

## Draft Lower Aire Flood Risk Management Strategy - summary document

### What is a flood risk management strategy and why do we need one?

We use high level strategies, plans and reports to help us get a better understanding of how we can manage the risk of flooding from a local perspective. In this case, we are in the process of producing a flood risk management strategy for the lower River Aire catchment. This builds on our National Flood Risk Management Strategy and our Aire and Ouse Catchment Flood Management Plans to provide a more detailed and localised plan for managing the risk of flooding.

In the Lower Aire Strategy, we set out a clear and consistent plan for local flood risk management to enable people, communities, businesses, infrastructure operators and the public sector to work together in the short (0-10 years), medium (10-50 years) and long term (50-100 years).

Over recent years, there have been a number of major floods which have increased the demand for resources and, in the face of such challenges, we need to be sure we are getting the best value for money. This often means making difficult decisions and, in many cases, we will not be able to continue all of the work that we have historically done. However, we will continue to maintain approximately 55 kilometres of defences and protect over 14,000 properties within the strategy area.

### What area is covered by the strategy?

The catchment stretches from Lemonroyd Weir, near Woodlesford, to Airmyn, near Goole, where the rivers Aire and Ouse meet. It includes the main centres of Castleford, Ferrybridge, Knottingley and Goole and smaller communities such as Beal, Hirst Courtney, Gowdall and Snaith. The strategy covers areas that are at risk of flooding from both river and tidal flows.

### The washlands in the lower Aire

To understand the complex washland systems which operate throughout the lower Aire catchment (particularly downstream of Knottingley), we have developed a hydraulic model. This will replicate the way the washlands operate and determine the level of protection they provide. The washlands store water in the floodplain between front riverside banks (which overtop in high flows) and a combination of barrier banks, set back from the river, and higher ground to reduce the risk of water spreading to properties, businesses and infrastructure.

The washlands are currently classified as reservoirs under the Reservoirs Act 1975. It is our responsibility to inspect and undertake work necessary in the interests of maintaining public safety.

### How our options have been developed

We have taken a strategic approach to identifying potential options for the lower Aire catchment as a whole. We initially considered a wide range of options and used the model to gain a thorough understanding of the processes before assessing them.

The initial assessment also looked at environmental and health and safety issues. After this, we developed options that were technically viable and economically feasible. These were taken forward for further detailed appraisal. This process led to the identification of the preferred strategic options for the catchment.

### Working together to protect communities

New Government guidance means our work must show value for money. Therefore, funding for much of the work recommended by the strategy will be highly dependent on external contributions in order to secure Government funding. The new method of obtaining funding means that, until the objectives of the strategy are developed further, there are two remaining possible options:

- Work solely with the Government funding available. In some cases, this will not be the full amount required to make the recommended option feasible.
- Contributions from other sources are secured in addition to Government funding which will mean that we can progress the recommended option with full financial support.

### Our recommendations to manage the risk of flooding in the future

We have developed five key principles to embrace the range of options that are available to manage the risk of flooding.

- **Be prepared** - We can't stop flooding but we can prepare for it and help others prepare too. Working closely with local communities to raise awareness of areas that are at risk is an essential part of the strategy. We will help you prepare for flooding by:
  - Continuing our flood awareness programme and encouraging those at risk to sign up to our free flood warning service. Over 2,700 properties near the lower River Aire are currently registered.
  - In some areas affected by flooding, we have supported residents by producing a community flood plan. The plan details how they can work together to make their response to flooding as effective as possible.
- **Adapt to floods** – The strategy sets out recommendations for managing the risk of flooding in the long term in ways that, wherever possible, work with nature rather than against it. In areas where engineered defences may not be appropriate, we will look to use other resilience measures such as safe refuge areas for people when the risk of flooding is high, flood proofing of properties, personal flood plans and temporary defences. This is to help make sure that the impacts and potential dangers of flooding are reduced.
- **Maintain existing protection** – There are many defences of varying condition that we currently maintain within the strategy area which provide protection to property. We will continue to maintain these defences over their lifetime. When these defences near the end of their functional life, we may require external financial contributions to maintain the current level of protection. In such cases, we will work with businesses and the local community to decide how best to manage the long-term risk.

- **Improve existing protection** – In some areas, we recommend improving the standard of protection for the concentrations of properties in isolated areas which are currently at risk.

However, financial contributions may still be required to implement the work as we cannot guarantee full Government funding. In such cases, we will work with local communities and businesses to agree these contributions.

- **Withdrawal of maintenance** – There are a number of washlands on the lower Aire where flooding to properties is prevented by barrier banks or high ground, not the front river banks. However, there are also a number of barrier banks, which provide limited or no protection to property. Where banks do not provide enough benefit to justify continued investment, it would no longer be economic for us to maintain them. We have powers to manage flood defences but it is national policy to withdraw from defences where the cost of maintaining them is greater than the benefits.

The plans at the back of this document look at how we can manage the risk of flooding in each of the areas of the strategy.

customer service line  
03708 506 506

incident hotline  
0800 80 70 60

floodline  
0845 988 1188

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

### How will withdrawal of maintenance affect me?

Where we intend to stop maintaining a defence because it is no longer viable, we will work closely with the affected landowners and communities and, subsequently, issue a formal letter of our intention. This will outline the period of time before we stop maintaining the defence and provide advice on future options for managing the land. In particular, we will want to determine whether property or landowners are willing to take over the maintenance themselves. If the banks are not maintained, they will eventually breach and the land next to the river will revert back to natural floodplain.

### Where can I find more detailed information?

We have prepared a [strategic environmental assessment report](#) that identifies the environmental impacts of the strategy. Copies of this are available at our offices in Leeds (address is below), or can be downloaded from our website:

[www.environment-agency.gov.uk/homeandleisure/floods/115320.aspx](http://www.environment-agency.gov.uk/homeandleisure/floods/115320.aspx)

### How can I register my views on the draft strategy?

We want your input to help us develop approaches for reducing the risk of flooding in the lower Aire catchment area. Due to economic constraints, we may not be able to incorporate all of your views to the final strategy but we would welcome any comments that you have.

We will take into account all comments received by **Friday 30 March 2012** before finalising the strategy.

You can write to us at: [Lower Aire Strategy](#), Environment Agency, Phoenix House, Global Avenue, Leeds, LS11 8PG or email: [lowerairestrategy@environment-agency.gov.uk](mailto:lowerairestrategy@environment-agency.gov.uk)

# What we're doing in the Lower Aire Strategy area

## Figure 1

### St. Aidans

St. Aidans is currently a separate project to create a reservoir and nature reserve and is therefore not considered further within the strategy.

### Lowther Washland

There are no properties in the area between Allerton Bywater and the river therefore in the short term (0 - 5 years) we will withdraw from the front embankment and middle embankment.

### Allerton Bywater

We will continue to maintain the defences in front of Allerton Bywater.

### Mickletown Ings

We can't justify maintaining the defences on technical and economic grounds. We will work with environmental partners, landowners and communities in the short term (0-5 years) to decide how best to manage the assets prior to withdrawing maintenance. This could include measures such as a short embankment to Lower Mickletown Road however, this would be subject to gaining significant external contributions.

### Allerton, Newton and Fairburn Ings

We cannot justify maintaining the defences on technical and economic grounds. We will work with environmental partners, landowners and communities in the short term (0-5 years) to decide how best to manage the assets prior to withdrawing maintenance.

### Whitwood Mere Back Bank

We will withdraw maintenance from the back embankments following works to raise the front embankment.

### Whitwood Mere Front Bank

In the short term (0 - 5 years) we will look to improve the existing protection at Whitwood Mere, possibly through raising the embankment along the front of the washland. We will work with the council and local businesses as it may be difficult to get full government funding.

### Brotherton

We will continue to maintain the defences at Brotherton.

### Brotherton Marsh, West Holme and Birkin Holme

There are no or very few properties at risk within these washlands therefore we cannot justify maintaining the river and back embankments. We will work with environmental partners, landowners and communities in the short term (0-5 years) to decide how to manage the assets prior to withdrawing maintenance

### Castleford

We will continue to maintain the existing defences, however contributions may be required in the long term for works to replace or rebuild defences.

### Knottingley

We will continue to maintain the defences at Knottingley.

### Kemp Bank and East Ings Front Bank

We cannot justify maintaining these embankments therefore we will work with local landowners and individual property owners prior to withdrawing maintenance in the short term (0 - 5 years).

### **Woodholmes Bank**

We will continue to maintain the Woodholmes embankment along the A645 which provides flood protection to the village of Kellingley.

### **Beal**

We will continue to maintain the Beal flood defences. However in the long term if improvement works are necessary, external contributions may be required.

### **North Bank Birkin to Temple Hirst**

The flood defences from Birkin to Temple Hirst will continue to be maintained. Significant external contributions may be required in the medium to long term for works to replace or rebuild existing defences.

## **Figure 2**

### **Kellington**

The embankment will continue to be maintained. Significant external contributions may be required in the medium to long term for works to replace or rebuild existing defences

### **Eggborough to Gowdall Ings**

We cannot justify maintaining the front defences as no or very few properties are at risk within these washlands.

We will work with landowners and communities in the short term (0-5 years) to decide how to manage the assets prior to withdrawing maintenance.

### **Hirst Courtney and West Marsh**

River embankments will continue to be maintained. However when the embankment nears the end of its residual life it is unlikely the Environment Agency will be able to fund works, significant external contributions may be required in the medium to long term for works to replace or rebuild existing defences.

### **Sea Bank**

From Hensall to Gowdall we will continue to maintain the defences. We will also work with the local community to be prepared for larger floods, as it will be difficult to fund works to increase protection.

### **Snaith and Pickhill**

The embankment cannot be justified on economic grounds, however as the washland is part of the Reservoirs Act, current guidance is that we will have to continue to maintain the front overtopping embankments but due to the potential changes upstream in the catchment the washland may fill more during future floods. Therefore we will work with the local community to be prepared for larger floods.

### **North Bank West Marsh to Little Airmyn**

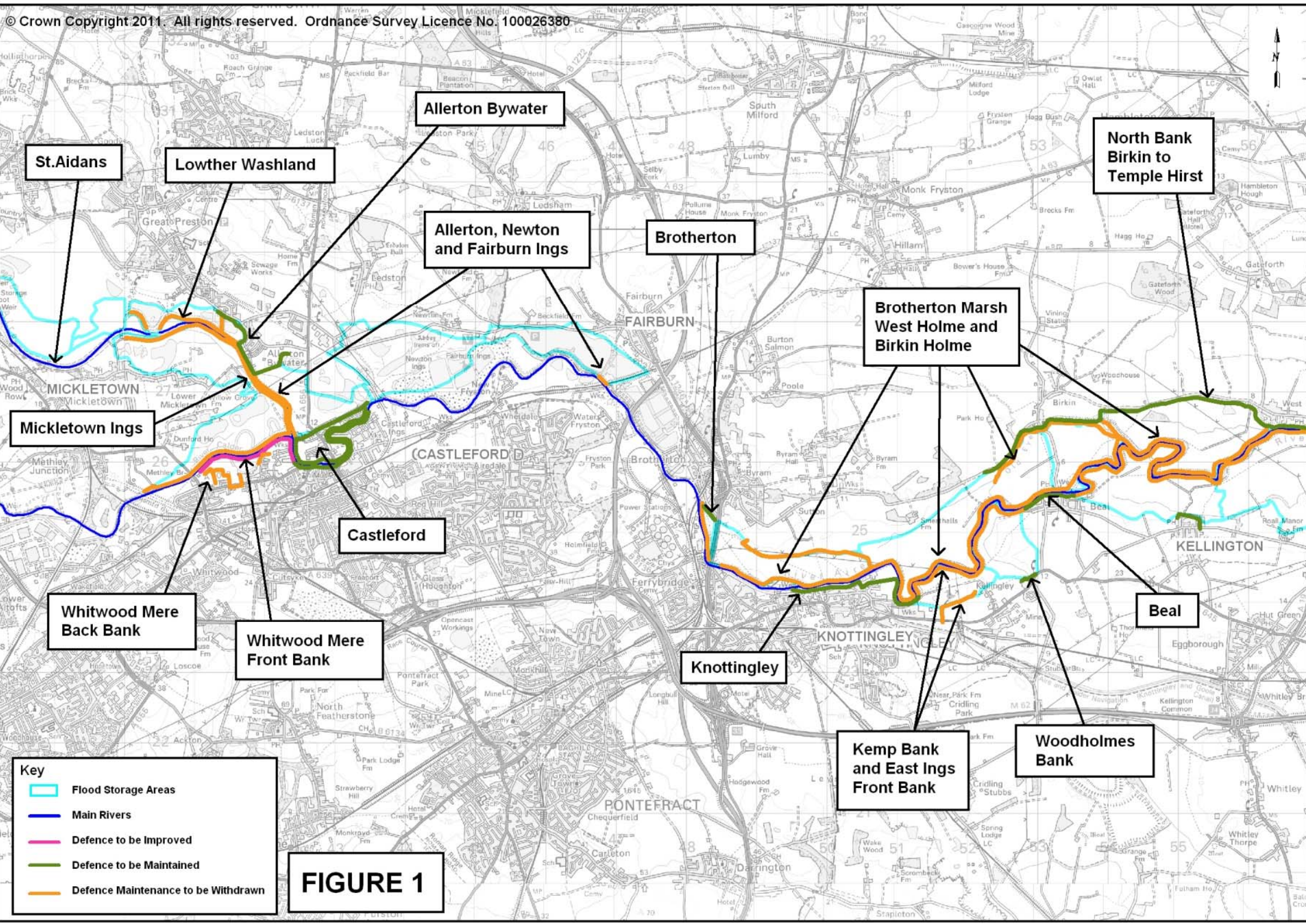
From West Marsh to Little Airmyn the river embankments will continue to be maintained. Significant external contributions may be required in the medium to long term for works to replace or rebuild existing defences.

### **East Cowick and Hazel Bank**

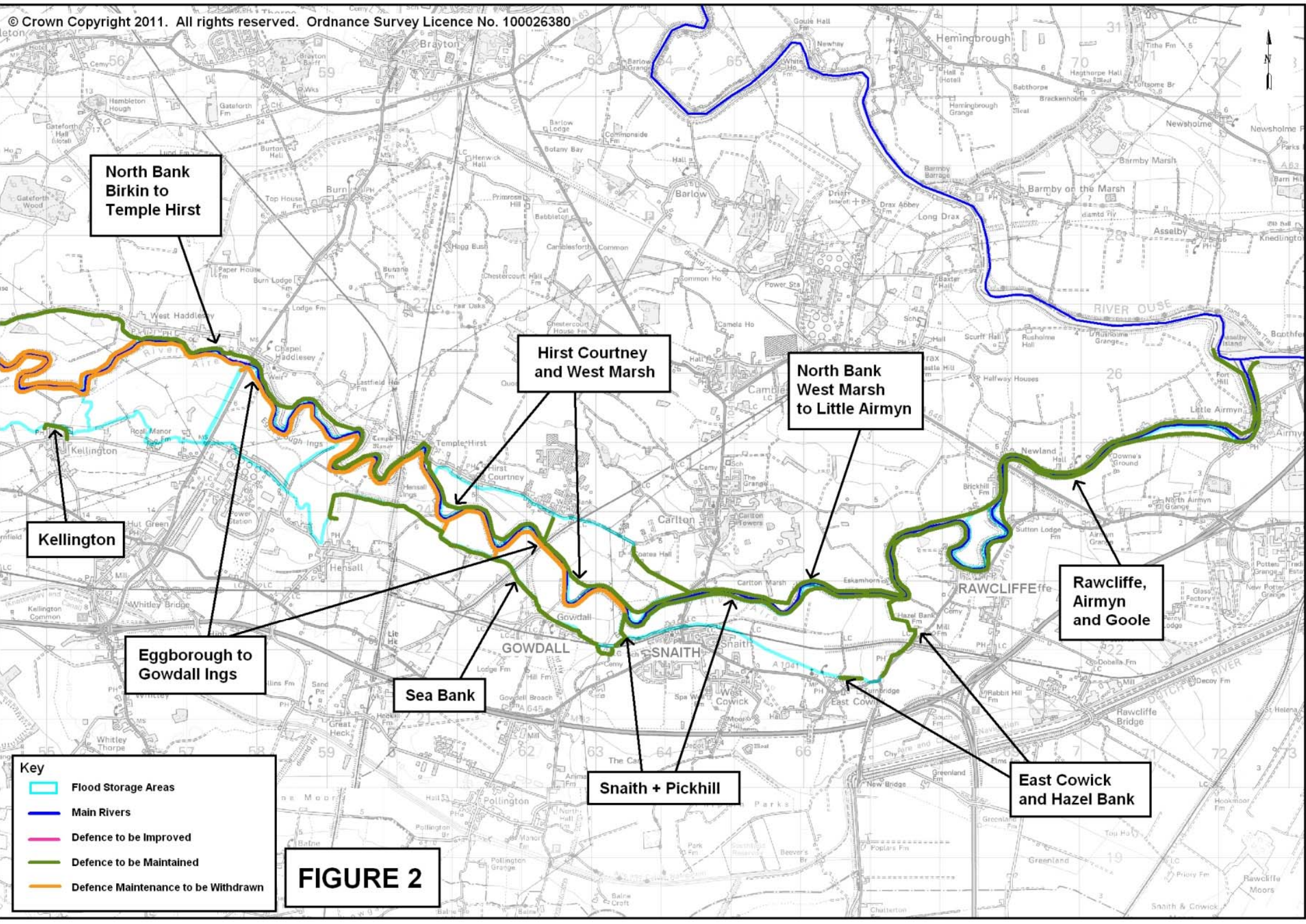
The embankments will continue to be maintained. We may improve these embankments in the medium term (5-30 years) if the embankments upstream are not maintained by external parties and fall into disrepair.

### **Rawcliffe, Airmyn and Goole**

We will maintain the embankments from Rawcliffe to Airmyn and then improve them as required in the medium to long-term in line with climate change.



**FIGURE 1**



North Bank  
Birkin to  
Temple Hirst

Hirst Courtney  
and West Marsh

North Bank  
West Marsh  
to Little Airmyn

Kellington

Eggborough to  
Gowdall Ings






Sea Bank

Snaith + Pickhill

Rawcliffe,  
Airmyn  
and Goole

East Cowick  
and Hazel Bank

**Key**

-  Flood Storage Areas
-  Main Rivers
-  Defence to be Improved
-  Defence to be Maintained
-  Defence Maintenance to be Withdrawn

**FIGURE 2**