

# Brighton Marina to River Adur Flood and Coastal Erosion Risk Management Strategy

Brighton & Hove City Council and Worthing and Adur councils want to share the findings and seek your views on the proposed management options of the Brighton Marina to River Adur Flood and Coastal Erosion Risk Management Strategy (the Strategy).

## What is the aim of the strategy?

The strategy's aim is to establish a plan for the management of flood and coastal erosion risk for the next 100 years. With the climate changing, sea levels rising and the increased frequency and intensity of storms, our existing coast defences are under increasing threat from the elements. The strategy considers the risks and impacts of coastal erosion and flooding to communities, businesses and the environment, both now and in the future. A business case for investment in the future management of risk is being developed.

## What area does the strategy cover?

The area covered is defined by a western boundary at the lock gates at Shoreham Harbour (including the east basin of Shoreham Port), the coast from the mouth of the River Adur to Brighton Marina and Brighton Marina itself. The area is divided into three operational units (see map below). Similar studies cover the coast to the east and west.



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## What have we done so far?

We have undertaken a series of investigations to improve our understanding of the area. We have developed a long list of options that would manage coastal erosion and flood risk in the study area. In May 2013, we undertook consultation to seek views on a long list of options. Taking into account feedback from the consultation and appraising the long list options against key criteria we developed a short list.

Following economic, technical and environmental appraisal of the short listed options we have identified the 'Preferred Option' for flood and coastal erosion management for each unit.

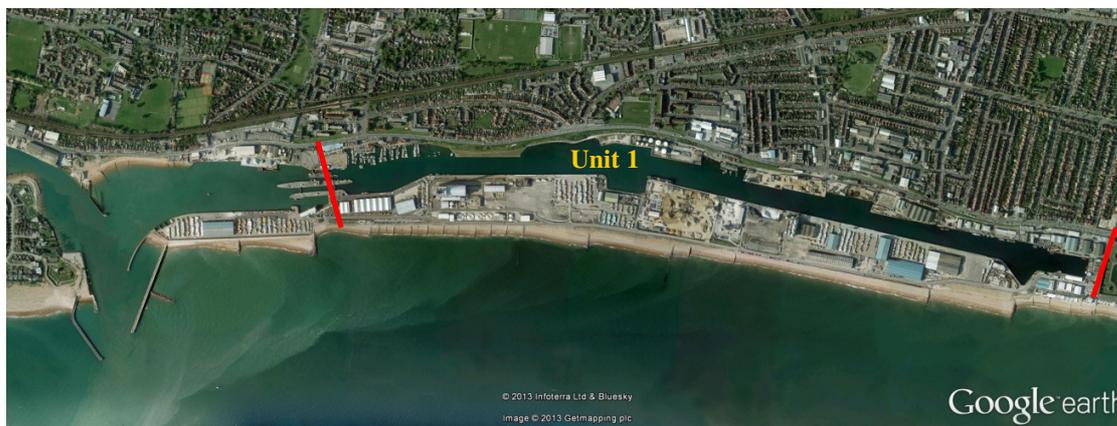
## What are the shortlisted options?

For each of the three units a number of appropriate options were considered for further analysis. To determine the leading option each of the units has been considered in terms of:

- Flood and erosion risk to people and property,
- Climate change and predicted sea level rise,
- Cost of the option and value of protected assets,
- Impact on the natural environment.

The following sections outline the shortlisted options for each unit. The preferred option has been highlighted in blue.

## Unit 1 Locked section at Shoreham Port



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<p><b>No Active Intervention</b></p>	<p>No further works or repairs would be undertaken and the defences would be left to deteriorate and fail over time. This option would result in flooding and erosion of properties in the harbour area, and loss of operations at the port.</p>
<p><b>Do Minimum</b></p>	<p>The same as the No Active Intervention Option, except that reactive repair works to the lock gates in the short term will delay the deterioration and failure of defences. This option would result in flooding and erosion of properties in the harbour area, and loss of operations at the port.</p>
<p><b>Maintain</b></p>	<p>Maintain and replace, as necessary, the existing lock gates. The flood risk to properties within the harbour will increase with time as sea levels rise.</p>
<p><b>Improve</b></p>	<p>Upgrade the existing lock gate area to a higher level to improve the standard of protection. The flood risk to the properties in the harbour area would be reduced.</p>

**Improve** has been selected because this option will prevent erosion in the harbour area and loss of the operations of the port. This option is environmentally acceptable. This option will result in reduced flood risk to properties and land within the locked section. Improve is the most cost effective option.

## Unit 2 Open Coast



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### No Active Intervention

No further works or repairs would be undertaken. Movement of beach shingle from Kemp Town to Southwick (beach recycling) and the movement of beach shingle from Shoreham to Southwick (beach bypassing) would cease. The defences would be left to deteriorate and fail.

Beaches along the Southwick and Portslade-by-Sea frontage would erode, eventually resulting in the loss of properties and land including industry at Shoreham Port. Open water conditions in the locked section would eventually result in collapse of the north bank of the basin with further loss of properties and the A259. Failure of groynes and breakwaters along the open coast would result in beach loss and increased wave overtopping along most of the frontage. However, beach shingle released from beaches will result in wider beaches to the west of Brighton Marina.

### Do Minimum

The same as the No Active Intervention Option, except that reactive repair works to the seawalls and some beach recycling to protect vulnerable seawall sections will delay deterioration and the failure of defences.

This option would result in the loss of properties and the A259 at Southwick and increased flood damages to properties along the open coast.

### Maintain

Existing groynes, seawalls and other defences will be repaired and replaced, as required. Beach shingle will be recycled from Kemp Town to Southwick, and beach bypassing operations from Shoreham will continue.

Flood risk to properties, businesses and amenities along the frontage will increase in the long term as sea levels rise.

## Unit 2 Open Coast

<p><b>Improve A – Wall Raising</b></p>	<p>Wall raising at Southwick along the coast between the lock gates and the eastern limit of the Sewage Treatment Works combined with the upgrading of existing groynes with higher and/or longer groynes to increase the size of the beaches along the rest of the open coast frontage. These works will improve the standard of protection. Groynes, seawalls and other defences will be refurbished and repaired as required. Beach shingle will be recycled from Kemp Town to Southwick, and beach bypassing operations from Shoreham will continue.</p> <p>Consideration of a range of standards of protection has been undertaken.</p> <p>Flood risk to properties, businesses and amenities along the frontage would be reduced.</p>
<p><b>Improve B – Beach Widening</b></p>	<p>Existing groynes will be upgraded with higher and/or longer groynes to increase the size of the beaches to improve the standard of protection, where required, along the entire open coast frontage. Groynes, seawalls and other defences will be refurbished and repaired as required. Beach shingle will be recycled from Kemp Town to Southwick, and beach bypassing operations from Shoreham will continue.</p> <p>Consideration of a range of standards of protection has been undertaken.</p> <p>Flood risk to properties, businesses and amenities along the frontage would be reduced.</p>

**Improve A** has been selected because the existing level of protection from wave overtopping is low in some parts of the frontage. It is the most economic and environmentally acceptable solution.

## Unit 3 Brighton Marina



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<p><b>No Active Intervention</b></p>	<p>No further works or repairs would be undertaken and the breakwaters would be left to deteriorate and eventually fail.</p> <p>The breakwaters would eventually fail resulting in flooding of properties and assets within the Marina.</p>
<p><b>Do Minimum</b></p>	<p>The same as the No Active Intervention Option, except that reactive repair works to the breakwaters and inner harbour wall in the short term will delay deterioration and the failure of defences.</p> <p>This option would probably result in flooding of properties and assets within the Marina in about forty year's time.</p>
<p><b>Maintain</b></p>	<p>The breakwaters and inner harbour wall would be maintained.</p> <p>The flood risk to properties and amenities within the Marina will increase in the long term as sea levels rise.</p>
<p><b>Sustain</b></p>	<p>The breakwaters will be maintained and the height of the inner harbour wall will be increased to sustain the standard of protection in the long term.</p> <p>Flood risk to properties and assets in the inner marina area will remain constant over time.</p>

The Brighton Marina Company who manages and maintains Brighton Marina has a legal obligation to keep the marina in good repair and privately fund the maintenance of all structures including flood and erosion defences. **Sustain** is the preferred option for this unit. This is a cost effective and environmentally acceptable option, and because of its legal obligations is the only option open to Brighton Marina Company.

## Have your say

We want to know what you think. Your opinions on the preferred options are important:

- Do you support the leading options?
- Do you have ideas for improvements?
- Do you have any other comments?

Please send us your views on the options listed to [coastaldefence@brighton-hove.gov.uk](mailto:coastaldefence@brighton-hove.gov.uk) or send your comments by post or email to:

Joanna Walker,  
CH2MHill, Elms House, 43 Brook Green, London W6 7EF  
[Joanna.Walker@ch2m.com](mailto:Joanna.Walker@ch2m.com)

## What happens next?

We will be holding public exhibitions at the following venues:

- Hove Town Hall – Friday 31 January to Friday 7 February
- Brighton Jubilee Library – Monday 17 February to Sunday 23 February
- King Alfred Leisure Centre – Monday 3 March to Sunday 9 March
- Adur Civic Centre – Monday 31 March to Monday 7 April

We will address any comments we receive and these will be taken into consideration for the final Strategy Report to be submitted for approval by the Environment Agency. Following approval, implementation of the preferred options will then depend upon the funding available, based on the current government funding guidelines. The cost of coast defence work is met from a combination of government grant and local contributions.