, Climate change adaptation officer |
| Gillings, Elliot | Green | Henry Aron/Tony Flux | Woodroffe School |
| Hayes, John | Red | Jim Masters | Countryside Coastal Ranger |
| Hayter, Mallory Cllr | Blue | Alex Potter/Peter Moore | Charmouth Parish Council, Chairman |
| Hills, Simon | Blue | Alex Potter/Peter Moore | Environment Agency |
| Horton, | Blue | Alex Potter/Peter Moore | Friends of Charmouth Heritage |

| | | | |
|---|---|---|---|
| Chris | | | Coast Centre, Chairman |
| Jordan, Hilary | Red | Jim Masters | WDDC |
| Loveland, Justin | Red | Jim Masters | Woodroffe School |
| Mattinsly, Neil | Blue | Alex Potter/Peter Moore | Resident |
| Moore, Chris | Green | Henry Aron/Tony Flux | Fossil collector |
| Morrow, Jane Cllr | Green | Henry Aron/Tony Flux | Charmouth Parish Council |
| Munroe, Tom | Blue | Alex Potter/Peter Moore | Dorset AONB |
| Nettley, Amy | Red | Jim Masters | PhD student, Exeter University |
| Noel, Peter | Green | Henry Aron/Tony Flux | Charmouth Parish Council Foreshore committee |
| Press, Peter | Blue | Alex Potter/Peter Moore | Resident & Charmouth History Group |
| Rhodes, Rob | Green | Henry Aron/Tony Flux | National Trust, Countryside Manager |
| Rose, Penny | Blue | Alex Potter/Peter Moore | Resident |
| Salisbury, Richard | Blue | Alex Potter/Peter Moore | Charmouth Heritage Coast Centre, Chairman |
| Sweeney, Terry | Green | Henry Aron/Tony Flux | Charmouth Heritage Coast Centre, Ranger |
| Townson, Geoff | Red | Jim Masters | Resident & local artist |
| Tritten, Phil | Blue | Alex Potter/Peter Moore | Charmouth Traders |
| Waldock, Rachel | Red | Jim Masters | Natural England |
| Watson, Neil | Red | Jim Masters | Environment Agency |

## 2.4 The scenario for Charmouth

# The Jurassic Coast Daily

**17th October 2038**

**The left fore-limb of a five metre long Megalosaurus was discovered last Friday on Charmouth beach by fossil collector Edward Smith, bringing excitement to Charmouth after the five years of gloom since The 'Great Storm' of 2033. The almost pristine piece of carnivorous theropod is a find of international significance. Edward Smith said: ''I have been waiting for this kind of fossil for over 40 years. I will be lobbying very hard for a new Heritage Centre to be constructed and really hope this discovery will help bring back the tourists Charmouth desperately needs a boost to it's economy.'' This finally puts Charmouth back on the map since the destruction caused by The Great Storm drove away tourists and devastated the village's economy.**

In the years leading up to the 'Great Storm', Charmouth was thriving with tourists enjoying the beach and trying their luck at finding a fossil. The soaring price of international air travel and hotter English summers led to an increase in 'holidaying at home' as demand for holiday lettings and second homes soared.

However, as Charmouth's popularity as a holiday destination was increasing, the ongoing process of coastal change was becoming more apparent. Cliff erosion rates continued at a notably higher rate than during the previous decades. The backshore of the beach was continually added to by large amounts of rock fall material, squeezing the beach and reducing the recreational area. In response to recommendations within the Shoreline Management Plan, the sea wall and rock armour fronting the Heritage Centre ceased to be maintained after 2030. By this point in time, the beach fronting the sea wall had thinned considerably, exposing the wall to persistent wave action and overtopping. During large storms, temporary closures of the Heritage Centre had become commonplace and a quarter of the car park was closed due to undermining in 2032.

The true vulnerability of Charmouth's seafront, however, became apparent during what is widely referred to as 'the weather event of the 21st century'. The 'Great Storm' of 17th October 2033 was the most catastrophic storm to hit the couth coast in over 200 years. Striking the Jurassic Coast during the early hours, the combination of 110 mph southwesterly winds, four meter waves and a spring high tide caused devastation as the sea surged over Charmouth beach. The effects of the storm were made all the more damaging by torrential rainfall; swelling the River Char to unusually high levels.

During the evening of the 16th, the Met Office issued a severe weather warning of gales, torrential rainfall and flooding along the Channel Coast. Worried residents of Lower Sea Lane, River Way and the Caravan Site sought refuge inland and returned the following morning to find the seafront transformed.

The storm had dramatically diminished the width of Charmouth's famous beach, littering what remained with debris from the flooded caravan site and damaged parish council car park. The coastal defences, once protecting the shoreline, were broken apart and strewn on the beach amongst vehicles left overnight in the car park. The footbridge at the mouth of the River Char was damaged beyond repair, cutting all access to the eastern end of the beach.

A local resident remembers the scene: ''Charmouth seafront was a real mess. The beach changed dramatically with unsightly debris all over the place. It was really dangerous. I used to walk my dog on the cliff tops and down on the beach everyday, but not since the storm.''

The popular Jurassic Coast Heritage Centre was hammered by powerful waves for more than several hours, causing huge cracks to form on the outside walls and damaging the building beyond repair. Shortly after the storm, cliff top property owners on Higher Sea Lane feared the worst as large fissures appeared in their gardens, raising concerns over the prospect of landslides.

The knock-on effects of the storm crippled the local tourism trade. Despite a coast-wide clean up operation, Charmouth's visitor numbers plummeted. The closure of the Heritage Centre building caused the loss of the café, fossil shop, clothes shop and Heritage Centre. Fewer people used the beach as an amenity and businesses reliant on visitors suffered, whilst many of the village's B&Bs and cafes were forced to close. The Landlord of Charmouth's only remaining pub said: ''the atmosphere in my pub is miserable. Recently, we haven't seen anywhere near the same number of families visiting the area. If only we had seen this coming, we could have planned for change.''

Since the events of 2033, Charmouth has struggled to regain its position as one of the Jurassic Coast's key tourist and interpretation centers. Hopes that the Heritage Centre could be saved were brought to an end following a structural survey in 2034. It has since remained closed.

However, the local community is hoping that the excitement surrounding the discovery of the Megalosaurus will spark discussion about redeveloping the seafront and relocating the Heritage Centre. Both could bring a much needed economic boost to this area of the Jurassic Coast.

## 2.5 The workshop outputs

The outputs of the workshops are detailed in full in Table 1. The key themes identified in the workshops are briefly summarised as follows:

**Impacts**

1. Closure of the Heritage Coast Centre would lead to a decline in visitor numbers with accompanying economic impact on local businesses.
2. Closure or partial loss of car parking facilities could have a knock on effect on parking provision elsewhere in Charmouth.
3. Flooding or damage of Charmouth Primary School could lead to closure and loss of younger element of community, loss of employment etc
4. Damage to the footbridge across the river Char would impinge coastal access.
5. Restriction in access to the beach.
6. Loss of visitor facilities – toilets, café etc
7. Loss of beach amenity through debris, risk of landslides etc could lead to a decline in visitor numbers.
8. Aftermath – evacuation of residents may be needed, utilities may be lost hampering recovery.
9. Loss/damage to residential property

**Options and opportunities**

1. The Heritage Coast Centre could be rebuilt elsewhere.
2. The Heritage Coast Centre could be housed in a temporary structure.
3. Work is needed to establish what local people and visitors want e.g. why do visitors come to Charmouth? Where do visitors want the Heritage Coast Centre to be?
4. A new car park could be constructed elsewhere.
5. A park and ride facility could be constructed to serve the beach and Heritage Coast Centre.
6. The footbridge could be relocated to a less vulnerable site.
7. A plan is needed for how the community would respond to sudden, catastrophic change.
8. Advanced warning of extreme weather events is needed.
9. Residential property at risk could be rebuilt elsewhere.

**Questions**

1. Are there any current evacuation plans?
2. Can private property be insured against coastal erosion?
3. Would a world class fossil exhibition improve viability & increase options for relocation?
4. Could Charmouth become the ‘ultimate green village’? Resilient to flooding and climate change whilst sustainable in its energy production?

5. Are there alternative car park locations if Parish owned car park was rendered unusable?

## Table 1

*This table details the comments of workshop participants*

| Issue | Challenges identified by workshop participants | Opportunities, questions and options identified by workshop participants |
|---|---|---|
| **Decline in visitor numbers** | • Education of visitors reduced<br>• Knock on effect on the community<br>• Economic impacts<br>• 25% of houses are second homes<br>• If summer income peak is reduced, it undermines the annual income<br>• Caravans, retail, accommodation etc would be impacted upon<br>• The beach is a very safe / popular family destination and is very important to the village's well being<br>• B&Bs and hotels would receive less custom if the beach was affected / Heritage Coast Centre closed<br>• Loss of beach would impact on visitor numbers<br>• Viability of caravan parks could be lost | • Community at Charmouth is very close knit and would work together to overcome problems<br>• Could be even more focussed on the fossil aspect of Charmouth<br>• More focus on local produce and materials to attract visitors. E.g., 'made in Dorset'<br>• Could slipway facilities be improved?<br>• Improve water sports facilities<br>• An artificial 'surf reef' could be created<br>• Visitor 'pay back' money is needed to fund many of the opportunities. |
| **Loss or damage of car parking facilities** | • Area behind the beach will go<br>• Economic impact on parish council from loss of car park revenue<br>• Car park is the main source of parish council income<br>• Capacity for parking in the village would be reduced<br>• Traffic chaos - no turning area at beach<br>• Residential unrest could arise from increased parking problems<br>• General hostility towards visitors could increase<br>• Would coach parking be impacted on?<br>• Boat launching, surfing could continue<br>• Loss of car park = loss of | • Can't Charmouth have a more sustainable park and ride system?<br>• Need to consider knock on effect on residents of poorly managed parking in town<br>• Opportunity to look at wider coastal infrastructure - bus services linking communities, key embarkation localities, regularity, quality of visitor experience, an integrated service could be created<br>• Are there alternative car park locations if Parish owned car park was lost?<br>• Shuttle bus / park and ride/ park and walk could provide continued revenue for the Parish council<br>• Parish needs to maintain its current income in order to provide service continuity<br>• Would car parks need to be relocated or temporarily allowed to flood?<br>• Could the Parish purchase private land for a new car park? |

| Issue | Challenges identified by workshop participants | Opportunities, questions and options identified by workshop participants |
|---|---|---|
| | income for Parish Council<br>• Parking problems in the village could arise form loss of car park<br>• All 3 main car parks could be vulnerable to flooding / erosion<br>• The Parish car park is already vulnerable to flooding from high seas | • People will always want private transport as opposed to public transport |
| **Damage to Charmouth Primary School** | • Flood risk to school<br>• Loss of the school during storm<br>• Loss of sense of community<br>• Children would have to be bussed to other sites in the area if school closes.<br>• Depopulation = loss of young couples<br>• No new young people would come in to community without a school<br>• Loss of services associated with school<br>• Isolating impact on people due to loss of interaction through the school<br>• Loss of local employment at the school<br>• Beach cleans and other activities lost<br>• Connection with Heritage Centre lost<br>• Population gets older | • Charmouth could create a free school specifically for the Jurassic Coast and heritage<br>• Is the school viable with an aging population?<br>• Impacts of technology – could lead to more home schooling and less need for a school<br>• The school could be used to support lifelong learning |
| **Closure of Heritage Coast Centre** | • Knock on effect = fewer people interested in the local landscape and loss of sense of ownership of place<br>• Losing focus for Jurassic Coast<br>• Iconic gateway for coast lost<br>• The centre is a trust in its own right<br>• Volunteer involvement very high this would be lost.<br>• Popular with tourists – a main attraction<br>• 80, 000 visitors in 2010<br>• Is it a centre of information for the locale?<br>• Fossils are one of the main attractions people learn about this in the centre | • Need explore financial options for replacing Heritage Coast Centre<br>• Alternative locations and impacts on planning for village as a whole<br>• Ned to explore when to relocate – now or later?<br>• Space could be provided to house a specialist museum if a new centre is built– a new tourist attraction<br>• A contingency plan needs to be in place<br>• Need to consult local people about what they want<br>• There are other community facilities that could be developed alongside new centre – education, field studies, retail, refreshment, conference centre, geological centre etc<br>• Could a new centre share a location with the school? |

| Issue | Challenges identified by workshop participants | Opportunities, questions and options identified by workshop participants |
|---|---|---|
| | • Safety issues – people won't know how and where to look for fossils without education<br>• Responsible fossil collection promotion lost<br>• Big influx of people looking for fossils initially after storm<br>• The centre provides marine life education and about coast in general<br>• Loss of all associated services<br>• Aesthetic value – amenity value lost<br>• Coastal protection reduced and then erosion will increase<br>• Reduced access to the beach<br>• Retail properties lost<br>• Insurance of Heritage Coast Centre and private property<br>• Businesses under Heritage Coast Centre affected<br>• Visitor numbers decrease initially due to loss of Heritage Coast Centre & debris on beach<br>• Negative economic impact on village<br>• Visual impacts & public safety issues from damaged building<br>• Lack of coordination of fossil collecting<br>• Insurance history of Heritage Coast Centre should be investigated<br>• Loss of education opportunities<br>• Risk to people unfamiliar with area without education facility(e.g. caravan park visitors)<br>• Heritage Coast Centre attracts 80,000 visits per year and closure would have a devastating affect upon the local economy<br>• Heritage Coast Centre is a major attraction and national asset<br>• Loss of educational potential<br>• Parish council would lose significant income due to closure of the car park | • Could funding for new school building fund the centre?<br>• A visitor centre and / or beach need a car park.<br>• Businesses could be involved in financing a new centre<br>• A feasibility study is required<br>• Need to build in capacity for future change – is a coastal location right or would an inland location be better?<br>• Sea level rise impacts on the right location for centre – we don't want to move it again<br>• May not have resources to move the centre if we leave it too long<br>• No obvious areas to put a new centre – by pass?<br>• Could a satellite field centre be provided?<br>• Charmouth Primary School could be used during holiday time<br>• Could one of the two village halls be used?<br>• Could the tennis court site be used?<br>• Is there an appropriate site north of the bypass?<br>• Inland sites could be considered<br>• Joint venture with caravan parks could be explored.<br>• Existing car park behind the centre could be considered? (owner Robert Vincent)<br>• Mobile facilities on beach could be used rather than permanent building? (like National Trust work?)<br>• Build a stronger building<br>• Need to consider viability of a park & ride scheme to a relocated building?<br>• River corridor could provide a link between the beach and relocated centre with interpretation/guided walks<br>• If the Centre was relocated, is there the possibility of incorporating café/retail? Opportunity for better integration (e.g. opening times for café / Heritage Coast Centre could be coordinated)<br>• Could a better fossil exhibition be incorporated?<br>• Education, display, facilities (toilets, refreshments)<br>• A survey of why visitors come to Charmouth is needed & market testing for the future of the centre (summer & winter and repeat surveys, including fossil collectors)<br>• Collaboration with Lyme Regis regarding |

| Issue | Challenges identified by workshop participants | Opportunities, questions and options identified by workshop participants |
|---|---|---|
| | | field studies centre<br>• Could buy-out café to increase options for building up 'war-chest' for CHCC relocation<br>• Need to encourage walkers & others who come not just for the beach<br>• Charmouth should make most of the landscape & farm walks & farm markets<br>• Charmouth tunnel could become a visitor attraction.<br>• Would a new centre need to be close to the beach for maximum effect?<br>• Could mobile / temporary buildings be used? Would this be practical for museum?<br>• Need to revisit planning constraints in the AONB.<br>• Will size of a new centre be restricted?<br>• Path location legislation for coastal access to be future proofed<br>• Build a World class Fossil museum near the trunk road. Car park is still needed – income to be used to safeguard local environment |
| **Damage to infrastructure and access** | • Coast path would be closed / diverted<br>• Toilet block would be lost<br>• Wipe out access to field car park<br>• Road access restricted.<br>• Loss of access to village from the eastern end (from loss of footbridge / flooding)<br>• Sewage works / pumping station damaged.<br>• Access to the beach lost Road to beach lost<br>• Recreational space lost<br>• Flood risk to caravan park<br>• Access to east beach lost if bridge goes<br>• Fossil collection and walking areas lost<br>• Bridge still needed – how could this be made<br>• Footbridges are now designed to fail – common practise<br>• More people will head west in the future to holiday<br>• Damage to the road could lead to loss of access to the beach<br>• The new Footbridge should last until 2033 | • How will people get to Charmouth?<br>• Some public transport service already exists<br>• A35 could be a 'mess' in 20/30 years time<br>• Old rail networks could be re-opened<br>• Transport in Charmouth part of a big picture.<br>• Is there a less 'congesting' way to get people along the Jurassic Coast?<br>• More people walking to beach from caravan parks<br>• Are there options for waterborne transport?<br>• Link between the centre relocation and South West Coast Path? Could be made more accessible by foot<br>• Rebuilding/relocating of footbridge – contingency plan needed for replacing footbridge<br>• The bridge could be set back from the coast<br>• Could the school site, if the school was moved, be used?<br>• Planning permission may not be granted at certain locations due to the AONB designation<br>• Beach huts need to be moved |

| Issue | Challenges identified by workshop participants | Opportunities, questions and options identified by workshop participants |
|---|---|---|
| | • Damage to the footbridge would sever access to the eastern beach<br>• Sewerage pumping station: if damaged, could result in raw sewage contaminating the river and estuary<br>• Pollution could be worse – sewage pumping station needs to be improved - what level of treatment is there – 1yr / 2yr / 3yr<br>• Beach huts could be damaged/lost<br>• Village could be divided into two if roads damaged (east and west)? | |
| **Emergency response/health and safety** | • Increased number of land slips after storm<br>• Unpleasant for visitors<br>• West end of beach is more dangerous<br>• West is more dangerous<br>• During a storm, utilities could be lost<br>• Medical resources in the village are limited<br>• Fire station is at the wrong end of town | • Assess alternative accommodation / refuges e.g. village halls, all empty beds / accommodation in the area<br>• Parish council should consider creating emergency plan for Charmouth<br>• Saving of livelihoods important, not just lives<br>• Who will: clean up the beach? Restore access? Re-open after closure?<br>• Plenty of locations available where people could be evacuated to<br>• In times of stress Charmouth's population would come together<br>• Need a 'village emergency plan' – a template is available on the Dorset County Council Emergency Planning website and can be uploaded to Dorset Explorer<br>• Plans should address multiple issues e.g. utilities, access, medical assistance and telecoms<br>• Each community would need to be self sufficient for a certain amount of time<br>• Local flood wardens are in place<br>• Need an advanced warning system that allows the community to take precautionary measures in the lead-up to a potential event<br>• Met-Office email system could be used for warning?<br>• The EA flood warning service is available – offers a coast wide service regarding surges / tides<br>• Charmouth has a very flashy catchment. Therefore warning time of river flooding would be low. Maybe as low as 1 hr<br>• Empty second homes could be used for |

| Issue | Challenges identified by workshop participants | Opportunities, questions and options identified by workshop participants |
|---|---|---|
| | | emergency accommodation |
| **Residential property** | • Private property next to the Heritage Centre will be affected/damaged<br>• There could be insurance/re-selling impacts for houses if damaged by a storm<br>• Housing estate near the Heritage Coast Centre would be impacted on<br>• Insurance – increase or availability of premiums could change after a major event<br>• Residential displacement would occur if homes are lost or damaged.<br>• Impact on property prices | • Also needs a relaxing of planning law to allow for relocation of homes<br>• Ageing population - what does Charmouth offer to new people moving here?<br>• Opportunity to develop office/space employment as part of new residential development?<br>• Build sustainable homes to replace those at risk.<br>• Need to find land to build on<br>• Can second homes be taxed and the revenue invested back into community to fund relocation?<br>• Holiday parks – relax planning and improve quality of holiday accommodation<br>• Recognition of costs of improvement and upkeep<br>• Buy and lease back of at risk properties?<br>• £10 k developers fee could pay for buy and lease back or similar schemes |

## 2.6 Conclusions

The first scenario planning workshop in Charmouth explored how coastal change may impact on the community in the future, and successfully identified a range of options for adaptation to those impacts.

In all three groups there was a strong focus on the possible impact of coastal change on the Heritage Coast Centre, and on how the loss of this facility would impact on Charmouth with particular reference to the local economy. Key possible impacts that emerged from the loss of the centre were the consequential loss of an educational facility for the visitors to the Jurassic Coast, the likelihood of a decline in visitor numbers to Charmouth and reduction in revenue for local businesses.

Loss or partial loss of the Parish Council owned car park was also identified as an impact of particular concern among workshop participants. This concern was focussed on the loss of associated revenue for the Parish Council and the resultant restriction on service provision that could arise. Participants also expressed concern over the inconvenience for Charmouth residents and visitors that the lack of a beachside car parking facility would cause.

During the second workshop discussion across the three groups was focussed again on the loss of the Heritage Centre and car parking facilities. Relocation of the centre and/or use of temporary and mobile structures were identified as possible mean of preserving the value the centre currently provides for Charmouth. Relocation of car parking facilities was also considered, together with alternatives to the current parking arrangements such the creation of a 'park and ride facility' or the provision of waterborne transport for visitors to Charmouth.

# 3.0 Charmouth Scenario Planning Options Assessment

## 3.1 Introduction

1. **WORKSHOPS ROUND 2**

The first round of Coastal Change Pathfinder workshops asked participants to identify how coastal change might impact on their community (issues) and ways in which they could minimise the negative impacts of coastal change and maximise the opportunities (options). During the workshops a large number of questions arose which the project will attempt to answer where possible.

Prior to engaging in round 2 the Pathfinder Project Team researched the feasibility of the options identified in Workshop 1 by assessing each against a set criteria. The findings of this research were sent to all participants prior to them attending the second round of workshops.

The aims of the second round of workshops was for the community to identify a short list of options which merit further discussion from the longer list produced at the first workshop, and to identify whether/how those options might be progressed.

The process followed during this research phase is outlined below.

2. **RESEARCH PHASE**

The aim of this process is to provide additional information on the adaptation options identified in Workshop 1 to allow the community and other stakeholders to make more informed decisions about which options to progress.

Step 1: Transcripts (from Round 1) written up by Pathfinder Project Team and circulated to workshop attendees.

Step2: Impacts and associated adaptation options grouped (e.g. 'loss of residential property' identified as a theme and options of roll back of dwellings, buy and lease back, replacement with temporary structures etc grouped with it).

Step 3: Evaluate each option against the following criteria (where appropriate in conjunction with stakeholders/experts): 1. environmental impact, 2. cost, 3. technical feasibility 4. Regulatory issues and 5. Continuity of community.

Step 4: The outputs of step 3 are incorporated into a single briefing pack and circulated to workshop attendees two weeks prior to workshop.

## 3.2 Impacts and adaptation options synopsis table

| Impact | Adaptation Options | Synopsis |
|---|---|---|
| **Decline in visitor numbers as a result of coastal change e.g. beach squeeze** | **1. More focus on fossil tourism to attract visitors** | • Increased focus on the fossils aspect in Charmouth could increase visitor numbers and boost the local economy<br>• Need to take the capacity of current infrastructure into consideration e.g. congestion on Lower Sea Lane, car parking and toilet facilities<br>• There would be a cost in implementing the fossil Code of Practice and beach monitoring led by the CHCC. |
| | **2. More focus on local produce to attract visitors** | • This could have a positive impact on the environment by promoting and supporting locally produced food, farms and markets, and reducing 'food miles'.<br>• Accreditation to sellers and producers of locally produced Dorset food can be made from 'Direct from Dorset' for a small annual membership fee as long as terms and conditions are adhered to. |
| | **3. Improve water sports facilities to attract visitors** | • Significant temporary and some permanent environmental impacts from the construction of a slipway or artificial reef<br>• Significant costs<br>• Construction of a slipway may need to include further infrastructure e.g. parking facilities |
| | **4. Survey of why visitors come to Charmouth** | • An all year round study would need to be conducted for the survey to be most useful<br>• Potential gaps in the tourism market could be identified and boost the local economy |

| Impact | Adaptation Options | Synopsis |
|---|---|---|
| Loss or damage of car parking facilities | **5. Park and ride system/Park and walk/shuttle bus** | • Sustainable transport options could enhance the environment and have positive knock-on effects to visitor numbers/the economy.<br>• A Feasibility study of location options for a new car park and interconnecting shuttle bus/or a pathway connecting the car park to the beach would be required |
| | **6. Purchase of an alternative site by Parish Council for a new car park** | • No current plans for Parish council to relocate the existing car park<br>• Potential loss in income for the Parish council if the existing car park was no longer in use<br>• Potential benefit to the environment if the current car park was returned to a natural state |
| Closure of Charmouth Heritage Coast Centre | **7. Build a stronger building in same location** | • Replacing the existing building in the same location would not render the site immune from future coastal change if the defences are not maintained in line with SMP policy.<br>• Given the risk a new building in the same location would face securing funding to implement this option could be particularly challenging. |
| | **8. Replacing CHCC with a temporary structure** | • Costs of purchasing/contracting a temporary structure<br>• Practical issues of size, space and educational facilities would need to be considered<br>• A suitable site for locating a temporary building would need to be located |
| | **9. Relocating CHCC within an existing building** | • There are options for moving the resources of the current CHCC into an existing building but further investigation would be required to identify the feasibility of doing so.<br>• Moving the heritage centre away from the beach could render it less attractive for visitors |

| Impact | Adaptation Options | Synopsis |
|---|---|---|
| | **10. Relocating CHCC with a new purpose built structure** | • The key challenge to relocating the centre would lie in identifying a suitable site and funding for relocation<br>• Planning permission would be required for the construction of a new building<br>• Investigation/a feasibility study would be required to identify when to relocate |
| **Damage to infrastructure** | **11. Waterborne transport for access to Charmouth** | • If the impacts of coastal change on the turning circle and car park restricted vehicular access for visitors waterborne transport could provide an alternative means of access for some.<br>• The local community can enhance the prospect of a waterborne transport system being made available for Charmouth by pledging its support for any schemes. |
| | **12. Relocation of beach huts** | • A suitable site would need to be identified to limit any impact on the surrounding landscape.<br>• It is probable that the cost of relocation would fall on the owners of the beach huts |
| | **13. Rebuild / relocate footbridge and rollback the coastal path as change occurs.** | • The new footbridge is due to be re-opened in Easter 2011 and has a design life of 30-40 years. Maintenance of this bridge is the responsibility of Dorset County Council.<br>• There are no current plans to write a contingency plan if the existing bridge fails.<br>• The Marine and Coastal Access Act specifies that when the path is affected by erosion it will automatically roll back, the footbridge at Charmouth would be considered as part of the path and would therefore be subject to the same regulations. However in areas like Charmouth where the path is close to homes and gardens it may need to be diverted away from the coast.<br>• The chief constraint on roll back of the coast path is the presence of private property on the coast which limits options for re-routing the path (e.g. gardens and caravan sites). |

| Impact | Adaptation Options | Synopsis |
|---|---|---|
| Emergency Response/ Flood Warning | **14. Develop an emergency response plan for Charmouth** | • Communities should contact the Emergency Planning Department at WDCC through their parish councils. West Dorset District Council will then provide communities with a template 'Community Resilience Plan' and support them in formulating their own plan. |
| | **15. Provision of a flood/storm warning system for Charmouth** | • The Environment Agency provides a flood warning service which individuals, businesses and organisations can sign up to. Warnings are issued by text, email, telephone or fax. Individuals can sign up to the service by calling 0845 988 1188.<br>• Severe weather warnings issued by the Met Office are available at their website. Individuals can sign up to the National Severe Weather Warnings Service to receive weather warnings by email but this may require a commercial contract. More information is available at the **www.metoffice.gov.uk** |
| Residential property | **16. Local tax to fund relocation of at risk properties** | • Local authorities would need to be given responsibility for funding adaptation to coastal change in order to increase council tax.<br>• Any increase in council tax would be likely to prove contentious.<br>• An option identified in the first Pathfinder workshop involved increased council tax payments by second home owners. |
| | **17. Government compensation for homeowners funded by a national tax (French system)** | The French system offers a precedent for the compulsory purchase of houses at imminent risk from coastal erosion, funded through a national tax. Although compensated for the loss of their homes people were not relocated in the immediate area. Any tax based on this approach would require new legislation – Pathfinder projects could encourage the Government to consider this option. |

| Impact | Adaptation Options | Synopsis |
|---|---|---|
| | **18. Buy and lease back of at risk homes by the local authority** | Implementation of buy and lease back would rely on securing funds for the initial purchase of dwellings at risk from coastal change. Purchasing at risk dwellings at market value could incur significant costs, although this should be recouped through letting the dwellings. |
| | **19. Relocation of homes at risk of coastal erosion** | Relocation of properties would ensure continuity of the present community at Charmouth. Furthermore, in an instance where a dwelling is replaced, it should be ensured that dwelling it replaces is cleared or managed to prevent detrimental impact on the local environment. Such dwellings could alternatively be put to a temporary use that is beneficial to the well being of the local community. |

## 3.3 Adaptation Option Assessment

**PLEASE NOTE:** The following assessment reflects research into the issues raised by the different options for adapting to coastal change identified by the community in Charmouth. It seeks to present an objective summary of the issues as seen by the Pathfinder project team but does not otherwise represent the views of any of the partner organisations or individuals involved in the Pathfinder project.

**Issue: Decline in visitor numbers as a result of coastal change e.g beach squeeze**

**1: Charmouth more focussed on fossil tourism**

| **1. Environmental impact/opportunity** |
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| • There are no direct environmental impacts from collecting fossils on the beach but with higher visitor numbers, there could be knock on effects such as beach litter, pollution, fossil collecting misconduct and increased pressure on other areas of Charmouth. |
| **2. Cost/other resource implications** |
| • Costs could include producing more promotional materials to encourage health and safety/education (e.g. Fossil Code of Practise leaflet) and more hours for CHCC fossil wardens to patrol the beach (educating, beach monitoring and stopping fossil misconduct). |

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| **3. Technical feasibility/other practical considerations** |
| • There would be a need to maintain access to the beach, car parking and toilet facilities<br>• There could be a need to improve these facilities to cope with an increase in usage<br>• Health and safety issues could arise from an increased number of people fossil hunting (e.g. landslides and rock falls) |
| **4. Regulatory issues** |
| • Digging fossils from the cliffs has been prosecuted against by the National Trust in the past. |
| **5. Continuity of community** |
| • Could help to sustain the local economy<br>• May cause a strain on local resources and facilities, as well as potentially creating resentment amongst the wider community against higher visitor numbers and associated problems (e.g. access, congestion, pollution etc). |
| **6. Summary** |
| • Increased focus on the fossils aspect in Charmouth could increase visitor numbers and boost the local economy<br>• Need to take the capacity of current infrastructure into consideration e.g. congestion on Lower Sea Lane, car parking and toilet facilities<br>• There would be a cost in implementing the fossil Code of Practice and beach monitoring led by the CHCC. |

**2: More focus on local produce to attract visitors**

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| **1. Environmental impact/opportunity** |
| • This could have a positive impact on the environment by promoting and supporting locally produced food, farms and markets, and reducing 'food miles'. |
| **2. Cost/other resource implications** |
| • Direct from Dorset Associate Memberships costs £35 per annum for businesses wishing to be accredited for stocking locally produced food. Membership costs would include marketing materials.<br>• Full Membership can be granted for £50 per annum if you are a food, drink, wood or craft producer who uses Dorset grown raw materials. Members would be accredited with using the 'Direct from Dorset' logo and would appear on the list of Direct from Dorset producers.<br>• The Dorset AONB team are happy to help tourism providers to locate good local produce to sell, and hope this provision of help will be developed further in the future. |
| **3. Technical feasibility/other practical considerations** |
| • Using locally produced food to attract visitors to Charmouth could play a role in sustaining visitor numbers in the future but would depend on the availability of such produce for use in local restaurants, sale in retail outlets etc.<br>• Other ways of promoting local produce could include food festivals or tours of local |

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| producers to attract visitors to Charmouth |
| **4. Regulatory issues** |
| • Direct from Dorset Members need to adhere to their terms and conditions e.g. for Associate Membership, businesses need to sell a minimum of three locally produced foods from the Full Producer Members list and commit to steadily increasing the number of these products stocked. More information on these terms and conditions can be found on the website: **www.directfromdorset.co.uk** |
| **5. Continuity of community** |
| • This option could enhance the sense of community within Charmouth; with all businesses working together to promote local and sustainable food. |
| **6. Summary** |
| • This could have a positive impact on the environment by promoting and supporting locally produced food, farms and markets, and reducing 'food miles'.<br>• Accreditation to sellers and producers of locally produced Dorset food can be made from 'Direct from Dorset' for a small annual membership fee as long as terms and conditions are adhered to. |

**3: Improve water sports facilities to attract visitors**

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| **1. Environmental impact/opportunity** |
| • There could be visual, noise and physical environmental impacts if construction works for a slipway facility or an offshore surf reef was to take place.<br>• There could also be a higher level of water pollution if motorised water sports were to take place in the Charmouth area.<br>• Environmental impacts associated with non-motorised water sports (e.g. kayaking, wind surfing) could be less |
| **2. Cost/other resource implications** |
| • Cost of constructing a slipway, artificial surf reef and/or other associated facilities are likely to be considerable.<br>• Further investigation would be required to establish the feasibility of improving and promoting water sports facilities at Charmouth |
| **3. Technical feasibility/other practical considerations** |
| • Access issues for constructing a slipway facility including Lower Sea Lane access, car parking and congestion<br>• Disruption to tourists affecting visitor numbers, local economy and CHCC visitor numbers during construction works including noise, visual impacts and beach access. |
| **3. Technical feasibility** |
| • Construction of a slipway facility is a long term objective for the Parish council at the moment<br>• A feasibility study and Environmental Impact Assessment would need to be carried out for the construction of an offshore reef or other facilities. |
| **4. Regulatory Issues** |
| • Works like the construction of a slipways or artificial reef are likely to require planning |

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| permission.<br>• The AONB Natural England and Jurassic Coast World Heritage Site team would be consulted and asked to advise the planning authorities during the planning application |
| **6. Summary** |
| • Significant temporary and some permanent environmental impacts from the construction of a slipway or artificial reef<br>• Significant costs<br>• Construction of a slipway may need to include further infrastructure e.g. parking facilities |

**4: Survey of why visitors come to Charmouth**

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| **1. Environmental impact/opportunity** |
| • There would be no environmental impacts associated with this option. |
| **2. Cost/other resource implications** |
| • There would be a cost of undertaking the survey and any development of the results. |
| **3. Technical feasibility/other practical considerations** |
| • The study would need to be carried out throughout the year to capture information from off-peak and peak time tourists. This would mean carrying out the survey in unfavourable weather conditions.<br>• There would need to be analysis of the results and a contingency plan created once the results of the survey are published. |
| **4. Regulatory issues** |
| • There are no regulatory issues associated with this option. |
| **5. Continuity of community** |
| • The results of the survey could prove useful in identifying gaps in the market for attracting visitors and boosting the economy |
| **6. Summary** |
| • An all year round study would need to be conducted for the survey to be most useful<br>• Potential gaps in the tourism market could be identified and boost the local economy |

**<u>Issue: Closure or damage to Parish owned car park</u>**

**5: A park and ride system/Park and walk/shuttle bus scheme**

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| **1. Environmental impact/opportunity** |
| • A park and walk/park and ride scheme could help reduce traffic flow to Charmouth or to the beach itself. |

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| • The construction of a new car park, if required, could have significant impact on the surrounding landscape subject to location. |
| **2. Cost/other resource implications** |
| • Cost of constructing a car park away from Charmouth's beach front (buying land, construction costs and maintenance costs)<br>• Cost of implementing a bus route, bus company and staff<br>• Cost of promotional materials and signage |
| **3. Technical feasibility/other practical considerations** |
| • A Feasibility study of location options for a new car park and interconnecting shuttle bus/or a pathway connecting the car park to the beach would be required<br>• X53 and 31 bus services already connect coastal communities to other areas along the Jurassic Coast. |
| **4. Regulatory issues** |
| • Regulatory requirements would depend on the scale and nature of the proposal. |
| **5. Continuity of community** |
| • Even though visitors would be encouraged to use a park and ride scheme and not park directly in the centre/seafront in Charmouth, sustainable transport options could enhance the environment and therefore increase visitor numbers and the economy.<br>• Park and ride schemes could alleviate existing issues surrounding parking and congestion on Charmouth's seafront/ Lower Sea Lane. |
| **6. Summary** |
| • Sustainable transport options could enhance the environment and have positive knock-on effects to visitor numbers/the economy.<br>• A Feasibility study of location options for a new car park and interconnecting shuttle bus/or a pathway connecting the car park to the beach would be required |

**6: Purchase of an alternative site by Parish council for a new car park**

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| **1. Environmental impact/opportunity** |
| • Construction of a new car park could have visual impact on the surrounding landscape subject to its location. |
| **2. Cost/other resource implications** |
| • Cost would be incurred by the Parish Council through purchasing land and construction of a new car park |
| **3. Technical feasibility/other practical considerations** |
| • The Parish council have no current plans to relocate the car park<br>• The cost of purchasing a new site would need to outweigh the amount of income generated (current car park generates ~£50,000 per annum)<br>• There would be competition between new Parish owned car park and existing car parks that may then be closer to the beach |
| **4. Regulatory issues** |
| • Planning permission would need to be granted if constructing a car park on a new site |
| **5. Continuity of community** |

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| • Potential negative impacts on the community if the Parish council have less income to spend as a result of loss of the car park could be mitigated against. |
| **6. Summary** |
| • No current plans for Parish council to relocate the existing car park<br>• Potential loss in income for the Parish council if the existing car park was no longer in use<br>• Potential benefit to the environment if the current car park was returned to a natural state |

**Issue: Closure of Charmouth Heritage Coast Centre**

**7: Build a stronger building in same location**

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| **1. Environmental impact/opportunity** |
| • There would be environmental impacts during the construction work and potential future environmental impacts if the building was to be damaged/demolished due to coastal change |
| **2. Cost/other resource implications** |
| • Demolition costs of existing building<br>• Cost of constructing a new building<br>• Given the risk a new building in the same location would face securing funding to implement this option could be particularly challenging. |
| **3. Technical feasibility/other practical considerations** |
| • Agreement would need to be sort from lease holders (fossil shop, café & clothes shop) for removal of the existing building<br>• Rebuilding in the same location would not solve the issue of coastal erosion/beach squeeze/coastal flooding in the future due to the change in SMP policy towards 'No Active Intervention' in the second epoch<br>• Funding for the rebuild would need to be sort. This comes shortly after Heritage Lottery Funding was granted for the refurbishment of the current building and therefore funding from this source is unlikely to be available.<br>• The building would need to be commercially viable in order to re-coop monies lost due to closure of the current building and the limited amount of time the new building would be open for until it is forced to close due to storm/flooding damage. |
| **4. Regulatory issues** |
| • Planning permission would need to be granted for construction of the new building<br>• Given the risk the site is exposed to the Environment Agency would be a key consultee on any application |
| **5. Continuity of community** |
| • Securing the future of the centre would ensure the continuation of the value it currently provides to the community and visitors.<br>• However, given the risk the site is exposed to it is unlikely that rebuilding the centre in |

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| the same location would be a sustainable option in the longer term |
| 6. Summary |
| • Replacing the existing building in the same location would not render the site immune from future coastal change if the defences are not maintained in line with SMP policy.<br>• Given the risk a new building in the same location would face securing funding to implement this option could be particularly challenging. |

**8: Replacing CHCC with a temporary structure**

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| **1. Environmental impact/opportunity** |
| • A temporary structure could prove more environmentally friendly if it was made using locally produced/sustainable materials.<br>• There could be some environmental benefits from demolishing the existing building and returning the area to a natural state. |
| **2. Cost/other resource implications** |
| • Purchasing a suitable temporary structure<br>• Eventual demolition cost of the existing CHCC building<br>• Loss of businesses currently occupying the CHCC<br>• Loss of resources as it is unlikely the temporary structure could provide as much room/resources as the existing CHCC. |
| **3. Technical feasibility/other practical considerations** |
| • A temporary structure may not be suitable for providing the existing range of facilities e.g. education room, fossil exhibitions etc<br>• If a temporary structure could not house all of the facilities and businesses currently housed by the centre this could render it less attractive for visitors |
| **4. Regulatory issues** |
| • Would need to investigate the regulatory and insurance issues surrounding the current business leases if the current building was to be demolished<br>• Planning permission would be required for construction of a temporary structure<br>• For temporary permissions, after-use conditions (or agreements) could be imposed requiring the removal of the structure after the prescribed period and the restoration of the site, in order to safeguard the character, appearance and vitality of a settlement. |
| **5. Continuity of community** |
| • There are currently approximately 350,000 visitors per annum to Charmouth, and approximately 90,000 visitors per annum to the CHCC. Whether facilities housed in a temporary structure could continue to sustain these numbers would require further investigation. |
| **6. Summary** |
| • Costs of purchasing/contracting a temporary structure<br>• Practical issues of size, space and educational facilities would need to be considered.<br>• A suitable site for locating a temporary building would need to be located |

**9: Relocating CHCC within an existing building**

| **1. Environmental impact/opportunity** |
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| • If a suitable building could be located this would minimise the environmental impact of 're-housing' the centre as construction of a new building would not be required |
| **2. Cost/other resource implications.** |
| • Cost of relocating materials from the existing CHCC building into a new building<br>• Cost of leasing/purchasing space within the existing building |
| **3. Technical feasibility/other practical implications** |
| • The key challenge lies in identifying a suitable building that could house facilities such as an educational room, fossil displays, interpretation panels etc.<br>• Suggested options discussed at the last workshop included:<br>o Satellite field centre<br>o Charmouth Primary School during holidays (therefore restricted opening times and Dorset County Council would need to agree on the use of the school due to potential security issues)<br>o One of the two village halls (the Village Hall on Wesley Close falls within a conservation area and there appears to be limited space for expansion and therefore would be as is. (the Parish Council do not own the village halls.)<br>o Proposed Lyme Regis Study Centre (this may not be target the same audience as the CHCC) |
| **4. Regulatory issues** |
| • Planning permission for extending an existing building or changing its use would be required. |
| **5. Continuity of community** |
| • Locating the CHCC away from the beach may make it less appealing for visitors and as a result reduce it's capacity for helping visitors understand Jurassic Coast World Heritage Site. |
| **6. Summary** |
| • There are options for moving the resources of the current CHCC into an existing building but further investigation would be required to identify the feasibility of doing so.<br>• Moving the heritage centre away from the beach could render it less attractive for visitors |

**10: Relocating CHCC within a new purpose built structure.**

| **1. Environmental impact/opportunity** |
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- The location and design of the new building would be the most significant factor in determining its impact on the landscape, AONB etc
- Incorporating energy efficiency measures into the design of a new building could reduce running costs and limit the centre's future environmental impact.
- Sympathetic design and appropriate landscaping could help to mitigate the impact of a new building on the surrounding landscape.

**2. Cost/other resource implications.**

- Likely costs associated with relocating the centre to a new location would include purchase of land, development of a suitable design, securing the required permissions (e.g. planning permission) and construction of a new building. Unless new sources of funding were made available to support relocation, the costs would have to be borne by the owners or alternative funding identified.

**3. Technical feasibility/other practical considerations**

- A contingency plan would be needed to explore when to relocate the centre to a new site
- A source of funding for relocation of the building would need to be identified
- Possible sites for relocation suggested at the Pathfinder Project workshop in November 2011 included :
    - Tennis court site south of The Street
    - A site north of the bypass
    - Existing car park to the north of the centre

**4. Regulatory issues**

- Planning permission would be required for construction of a new building.

**5. Continuity of Community**

- Re-housing the heritage centre in a new building could help to preserve the services it currently provides for the local community and visitors to Charmouth.

**6. Summary**

- The key challenge to relocating the centre would lie in identifying a suitable site and funding for relocation
- Planning permission would be required for the construction of a new building
- Investigation/a feasibility study would be required to identify when to relocate

**Issue: Damage to infrastructure**

**11: Waterborne transport for access to Charmouth**

**1. Environmental impact**

- A jetty could be required in order provide a landing point for waterborne transport
- Possible benefits could include a reduction in car movements to and from Charmouth and alleviation of associated pollution.

**2. Cost**

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| • Cost would be significant unless a commercially viable service could be maintained.<br>• Cost would be incurred through operating the service and funding any infrastructure (e.g. jetty) which may be required |
| **3. Technical feasibility/other practical considerations** |
| • A waterborne transport service would need to be economically viable in order for a private enterprise to operate it. Any service is likely to be weather dependant and seasonal.<br>• A feasibility study would be required to identify whether there are locations on the coast where a sufficient number of trips to Charmouth originate to create a viable service (e.g. linking Charmouth to larger settlements like Weymouth, Lyme Regis etc). |
| **4. Regulatory issues** |
| • A commercial operation would need to comply with relevant safety requirements<br>• Permission would be required for installing any equipment/infrastructure on the beach**.** |
| **5. Continuity of community** |
| • Waterborne transport to Charmouth would provide an alternative means of access to the community which could prove beneficial to local businesses if it provided a more convenient/attractive means of access to Charmouth for visitors |
| **6. Summary** |
| • If the impacts of coastal change on the turning circle and car park restricted vehicular access for visitors waterborne transport could provide an alternative means of access for some.<br>• The local community can enhance the prospect of a waterborne transport system being made available for Charmouth by pledging its support for any schemes. |

**12: Relocation of beach huts**

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| **1. Environmental impact/opportunity** |
| • The environmental impact of implementing this option would depend on where the beach huts were relocated to.<br>• A suitable site would need to be identified to limit any impact on the surrounding landscape. |
| **2. Cost/other resource implications** |
| • The most significant cost would be incurred through leasing or purchasing a site to relocate the beach huts and any demolition or landscaping required to restore the existing site.<br>• It is probable that the cost of relocation would fall on the owners of the beach huts |
| **3. Technical feasibility/other practical considerations** |
| • A suitable site would need to be identified to relocate the beach huts to. Given the sensitivity of the surrounding landscape doing so may prove difficult. |
| **4. Regulatory issues** |

- Planning permission would be required in order to relocate the beach huts.

**5. Continuity of community**

- Relocating/rebuilding the beach huts at a location less at risk from coastal change could help maintain the overall quality of facilities Charmouth offers to visitors and residents.

**6. Summary**

- A suitable site would need to be identified to limit any impact on the surrounding landscape.
- It is probable that the cost of relocation would fall on the owners of the beach huts

**13: Rebuild / relocate footbridge and rollback the coastal path as change occurs.**

**1. Environmental impact/opportunity**

- There would be a temporary visual impact from construction of a new bridge and demolition of the (from Easter 2011) existing bridge. There would also be a direct impact on wildlife during the construction works and potential long term impacts on the river habitat should the bridge be relocated inland.
- Re-routing areas of the coastal path where erosion may prevent access would have minimal implications for the natural environment.

**2. Cost/other resource implications**

- The future construction cost for a new bridge is unknown but as a comparison, the cost of the current rebuilding operation is estimated to be approximately £30,000. This new bridge is classed as a 'major structure' and therefore maintenance work is the responsibility of Dorset County Council.
- The cost of re-routing coastal paths inland would have to be met by Dorset County Council.

**3. Technical feasibility/other practical considerations**

- The new footbridge is due to be re-opened in Easter 2011 and has a design life of 30-40 years. Maintenance of this bridge is the responsibility of Dorset County Council.
- There are no current plans to write a contingency plan if the existing bridge fails.
- Relocating the footbridge would depend on the scale and rate of coastal change at the mouth of the River Char
- A relocated footbridge would preferably maintain access to the CHCC, car parking facilities and toilet facilities.
- The chief constraint on roll back of the coast path is the presence of private property on the coast which limits options for re-routing the path (e.g. gardens and caravan sites).
- Future sites for the relocation of the footbridge could include privately owned land therefore requiring negotiations and permission from landowners
- Newland's Bridge could potentially be used as an alternative crossing in the future.

| 4. Regulatory issues |
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| • The Marine and Coastal Access Act (2009) requires the provision of an uninterrupted path aground Britain's coast together with land open for access by walkers around the path known as 'spreading room'. Private homes and gardens are exempt from having the path routed through them or being used as 'spreading room'. Creation of the path is forecast to take approximately 10 years.<br>• The Marine and Coastal Access Act specifies that when the path is affected by erosion it will automatically roll back, the footbridge at Charmouth would be considered as part of the path and would therefore be subject to the same regulations. However in areas like Charmouth where the path is close to homes and gardens it may need to be diverted away from the coast. |
| **5. Continuity of community** |
| • There are currently ~700,000 people that use the existing footbridge per year. The bridge provides the only convenient access over the river Char and between the two beaches. |
| **6. Summary** |
| • The new footbridge is due to be re-opened in Easter 2011 and has a design life of 30-40 years. Maintenance of this bridge is the responsibility of Dorset County Council.<br>• There are no current plans to write a contingency plan if the existing bridge fails.<br>• The Marine and Coastal Access Act specifies that when the path is affected by erosion it will automatically roll back, the footbridge at Charmouth would be considered as part of the path and would therefore be subject to the same regulations. However in areas like Charmouth where the path is close to homes and gardens it may need to be diverted away from the coast.<br>• The chief constraint on roll back of the coast path is the presence of private property on the coast which limits options for re-routing the path (e.g. gardens and caravan sites). |

**Issue: Emergency response**

**14: Develop an emergency response plan for Charmouth**

| 1. Environmental impact/opportunity |
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| • There would be no environmental impact of creating a Community Emergency Plan though such a plan could help ensure that the environmental impacts are minimised in the event of a major storm (e.g. by ensuring potential pollutants are secure and moved away from areas at risk). |
| **2. Cost/other resource implications** |
| • There would be no financial cost in producing a Community Emergency Plan though some time commitment from members of the community would be required to ensure an effective emergency plan is produced. |
| **3. Technical feasibility/other practical considerations** |

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| • Communities are encouraged to formulate their own emergency plans with the support of West Dorset District Council's emergency planning team. West Dorset District Council has produced a template 'Community Emergency Plan' and offer support to communities in completing the plan. Community led plans ensure the best use of knowledge specific to individual communities. |
| **4. Regulatory issues** |
| • There are no regulatory issues associated with this option. |
| **5. Continuity of community** |
| • The formulation of a Community Emergency Plan for Charmouth would increase the resilience of the community to coastal change. The community would be better prepared to deal with severe storms and coastal change and reduce the risk of irrevocable impacts. |
| **6. Summary** |
| • Communities should contact the Emergency Planning Department at WDCC through their parish councils. West Dorset District Council will then provide communities with a template 'Community Resilience Plan' and support them in formulating their own plan. |

**15: Provision of a flood/storm warning system for Charmouth**

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| **1. Environmental impact/opportunity** |
| • There are no environmental impacts associated with this option. |
| **2. Cost/other resource implications** |
| • Flood warnings and severe weather warnings are currently provided free of charge by the Environment Agency and Met Office. |
| **3. Technical feasibility/other practical considerations** |
| • Flood warnings are currently issued by the Environment Agency and severe weather warnings are available from the Met Office. With regard to the EA flood warnings, the forecasts for Charmouth include that for the river Char and the West Dorset Coast area. No service is currently available with the purpose of specifically predicting flood risk at Charmouth |
| **4. Regulatory issues** |
| • There are no regulatory issues associated with this option<br>• |
| **5. Continuity of community** |
| • Advance warning of storm events likely to result in coastal change would allow Charmouth to be better prepared to limit the negative impacts of such a storm. This would minimise the overall damage a severe storm would inflict on the community and the time taken to recover from it in the aftermath. |
| **6. Summary** |

- The Environment Agency provides a flood warning service which individuals, businesses and organisations can sign up to. Warnings are issued by text, email, telephone or fax. Individuals can sign up to the service by calling 0845 988 1188.
- Severe weather warnings issued by the Met Office are available at their website. Individuals can sign up to the National Severe Weather Warnings Service to receive weather warnings by email but this may require a commercial contract. More information is available at the **www.metoffice.gov.uk**

## Issue: Residential property

### 16: Local tax to fund to fund relocation of at risk properties

| **1. Environmental impact** |
|---|
| • There would be no environmental impacts associated with this option |
| **2. Cost** |
| • The cost associated with this option would depend on the level of increase in council tax required but this would fall directly on householders<br>• The level of increase required would depend on the nature of the adaptation required |
| **3. Technical feasibility/other practical considerations** |
| • In order to generate sufficient funds to support adaptation and avoid placing too heavy a financial burden on individuals an increase in council tax would need to be imposed across a wide area.<br>• Increasing Council Tax is likely to be a controversial proposal, particularly if imposed on residents who may not be directly affected by the impacts of coastal change.<br>• An option identified in the first Pathfinder workshop involved increased council tax payments by second home owners. |
| **4. Regulatory issues** |
| • Council tax is used to fund services provided by local authorities. As Weymouth and Portland Borough Council (and other local authorities nationally) are not responsible for funding adaptation to coastal change this responsibility would need to be placed on them by central government in order for Council Tax to be used as a mechanism for raising funds. |
| **5. Continuity of community** |
| • Securing funding to support practical adaptation e.g. relocation of at risk buildings would in principle allow for continuity of community to be secured. |
| **6. Summary** |
| • Local authorities would need to be given responsibility for funding adaptation to coastal change in order to increase council tax.<br>• Any increase in council tax would be likely to prove contentious.<br>• An option identified in the first Pathfinder workshop involved increased council tax payments by second home owners. |

**17: Government compensation for homeowners funded by a national tax (French system)**

| **1. Environmental impact** |
|---|
| • If such a tax provided for roll back this would allow for natural processes to continue which would ultimately benefit the environment. |
| **2. Cost** |
| • In France the 'National Catastrophe System' exists to compensate home owners for damage to their property as a result of natural disaster including coastal erosion. A national tax is imposed on all property damage insurance premiums to provide a compensation fund should properties be damaged by natural disasters (e.g. coastal change) |
| **3. Technical feasibility/other practical considerations** |
| • If a national tax could fund compensation packages for homeowners who lose their properties, appropriate land for relocation of development would still need to be identified should relocation be considered a desired option |
| **4. Regulatory issues** |
| • This would require legislation at a national level |
| **5. Continuity of community** |
| • Providing compensation for at risk properties could fund adaptation options such as roll-back. Such options could help to maintain continuity of community if properties were relocated sufficiently close to the existing settlement. |
| **6. Summary** |
| • The French system offers a precedent for the compulsory purchase of houses at imminent risk from coastal erosion, funded through a national tax. Although compensated for the loss of their homes people were not relocated in the immediate area. Any tax based on this approach would require new legislation – Pathfinder projects could encourage the Government to consider this option. |

**18: Buy and lease back of at risk homes by the local authority**

| **1. Environmental impact** |
|---|
| • There are no direct environmental impacts associated with this option. However, buy and lease back of at risk dwellings could prolong their occupation and prevent them falling into disrepair whilst ensuring their demolition and removal once loss due to erosion becomes imminent |
| **2. Cost** |
| • In order for a buy and lease scheme to give the owners of at risk dwellings the opportunity to ultimately relocate (i.e. buy a house elsewhere) dwellings would have to be bought at an appropriate price |

- Some or all of the cost of this initial expenditure would then be recouped by leasing the dwelling to the original owner or a new occupant.
- Adequate funding would need to be made available by central or local government to cover the initial purchase of dwellings.

**3. Technical feasibility/other practical considerations**

- Buy and lease back of dwellings at risk from coastal change is being trialled by North Norfolk's Coastal Change Pathfinder Project focussed on Happisburgh.
- Properties at medium term risk from coastal erosion will be purchased and leased back to the owner or put to alternative use. Properties will then be demolished when cliff recession reaches a point where they are no longer safe to inhabit.

**4. Regulatory issues**

- There is currently no system in place to finance buy and lease back of dwellings at risk from coastal change, though this could conceivably be one outcome of the Pathfinder process nationally.

**5. Continuity of community**

- Buy and lease back of residential property at risk could allow residents to stay in their home up until the point where it no longer becomes safe to do so, avoiding 'blight' as a result of property abandonment.
- However, at the point where their home is no longer habitable occupants would have to look for accommodation elsewhere. Unless alternative housing was available in Charmouth this would entail moving out of the community.

**6. Summary**

- Implementation of buy and lease back would rely on securing funds for the initial purchase of dwellings at risk from coastal change. Purchasing at risk dwellings at market value could incur significant costs, although this should be recouped through letting the dwellings.

**19: Relocation of homes at risk of coastal erosion**

**1. Environmental impact**

- The location and design of any new building would be the most important factor in determining its impact on the environment.
- Should relocation of properties be situated within the AONB, the visual impact could be mitigated by good design and landscaping.

**2. Cost**

- There is currently no fiscal mechanism nationally or locally to fully or partly fund the relocation of property, so the cost would be borne by property owners.
- Likely costs associated with relocating at risk properties to a new location would include purchase of land, development of a suitable design, securing the required permissions (e.g. planning permission) and construction of a new building.

**3. Technical feasibility/other practical considerations**

- Any proposals to relocate at risk properties would have to be driven by the current owners.
- Identification and acquisition of a suitable site for relocation of properties would be the

| |
|---|
| most significant barrier to successful relocation. Relocation sites would need to be deemed to be at no risk from coastal change according to recommendations within the Shoreline Management Plan |
| **4. Regulatory issues** |
| • Any relocation would require planning permission from West Dorset District Council and would most likely need to comply with the Dorset AONB aim of conserving and enhancing the natural beauty of Dorset's countryside<br>• Local authorities in North Norfolk and East Riding have developed planning policy that allows for relocation of properties at risk from coastal erosion in areas where it may not be permitted. E.g. due to environmental designations such as AONBs.<br>• West Dorset District Council's policy for Coastal erosion states: "Development that is likely to have an adverse effect on, or be at risk from, coastal erosion during its anticipated lifetime will not be permitted." |
| **5. Continuity of community** |
| • Relocation of properties would ensure continuity of the present community at Charmouth. Furthermore, in an instance where a dwelling is replaced, it should be ensured that dwelling it replaces is cleared or managed to prevent detrimental impact on the local environment. Such dwellings could alternatively be put to a temporary use that is beneficial to the well being of the local community. |
| **6. Summary** |
| • Relocation of properties would ensure continuity of the present community at Charmouth. Furthermore, in an instance where a dwelling is replaced, it should be ensured that dwelling it replaces is cleared or managed to prevent detrimental impact on the local environment. Such dwellings could alternatively be put to a temporary use that is beneficial to the well being of the local community. |

## 4.0 Scenario Planning Workshop 2 Outcomes

**Date:** 16/03/2011

**Location:** Lyme Regis Golf Club

**Project team attending:** Henry Aron, Rupert Lloyd, Alex Potter
**Additional facilitators:** Mark Fortune

## 4.1 Workshop Aims

Two sessions were run during the workshop. The aims of these sessions were as follows:

Session 1

1. Group discussion of the adaptation options prior to the prioritisation process
2. Prioritisation of adaptation options for further discussion

Session 2

1. Whole group discussion of how the prioritised options could be carried forward

## 4.2 Workshop Agenda

The workshop opened at 17:30 and closed at 20:30

1. Introduction – house-keeping, welcome
2. Recap on the Pathfinder Project and the scenario planning process
3. Outline of the agenda
4. Group Session – Two rolling workshop groups discussing the adaptation options identified during the first workshop
5. Prioritisation of preferred options for further discussion – Stakeholders prioritise preferred options using sticky dots
6. Break
7. Plenary Session – further discussion of prioritised options and how they can be carried forward
8. Summary and issuing of evaluation forms

The second scenario planning workshop followed a structure that will be used across all six Pathfinder case study sites along the Jurassic Coast.

## 4.3 Attendees

17 people took part in the two workshops. A full list of attendees is provided below, those attending included representatives from the following groups:

| Name | Organisation |
|---|---|
| Brierley, Geoffrey Cllr | Dorset County Council |
| Clothier, Alison | WDDC Planner |
| Hills, Simon | Environment Agency |
| Horton, Chris | Friends of Charmouth Heritage Coast Centre, Chairman |
| Marler, Tracey | Fossil Expert |
| Moore, Chris | Fossil expert |
| Morrow, Jane | Charmouth Parish Council |
| Murray, Ben | WDDC Engineer |
| Rebbeck, Cliff | Resident |
| Rose, Penny | Resident |
| Salisbury, Richard | Charmouth Heritage Coast Centre, Chairman |
| Scriven, Sam | Jurassic Coast team |
| Townson, Geoff | Resident |
| Watson, Neil | Environment Agency |
| White, Ann | Resident |
| White, Jeremy | Resident |
| Wyatt, Richard | Charmouth Parish Council |

Attendees were divided into two groups for the first workshop session. Each group included a mix of residents and representatives of organisations.

## 4.4 The workshop outputs

### Prioritisation of Adaptation Options

Following the first session, each stakeholder was given 5 sticky dots on which they wrote the numbers of the adaptation options they wanted to discuss further. Stakeholders could not vote for an option more than once and were not obliged to use all 5 sticky dots. Stakeholders were given 10 minutes to prioritise adaptation options before all sticky dots were collected and the number of dots for each option was counted by the Pathfinder team. The results of the prioritisation exercise are illustrated in Table 1

**Table 1: Results of the prioritisation exercise (yellow highlighted options received the most votes)**

| Option Number | Adaptation Option | Number of votes |
|---|---|---|
| 1 | More focus on fossil tourism to attract visitors | 10 |
| 2 | More focus on local produce to attract visitors | 0 |
| 3 | Improve water sports facilities to attract visitors | 4 |
| 4 | A survey of why visitors come to Charmouth | 9 |
| 5 | Integrated bus service linking coastal communities/a park and ride scheme/shuttle bus/park and walk | 6 |
| 6 | Purchase of an alternative site by Parish Council for a new car park | 6 |
| 7 | Build a stronger building in the same location | 2 |
| 8 | Replacing CHCC with a temporary structure | 1 |
| 9 | Relocating CHCC within an existing building | 3 |
| 10 | Relocating CHCC with a new purpose built structure | 13 |
| 11 | Waterborne transport for access to Charmouth | 4 |

| Option Number | Adaptation Option | Number of votes |
|---|---|---|
| 12 | Relocation of beach huts | 0 |
| 13 | Rebuild/relocate footbridge and rollback the coastal path as change occurs | 4 |
| 14 | Develop an emergency response plan for Charmouth | 9 |
| 15 | Provision of a flood/storm warning system for Charmouth | 4 |
| 16 | Local tax fund to fund relocation of at risk properties | 0 |
| 17 | Government compensation for homeowners funded by a national tax (French system) | 0 |
| 18 | Buy and lease back of at risk homes by the local authority | 0 |
| 19 | Relocation of homes at risk of coastal erosion | 1 |

## Session 2 discussion

Following the prioritisation exercise the four adaptation options with most votes were discussed during a plenary session. The purpose of the session was to assess the feasibility of the prioritised adaptation options and agree actions for how they could be carried forward. The options with the highest number of votes are highlighted in the table above. The transcripts of the plenary session are listed below.

*The comments of workshop participants during the discussion are detailed below. Please note that these are not complete transcripts of the discussion and are intended only to give an overview of the discussion during the evening as recorded by the Pathfinder Project team.*

## Option 10: Relocating CHCC with a new purpose built structure (13 votes)

- Having the CHCC within 200-300 yards of the beach is very important
- The field car park is an option but cost would be an issue
- Charmouth Parish Council could drive this option forward but need to get in contact with the land owner

- Could the existing CHCC be sold even though it is at risk from coastal change?
- Parish Council owns land directly behind the CHCC leading uphill
- Planning permission would be needed for a new building, as well as getting advice for access and nature designations from environmental bodies
- Local plan does not take the Shoreline Management Plan into consideration because this was not an issue when it was written
- Businesses (e.g. partnerships) could be involved in funding the new building e.g. Palmer's Brewery
- Business partnerships could be formed and they could have a facility within a new building
- Resident: Surveyors said ~900 year life for their property that is located in line with the CHCC on top of the hill to the west
- A new building would need to be in a position where it would be safe from erosion for it's design life
- Plans for a new building depend on the proposed usage
- A temporary structure may be more advisable
- There is an added cost of survey work to develop plans further
- Main issue is that the CHCC needs to be by the sea to attract visitors, even though the safest option would be to relocate as far back as possible
- Could look into buying a plot of land near to the beach and build on that e.g. one of the bungalows.
- Need to know when to start going for this idea of relocating CHCC onto a new plot of land – how do we do this?
- The questions/challenges lie in how/when to take this forward
- Need to attract/accumulate funding
- Could approach land owners to establish costs of plots nearby and then look into it as the existing CHCC building could be leased to other businesses
- Feasibility study needed focussed on: cost, type of building required, when to relocate, how, benefits and possibly half the proposed land/area to be used as a year round car park
- This study would need to be done sooner rather than later and damage to the existing CHCC wouldn't necessarily come from a 1:200 year storm
- Who to raise the money?
- Could be done through a preliminary study
- Parish council has no responsibility to fund the relocation of the CHCC and would need to go elsewhere for funding e.g. Heritage Lottery funding.
- Where would money for feasibility study come from?
- Need to go to DCC & WDDC
- The CHCC is very important to tourism of WDDC and Charmouth
- Could Parish Council fund feasibility study?
- To progress a brief needs to be written and sent out to consultants to know how much it would cost for a relocation.
- CHCC been open 25 years and was built in 1825
- Funding paths/partners to fund this project need to be identified

## Option 1: More focus on fossil tourism to attract visitors (10 votes)

- Build a fossil museum which ties in with the Heritage Centre
- Could be part of a museum
- Beachfront pointer to a museum which could be a temporary building
- Inland museum may be a disadvantage as could attract less visitors
- Educational material is essential and it needs to be located on the seafront
- The existing CHCC is an asset to the village
- There is scope to attract more people for fossil hunting
- Paired in summer for fossil hunting – should we attract more?
- What about out of season fossil hunters?
- Exploration of fossil hunting requires expertise & resources in the form of a centre. The CHCC provides that resource
- This option is linked to the relocation of CHCC as the two could go together
- Lyme Regis is an alternative location as it is on the A35
- A35 is the main tourist route which could bring more tourists to Charmouth
- CHCC & fossil museum could be combined in one building with many facets to it – space for education and community, café & museum
- Museum would draw people into the area e.g. a 'chain' museum like the Tate Museum in St.Ives
- This could be included in a feasibility study to attract further findings, increase development in Charmouth and get a developer to fund the museum and CHCC
- The Government is looking at localism (as part of the Localism Bill) and will be asking communities to spend the money as they wish

## Option 4: A survey of why visitors come to Charmouth (9 votes)

- This would provide data to add to this community/feasibility study. Need quantitative information to back up pursuit of other options and not just base it on opinions/views
- The feasibility study (of relocating the CHCC) would need to include a survey
- Charmouth Parish Council have already undertaken a survey but this could be carried out again
- 3 or 4 surveys have been carried out in the last 10 years
- Who is coming to Charmouth? A mixture: people from regional, national and international areas
- A survey is needed in various places – e.g. hotels, campsites and caravan sites
- Day trippers, winter and summer visitors would need to be included
- Could have leaflets in areas for people to pick up and fill in
- This information is necessary to inform other opinions e.g. relocation of CHCC
- Knowing the strengths and why people come to Charmouth may influence funding/stop interference with things that are good about Charmouth
- Funding could be from a combination of people
- Who pays for the survey?

- Funders may want to ask some of the questions as a form of return for their investment
- Need analysis to go with the survey
- Get local entities involved on a more local scale to reduce costs

## Option 14: Develop an emergency response plan for Charmouth (9 votes)

- DCC has a template emergency plan which communities can fill in themselves
- WDDC Engineer: WDDC can support the community in developing a plan
- The Parish Council can request a presentation from WDDC officers – and this will detail what the plan is, what they involve and what resources are required.
- Communities need to lead plans but WDDC can offer the support for the process and provide a steer
- Is there a desire from Charmouth Parish Council?
- Charmouth Parish Council need to contact Ben Murray (WDDC) in the first instance
- Environment Agency issue storm warnings but there is no process for forecasting erosion
- Environment Agency flood warden should be involved in this process
- Parish Council: We will put the idea of an emergency response plan to the rest of the Parish Council
- Need to raise community awareness of what might happen e.g. evacuation plans
- Need community to support this process
- Action: Parish council to look into the plan

## 4.5 Conclusions

The second Pathfinder Project workshop for Charmouth refined the list of adaptation options identified by participants during workshop 1. The outcomes of the prioritisation exercise indicate that workshop participants had a clear interest in further development of an emergency plan for Charmouth, conducting a feasibility study looking into the relocation of the Charmouth Heritage Coast Centre together with conducting a survey as to why visitors come to Charmouth.

The discussion in the second workshop session did not produce specific actions to support further development of the prioritised options. However, it was established that work on developing a community emergency resilience plan and the option of a feasibility study/survey of why visitors come to Charmouth could be discussed further by Charmouth Parish Council.

In conclusion, the workshop was effective in refining the list of options identified in the first workshop and addressing how these options could be taken further.