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**Policy and Scrutiny**

**Open Report on behalf of Phil Younge, Area Manager Lincolnshire & Northamptonshire, Environment Agency**

Report to:	<b>Flood and Drainage Management Scrutiny Committee</b>
Date:	<b>29 May 2015</b>
Subject:	<b>Louth and Horncastle Flood Alleviation Schemes</b>

**Summary:**

To outline progress on implementing flood alleviation schemes for Louth and Horncastle.

**Actions Required:**

That the Committee consider and comment on progress made towards implementing flood alleviation schemes for Louth and Horncastle.

## **1. Background**

Louth and Horncastle have suffered historic flooding from main rivers, most recently in 2007.

Louth is a “rapid response” catchment situated on the River Lud with a low standard of protection from flooding. The preferred flood risk management option is to build two flood storage reservoirs to reduce flood risk to homes and businesses in Louth.

Horncastle is situated on the confluence of the rivers Bain and Waring. Flooding occurs due to high flows in both watercourses. The town has a significant number of properties with a low standard of protection. Flood events have been recorded in 1920, 1960, 1981, 1993 and 2007.

In March 2009 it was concluded that external contributions would be necessary to make any scheme viable. A partnership approach to funding was therefore adopted by; The Environment Agency, Lincolnshire County Council, East Lindsey District Council, Lindsey Marsh Drainage Board and the Witham Third Drainage Board to deliver flood storage schemes at both locations. Both Town Councils have agreed in principle to fund future maintenance of the completed schemes. Negotiations are also continuing with potential additional contributors to maximise funding opportunities that could benefit both schemes.

## Key Information

	<b>Louth</b>	<b>Horncastle</b>
Current probability of Main River flooding in any year	5% (1in20) 20%(1in5) Waring	10%(1in10) Bain
Probability following construction works*	0.67% (1in150)	1% (1in100)
Number of properties benefiting from scheme	355	288
Estimated construction completion	2015/16	2015/16
Capital Cost including contingency (today's prices)**	£6.5 million	£8.2 million

\* the figure quoted for annual probability of river flooding post-construction works is based on current river flows. For Louth, the probability is expected to increase to 1.25% (1in80) over the 100 year life of the scheme based on the latest climate change guidance. We have not yet undertaken the climate change calculations for Horncastle but similar changes should be expected.

\*\* includes additional £430,000 acceleration funding, secured for potential Property Level Flood Protection (PLFP) works.

We held the last Project Board meeting for both these projects on the 15<sup>th</sup> May, 2015. Board members, which included funding partners, were updated on our progress and issues relating to delivery, including negotiations with landowners.

### Louth

Planning permission for the scheme was received from East Lindsey District Council on 21st April, 2015. Our suppliers VBA selected from our Water and Environment Management (WEM) framework started enabling works in Spring this year. This work included vegetation clearance, water vole trapping and access track construction. VBA are currently doing the final details of the design so that they can start works summer this year.

We are planning to undertake the works by agreement with land owners and are continuing our negotiations with them.

### Horncastle

VBA have also been awarded the contract to undertake the detailed design, planning submission work and construction of this scheme. The proposal is to provide a 1 in 100 flood storage area on the Bain near Hemingby. Design work is progressing well. A planning application was submitted on 25<sup>th</sup> March 2015, with a view to starting on site this summer. It is expected that we will complete the scheme by early 2016.

We are planning to undertake the works by agreement with land owners and are continuing our negotiations with them about our proposed works. If these negotiations haven't concluded before we wish to enter the land to start our works, the Water Resources Act 1991 give the Environment Agency the power to take possession of land to undertake flood defence works. Negotiations can then continue during construction.

Property Level Flood Protection (PLFP) to 16 homes at risk of flooding from the Waring was completed in March this year.

## **2. Conclusion**

The approach taken by partners to implement flood alleviation schemes for both Louth and Horncastle is to treat the individual projects under a joint funding arrangement. In this way, there is greater flexibility to support both projects to ensure works occur at the earliest opportunity.

## **3. Consultation**

### **a) Policy Proofing Actions Required**

Not applicable

## **4. Background Papers**

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Deborah Campbell, who can be contacted on (01522) 784387 or [deborah.campbell@environment-agency.gov.uk](mailto:deborah.campbell@environment-agency.gov.uk)

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**Open Report on behalf of Phil Younge, Area Manager Lincolnshire & Northamptonshire, Environment Agency**

Report to:	<b>Flood and Drainage Management Scrutiny Committee</b>
Date:	<b>29 May 2015</b>
Subject:	<b>Boston Barrier Tidal Flood Defence Scheme</b>

**Summary:**

To outline progress on work to develop a tidal flood barrier in Boston.

**Actions Required:**

That the Committee consider and comment on progress to develop a tidal flood barrier in Boston.

## 1. Background

- 1.1 The £198million, five phase Boston Combined Strategy (BCS) was approved in 2008.
- 1.2 The BCS identified a multi-functional barrier as the best way to reduce the risk of tidal flooding to 20,000 properties over the next 100 years and achieve waterways objectives like the Fens Waterways Link by managing water levels through the town.
- 1.3 Over 800 properties, including 84 businesses, flooded across 55 streets during the tidal surge on 5 December 2013. If the barrier had been built on 5 December 2013 then it would have prevented the flooding.
- 1.4 Government has committed £73million to build the barrier.
- 1.5 The Boston Barrier Partnership (Environment Agency, Lincolnshire County Council, Boston Borough Council and Black Sluice Internal Drainage Board) has committed to delivering the Boston Barrier by December 2019.

## 2. Update

- 2.1 Immediate Water Level Management (WLM) has been removed from the current scope of the Boston Barrier project following consultation with Lincolnshire County Council. Due to the complexities around how WLM

would be delivered and its intrinsic link to the Fens Waterways Link scheme, it has been seen more appropriate that this element of the scheme is delivered through the Fens Waterways Link in the future.

- 2.2 Water Level Management (WLM) will create a safe and reliable non-tidal inland navigation link between Grand Sluice and Black Sluice Lock forming phase 2 of the Fens Waterways Link. As a key partner in the project Lincolnshire County Council committed £11m to deliver water based regeneration to Boston.
- 2.3 The original proposed WLM regime was to mirror the level of the River Witham through Boston on alternate tides. Our engagement work identified a group of river users navigating to the Wash and back that would likely object to these proposals. The project team has worked intensively with these stakeholders to reach agreement on how to operate WLM, as a result of this work we identified a lower retained level would not impact stakeholders.
- 2.4 A recent economic study has concluded that the most opportunities for economic growth in Boston as a result of WLM happen when the next stages of the Fens Waterways Link is completed. The study also identified the most benefits for Boston arise from holding water levels as high as possible for as long as possible.
- 2.5 The partnership has agreed to adopt a phased approach to water level management to allow more time to reach an acceptable solution. This means that the barrier will only operate as a tidal flood defence structure until further permissions to operate water level management are sought in the future.
- 2.6 The partnership remains committed to delivering future water level management as part of the Fens Waterways Link. The barrier will be designed so that it can still be used to manage water levels through Boston in the future.
- 2.7 The designs include WLM provision in the Boston Barrier scheme, which LCC are considering partial funding for through their current £11m allocation to deliver water-based regeneration to Boston.
- 2.8 We have implemented a scope of works freeze on the Barrier location and design. Our suppliers have begun the Environmental Impact Assessment works and design work needed for the Transport and Works Act Order application. We are currently working on preliminary design and the Transport and Works Act Order application.

### **3. Conclusion**

Progress continues on the Boston Barrier to reduce the risk of tidal flooding in the Borough of Boston. Current expectations are that construction will start in 2017 and be completed by December 2019.

#### **4. Consultation**

##### **a) Policy Proofing Actions Required**

Not applicable

#### **5. Background Papers**

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

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Report to:	<b>Flood and Drainage Management Scrutiny Committee</b>
Date:	<b>29 May 2015</b>
Subject:	<b>Steeping River</b>

**Summary:**

To outline progress on assessing the options for reducing flood risk in the Steeping catchment, in particular local aspirations for de-silting works.

**Actions Required:**

That the Committee consider and comment on the current situation.

## 1. Background

Since 2007, the Environment Agency has undertaken various works to reduce flood risk from the River Steeping. This has included raising banks, improving sluice gates and removing silt from a section of the river upstream of Wainfleet, between Crows Bridge to Firsby Clough. The Environment Agency also regularly inspects the outfall of the river near Gibraltar Point and removes accumulated silt to keep this clear.

A partnership, including the Environment Agency, Lindsey Marsh Internal Drainage Board and Lincolnshire County Council, have been working to decide on the most appropriate way to reduce flood risk to people and property in the River Steeping catchment. Removal of silt was one of the options being considered based upon previous survey information and there is an element of public expectation this will be taken forward.

An outline plan had been proposed which would have seen de-silting commence in early 2015 for a four year period, however due to the likely cost of the scheme and to ensure the most effective use of public money, the survey and modelling information used to demonstrate the need and value of de-silting was updated, including a more refined survey of silt levels.

Full funding for the works had not been confirmed beyond year one.

## **2. Conclusion**

The initial results of the updated modelling work have raised doubt over the cost effectiveness of the proposed de-silting works. The results suggest the risk from overtopping of the banks can be reduced to an appropriate level through relatively minor localised bank raising, the first section of which is planned for this summer.

Taking into account future funding uncertainties the partnership has agreed to postpone de-silting works until we are certain the most cost effective and appropriate option is being pursued

The modelling work to confirm the way forward is ongoing though, for a various reasons, is currently behind programme. We are looking at ways to accelerate the work.

De-silting or localised bank raising will only affect the risk from overtopping of the banks. In order to reduce the overall flood risk further work needs to be carried out to secure the stability and integrity of the banks, including assessing the risk to the banks of any de-silting. This work is ongoing.

## **3. Consultation**

The initial results were discussed with the partnership in February when the decision to postpone de-silting was jointly taken. A position statement was agreed at the February Scrutiny Meeting.

A meeting was held with Councillors, officers of LCC, the EA and the IDB in early March to outline the position at that date and works planned for the following months.

Once final results of the updated modelling are available they will be shared with the partnership so agreement on the way forward can be reached. These results are due early June 2015.

## **4. Background Papers**

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