

## Draft Eastern Yar Flood and Erosion Management Strategy Consultation

### Frequently Asked Questions

We have compiled a list of questions that have been raised on other Environment Agency Management Strategies, to share with local residents on our web site. Below is a list of the most frequently asked and pertinent questions identified so far.

#### **What is a fluvial and coastal strategy?**

A fluvial and coastal strategy, also termed a flood and erosion risk management strategy, identifies the risks from flood and coastal erosion within a specific area (in this case the Eastern Yar river and Bembridge Harbour coastal frontage) over a 100 year time period and sets out how to manage these risks.

We have to plan and justify our flood and erosion risk management works as we are using public money. To help us make the right choices, we prepare strategies – these are long term (100 years) to make sure we understand the future implications of what we do now and take into account long term trends such as sea level rise. Strategies also make sure that we look at the potential wider effects of our works – for example, what they could mean for flood risk in other areas and what they could mean for people and wildlife.

Coastal defence strategies fit into a three-tiered framework of flood and erosion risk management as established by the Department for Environment, Food and Rural Affairs (Defra):

- Shoreline Management Plans (SMPs) set out high level management policies for 100 years across wide areas of coastline.
- Coastal defence strategies define how to deliver SMP policy for smaller areas.
- Schemes implement work on the ground.

#### **What does the term “benefit cost ratio” (BCR) mean?**

When we need to decide on how we manage coastal flood risk and erosion in the future, we have to compare a number of options.

We do that by comparing how much each option would cost over the next 100 years (including initial build and ongoing maintenance), against the benefits (again measured in monetary value) that we would achieve. Benefits would include, for example, how many properties, or services like sewage works or electricity substations are at risk within the 100 year period that would be protected by defences.

We add up all the benefits, we divide this by the costs and that gives us our 'benefit cost ratio'. The bigger the ratio the more likely it is to secure funding..

### **Why is impact on local business / economy not considered in value?**

The guidance provided by Defra (the Department for the Environment, Food and Rural Affairs), for carrying out economic assessments is outlined in its Flood and Coastal Defence Project Appraisal Guidance Volume 3, published on the Defra web site: <http://www.defra.gov.uk/environment/flooding/policy/guidance/project-appraisal.htm>. This guidance explains that the assessment includes the impact on the national rather than the local economy. As a brief example, if a consumer/visitor can go to another beach or another holiday camp then this change represents no real economic loss to the national economy. Local impacts are therefore not included in the economic assessment. However, loss of fixed assets such as the pitches for caravans is included in calculations.

### **What do you mean by sustainability?**

The concept of sustainability is firmly embedded in all flood and erosion risk management decisions. In overall terms, sustainability means a better quality of life (a combination of social, environmental and economic points of view) now and for generations to come. In flood risk management terms, it means the degree to which options avoid tying future generations into inflexible and/or expensive means of defence. Sustainable options are those that work with, not against natural processes and do not require long term demands for non-renewable materials.

### **Why can't you hold the current line of the coast everywhere?**

In coming up with our recommended management options we have had to take account of existing coastal processes, potential effects of rising sea levels and the need to adapt to climate change. We must follow assessment criteria set out by Defra, which provides central government funding for flood and coastal defences. Floods are part of nature and it is neither technically feasible or economically affordable to protect all properties. A risk based approach has been taken to achieve the best results possible using the budget and resource available.

### **Were other options considered in the analysis?**

A large range of options were assessed as the strategy was being developed. The preferred options have been selected based on the least cost providing the greatest benefit. The preferred options have

also been selected to cause no net loss to habitat protected under the Habitats Regulations.

### What options do you consider?

We have assessed various options for each frontage of the coastline against technical, economic, social, and environmental criteria to make our recommendation for the best option. The options considered for each frontage are:

- **Do Nothing** – The Do Nothing option is the baseline option against which the impact and benefits of all other options are measured. No further capital or maintenance work is undertaken and the defence structure deteriorates to a point at which it becomes ineffective. A sub-option of Do Nothing is **withdrawal of maintenance**. Under this management option we maintain defences for two years before stopping our flood risk management activities, then let nature take its course, allowing existing defences to deteriorate over time. No further maintenance or repair work is undertaken except to manage health and safety at the site.
- **Do Minimum** - Defence assets receive basic maintenance to continue their operation until the end of their residual life. Reactive works only are undertaken to the defence assets to repair them, but assets are not replaced as they fail at the end of their life.
- **Maintain** - Existing flood or erosion management assets would be maintained in their current form by undertaking proactive repairs as and when necessary, and the assets replaced as required at the end of their residual life. No improvement to the standard of protection (SoP) would be undertaken and sea level rise would cause a reduction in SoP.
- **Sustain** - Existing defences are improved to mitigate the impact of sea level rise over the life of the strategy to sustain the current SoP.
- **Improve** - The Improve options will raise the SoP. Various technical solutions to implement an improvement on the current alignment to the SoP are proposed. Wider improve options such as tidal barriers at the estuary mouths were not considered in great detail since these would impact a considerably wider area than this strategy study area, and such options were not considered viable in the SMP.
- **Managed Realignment** - A new defence structure usually located landward of the existing defences or by realigning to higher ground with (partial) removal of the existing defence.

### How do we value property in our analysis?

When we undertake our cost benefit analysis we consider many aspects of the area including properties, infrastructure and environmentally designated sites. To calculate the property values we use current information on houses which have been sold in the area.

Property price information was used from February 2008 which is prior to property prices reducing. We feel that this is likely to be an appropriate reflection of the long term situation.

Average property prices are calculated for different types of properties: detached, semi-detached, terraced and flats. A factor is also applied to ensure these prices can be compared nationally. In this case, prices have been increased by almost a quarter.

The way that property prices are calculated is set out in Environment Agency and Defra guidance which all projects of this type have to use.

### **Is a flood and erosion management strategy a legal document?**

Our strategies are non-statutory and as such are not a legal document. It is a business case and policy document which sets out the way the river and coastline should be managed, using public money, both on a technical and economic basis. We use HM Treasury's Green Book which sets out the core principles on which all public sector economic assessment are based and detailed project appraisal guidance from Defra.

### **Who decides on allocation of funds? What are the criteria for funding? Can we have copies of Defra funding guidance?**

National funding for flood and coastal defences (Flood Defence Grant in Aid) is provided by Defra and is strictly limited, so flood defence strategies and schemes need to be prioritised. Previously, a system of **priority scoring** was used to decide which schemes went ahead, but now we use **outcome measures**. Outcome measures allow us to look at proposed schemes in terms of a number of fixed criteria, including the number of homes protected, the number of these that are in deprived areas, the overall benefit cost ratio and the potential for environmental enhancement in order to decide the scheme's priority. More information on Outcome Measures is available on the Defra web site: <http://www.defra.gov.uk/environment/flooding/funding/targets.htm>

### **Who has overall policy responsibility for flood and coastal erosion risk management in England?**

The Department for Environment, Food and Rural Affairs (Defra) has overall policy responsibility for flood and coastal erosion risk management in England. Operating authorities, such as the Environment Agency (for flooding) and District Councils (for erosion) manage the coastline in accordance with this policy.

There is no right to flood or erosion protection, except in very limited circumstances. The Environment Agency and the District Councils

have permissive powers to construct coastal defences to protect people and property where these are economically justified.

For the Eastern Yar Flood and Erosion risk management strategy we are working in partnership with the Isle of Wight council to complete the strategy and develop the best options within the policy criteria for flood and erosion risk management.

### **What is meant by ‘permissive powers’?**

The term ‘permissive powers’ relates to certain powers of Permitted Development (i.e. development not requiring planning permission) set out in the General Permitted Development Order, 1995. The Environment Agency has permissive powers under this order to undertake necessary works in watercourses, including coastal defences

This means that we may choose to intervene in the public interest, where we believe works would be beneficial and / or economically viable, but we have no legal duty to do so. This recognises that we have finite resources and must prioritise how we use them.

### **What is the strategic coastal overview?**

In April 2008 the Environment Agency took on the strategic overview role for the coast in England, with an overarching role in the management of our coastline.

Under the new arrangements the Environment Agency now:

- ensures that proper and sustainable long-term Shoreline Management Plans are in place for our coastline, and approves them on behalf of Defra;
- allocates all flood and coastal erosion risk management capital funding.

Coastal management strategies, including the draft Eastern Yar Flood and Erosion Risk Management strategy, will continue to be developed in partnership between local authorities and the Environment Agency.

The Environment Agency, coastal groups and local authorities are working hard to ensure that we deliver this new way of working in a true partnership approach. More information on the Strategic Overview can be found on the Department for Environment, Food and Rural Affairs website

<http://www.defra.gov.uk/environ/fcd/policy/strategy/ha1a.htm>.

### **Climate change – is it really happening?**

Yes. We face a real challenge along our coastline as climate change increases the risk of flooding and coastal erosion. These impacts are

well documented and include sea level rise and the potential increase in intensity, severity and frequency of coastal storms. In addition to the expected changes in sea level due to climate change, the south of the UK will see additional rises in sea level due to gradual geological decline, called 'isostatic rebound'.

We have used Defra guidance on sea level rise allowances in our strategy. This guidance is based on evidence of climate change effects to date and modelling to predict the future. There are uncertainties about what will happen in the future and the sea level rise allowances are amended as new information becomes available.

Current predictions for the South East of England estimate a **relative** rise in sea levels of 4.8mm per year in 2009, rising to 15.8mm per year by 2085. This equates to almost 1 metre of sea level rise over the 100-year life of the Eastern Yar flood and erosion risk management strategy. NB the term "relative" is used because land can sink as well as the sea rise.

### **What can landowners do to protect their own properties?**

There are a number of options to protect property on either a single or collective basis. We are not able to give specific advice on measures to protect individual properties, as they would need to be considered on a case by case basis. There are a number of proprietary systems available for this and information on making your property resilient to flooding is available from CIRIA at [www.ciria.org/flooding](http://www.ciria.org/flooding) or phone 020 7549 3300.

### **How will I get insurance?**

Insurance companies will first assess which of the following insurance categories applies to the area in which your property is situated, based on Environment Agency flood probability data:

- **Low** - The chance of flooding in any year is 0.5% (1 in 200) or less
- **Moderate** - The chance of flooding in any year is 1.3% (1 in 75) or less, but greater than 0.5% (1 in 200)
- **Significant** - The chance of flooding in any year is greater than 1.3% (1 in 75)

Properties situated in areas that are in low and moderate categories should be offered insurance on normal terms. Properties situated in areas that are in the significant category may be subject to further scrutiny by your insurer as to whether there are any planned improvements in permanent or temporary flood defences and if you have taken any measures to protect your property. All these factors will be considered in assessing the terms under which insurance may be offered. There is an insurance factsheet at

<http://publications.environment-agency.gov.uk/pdf/GEHO0609BQEN-e-e.pdf>

### **Am I at risk from flooding? How can I receive flood warnings?**

Contact Floodline on 0845 9881188.

### **Why are we consulting?**

The 'planning for the future' document has been designed for public consultation to inform people of the key issues and explain the recommendations set out in the draft strategy. The strategy is not yet finalised and for three months we are consulting on our recommendations to get your views and address your queries. We are particularly interested in any new information that comes to light during the consultation prior to finalising the strategy. Your input is important to ensure that we consider your opinions in producing the final Eastern Yar Flood and Erosion Risk Management Strategy.

Our consultation runs between 30 November 2009 and 5 March 2010.

### **What happens after the consultation?**

After the public consultation closes on 5 March 2010 we will review all of the responses as we finalise the strategy. We will share the outcomes of this consultation and our strategy progress with you through press releases, communications with local community representatives and on our website.

We hope to make a decision on the final strategy by the end of the summer and have all the necessary approvals by late 2010. At that time the operating authorities will begin to develop schemes to implement the strategy, subject to available funding.

### **How can I find out more?**

Please read the *Planning for the future: Draft Eastern Yar flood and erosion risk management strategy* to learn more about our recommended management options.

It is available for download at our website: <http://www.environment-agency.gov.uk/consultations>. If you know someone who does not have access to a computer, additional hard copies are available at Bembridge and Sandown Libraries and at the Coastal Centre in Ventnor. You can also call us on 08708 506 506 or write to us at the following address: Eastern Yar Draft Strategy Consultation 2010, Environment Agency, Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD.

You can also find out details about the strategy at the IWC website:  
<http://www.coastalwight.gov.uk/easternyarstrategy>.

### **What about the Christmas period?**

We have allowed two extra working weeks within our consultation period to take account of the time lost due to the Christmas holidays. The full consultation period is 14 weeks.

### **What is Natural England's role in developing the strategy?**

Natural England is a statutory government body. It advises the Government on nature conservation issues and as such we need to gain their agreement to proceed with the Eastern Yar flood and erosion risk management strategy. Natural England specifically advises on the appropriate management of internationally and nationally designated sites. In this strategy area there are many environmental designations and issues arising from natural coastal processes. We have sought advice from Natural England on how best to address these issues and will continue to do so as we finalise the strategy.

### **What is the Strategic Environmental Assessment?**

We have completed a Strategic Environmental Assessment (SEA) of our draft strategy. The SEA outlines the potential environmental impacts that could be caused by the recommended management options in the strategy. These include impacts on people, habitats and species, cultural heritage and landscape. These assessments are high-level and will be expanded in more detailed Environmental Impact Assessments of individual flood defence schemes.

The full SEA Environmental Report is available for comment during the three-month consultation running from 30 November 2009 to 5 March 2010. You can download the report from our website <http://www.environment-agency.gov.uk/consultations>. You can also review copies of this report at the Bembridge and Sandown Libraries and the Coastal Centre in Ventnor.

Please send us your comments:  
Eastern Yar Draft Strategy Consultation 2010.  
Environment Agency,  
Guildbourne House,  
Chatsworth Road,  
Worthing,  
West Sussex  
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### **Has any quality assurance been carried out on Atkins' coastal process work?**

The coastal process work has been carried out by senior coastal process specialists from water and environment consultants Atkins. Coastal processes around Bembridge Harbour are complicated and so the project team felt it was important to get Atkins' work reviewed by other experts in the field of coastal dynamics. In 2006 we asked ABPmer to review Atkins' coastal behavioural response work. We also asked Dr Malcolm Bray the coastal geomorphologist from Portsmouth University to verify the conclusions. These reviews left us with four specific questions which were addressed by ABPmer in 2008. All of these pieces of information from leading technical experts have been brought together and allowed us to complete our option appraisal work and recommend draft strategy options. This level of detail and verification greatly exceeds that normally collected for a flood and erosion risk management strategy. We have confidence in the conclusions provided to us by these experts.

### **What was the Shoreline Management Plan policy?**

The Shoreline Management Plan's (SMP's) initial policy for this area was 'managed realignment', however the IWC decided that the coastal and fluvial processes in this unit were too complex to make a final decision. The Isle of Wight council (IWC) decided to defer a coastal policy decision on the Bembridge Harbour area pending further investigation. During the planning of this investigation, the IWC and the Environment Agency decided that decisions about the tide locked Brading Marshes and Levels could not be made without taking account of the fluvial flood risk implications. Similarly decisions about managing the fluvial flood risks in this area could not be made without taking into account the managed retreat implications. Consequently it was decided that the logical way forward was for the IWC and the Agency to carry out the Joint Fluvial & Coastal Strategy for the Eastern Yar and Bembridge Harbour.

The Isle of Wight SMP is being reviewed at the moment. The current programme is that it will be consulted upon in July 2010.

### **Does the Environment Agency clear Bembridge sluice as part of maintenance activities?**

The grills at Bembridge Tidegate/sluice are checked and cleared by Environment Agency staff on a weekly basis between April to August and twice-weekly between September and March. We need to continue maintaining Bembridge Sluice for environmental and flood management reasons.

### **What consideration has been given to Sandown Sea Wall?**

Sandown Sea Wall is being considered as part of the ongoing Sandown Bay Strategy as a key defence component along this stretch of coastline. The Eastern Yar Flood and Erosion Risk Management Strategy assumes that the sea wall at Sandown will remain in place for the duration of the strategy and will provide protection from flooding at that location. Consequently no direct consideration of the impacts of the Sandown Sea Wall have been included in our strategy. This is supported by an assessment we have undertaken as to what Standard of Protection (SoP) Sandown Sea Wall provides. This shows that it has a SoP against breach of 0.1% Annual Exceedance Probability (AEP) or above until the year 2085. After this the SoP against breach would reduce to 2% AEP by 2115. In our economic analysis of the consequences of any flooding from overtopping of the Sandown Sea Wall, we have been careful to ensure that we do not double count properties that are also at risk of flooding from Bembridge Harbour.

### **What could happen to Bembridge Point groyne?**

Bembridge Point groyne is a coastal protection structure constructed to slow sediment from the east and to stabilise Bembridge Point from erosion. Although the groyne is in disrepair, the coastal system has stabilised and there is no significant erosion presently occurring along this frontage. Action would only be taken if monitoring of the point identified an increase in the rate of erosion and therefore an increase in risk of changes to the coastal dynamics in and around the harbour. The groyne does not protect properties from flooding.

### **Why is the strategy not investigating the dredging activities that are currently being undertaken in and around the harbour?**

The Eastern Yar Flood and Erosion Risk Management Strategy does not look into the impacts of actual or potential dredging on flood and erosion risk as these are dealt with through the planning process. Our studies do show that there is a reduction in wave height as waves pass over the near-shore sandbanks next to the Duver. Those wishing to extract marine and sand aggregates are required to obtain approval from the Planning Authority, and the Environment Agency is involved in subsequent consultations. We influence such applications in a manner that avoids increasing flood risk to people, property and the environment and the onus is on the applicant to demonstrate that the impact on the coast and on flood risk is acceptable. Internally we have marine policies in place and we will ensure that our works, including dredging, do not increase flood or erosion risk.

### **What works will be done on Embankment Road and when will they be carried out?**

If a sustain option is confirmed then a scheme will go ahead on Embankment Road. The current proposal would be to build a small wall on the harbour side of the footpath. It would not be more than one metre at its highest point.

Once the strategy is approved, work will begin on a project to design the wall. At this stage no decisions are made on the exact appearance of the wall nor the materials that it will be made from. You will be able to contribute to these decisions at a later date when the scheme is worked up into detailed designs. Work is likely to start on the ground in 2011/12.

### **Is there any information for properties at risk of flooding upstream of Alverstone?**

There are very low numbers of properties at risk of flooding in the upstream part of the catchment and so it has been excluded from the main strategy appraisal. There is no tidal influence upstream of Alverstone and the gradient of the catchment is considerably steeper than the low lying and flat lower catchment. Flood conditions in the lower catchment will not significantly affect those in the middle catchment. None of the options identified for these areas have a strategic benefit for other areas at risk upstream or downstream.

We have prepared a local options report for the strategy area upstream of Alverstone. You can access this report from <http://www.coastalwight.gov.uk/easternyarstrategy> or by contacting us using the details below.

The number of properties at risk from fluvial flooding in the lower catchment around Sandown is not highly sensitive to increases in flood level.

### **What is the Duver's role in protecting Embankment Road?**

The most likely impact of retreat of The Duver would be to increase exposure inside the harbour with particular relevance to the Embankment Road frontage. The Duver and Bembridge Point do shelter Bembridge Harbour from any wind generated waves and low frequency swell waves from the East. Our findings indicate that the waves within the harbour are locally generated wind waves which are expected to have significant heights of less than 0.3m. The assessment of coastal erosion on The Duver concluded that under the Do Nothing scenario, it is unlikely that within the life of the Strategy the Duver will have retreated sufficiently to create significant erosion/overtopping issues on Embankment Road.

## **What additional information have we produced as part of the strategy?**

We have done a lot of additional work for this strategy. You can request details by emailing [eyes@environment-agency.gov.uk](mailto:eyes@environment-agency.gov.uk) or by writing to Eastern Yar Draft Strategy Consultation 2010, Environment Agency, Guildbourne House, Chatsworth Road, Worthing, West Sussex, BN11 1LD. Some of the reports are already available on the Isle of Wight Council strategy website <http://www.coastalwight.gov.uk/easternyarstrategy>.