

# Brean Down to Burnham on Sea

## Existing defences and probability of flooding

The probability of tidal flooding to properties at Burnham on Sea is less than 1 in 200 in any year but the chance of disruption by waves is 1 in 5 in any year. At Brean the probability of flooding is 1 in 100 or less but again disruption from waves is frequent.

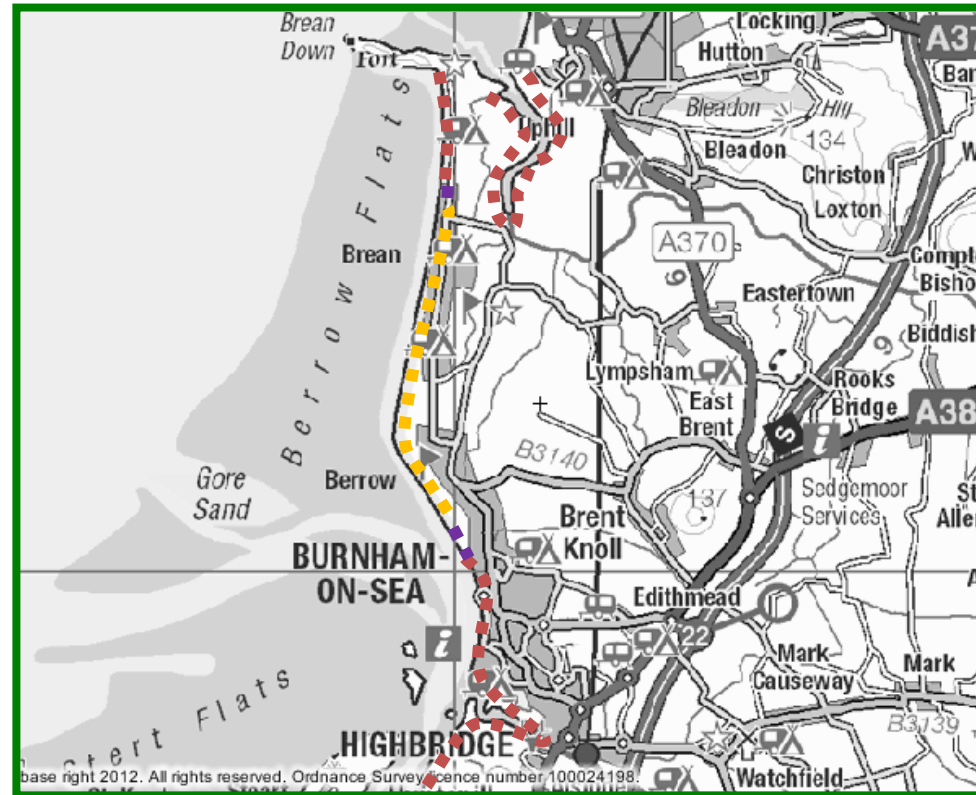
The standard of defence is expected to be maintained until 2030; however the probability of tidal flooding may increase to around 1 in 100 in any year by 2060 as a result of sea level rise. Disruption by waves will become more frequent.

With continued maintenance, we expect the defences to be effective for 40-60 years at Brean and 100 years at Burnham on Sea, however, wave disruption will become more frequent. The sand dunes at Brean can frequently be disrupted by wave action and quickly eroded, making it difficult to predict a lifespan for this natural defence.




## Sea level rise note

The UKCP09 medium emissions scenario projects about 0.1m of sea level rise by 2030, about 0.3m by 2060, and about 0.7m by 2110.

Currently sea level is rising at about 2 to 2.5mm a year. If this rate were to continue, sea level rise would be less than what is projected by the UKCP09 medium emissions scenario.



## Key

-  Defences maintained by the EA
-  Sand dunes
-  Other defences

## How these options were reached

There is currently sufficient public benefit for the Environment Agency to continue maintaining the defences at Brean and Burnham on Sea into the medium to long term future. Therefore we will continue to maintain the existing defences as long as funds allow.

There may be a tipping point for the defences at Brean in 40-60 years when more frequent flooding becomes a problem. Based on the current prioritisation system for allocating funds, it is unlikely that public funding would be available to raise the defences substantially. Realignment of the banks may be an option at this time.

Improved defences can be achieved if they are positioned further inland, and this is an ideal site for habitat to be created.

## Ongoing local discussions

We will only progress future managed re-alignment proposals through negotiation with landowners. Within the next 30 years landowners have options to either:

- Acquire legal consents to improve banks by their own means with EA advice; or
- Work with the EA on a realignment scheme that combines better protection to all properties with the creation of compensatory habitat.

## What can be done?

The dunes at Brean will continue to be monitored along with beach levels.

The River Axe embankments and Brean Rock Armour sea wall will be maintained as funding allows.

Despite this, the River Axe embankments could become inadequate in 30-50 years. Based on the current prioritisation of funds, it is unlikely that public funding would be available to raise the defences substantially.

At this point, landowners would need to consider the options available to them.

The option to re-align the Axe embankments is not being considered for at least 30 years, and even then will only be possible with agreement from landowners.

A beach management plan has been produced by Sedgemoor District Council and the Environment Agency to facilitate the management of the coastal frontage.

The sea wall at Burnham will be maintained to ensure it continues to provide protection up to 2110. However wave overtopping will become more frequent into the future.