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Heybridge Flood Alleviation Scheme Consultation Document

July 2003



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The Environment Agency is the leading public body protecting and improving the environment in England and Wales.

It's our job to make sure that air, land and water are looked after by everyone in today's society, so that tomorrow's generations inherit a cleaner, healthier world.

Our work includes tackling flooding and pollution incidents, reducing industry's impacts on the environment, cleaning up rivers, coastal waters and contaminated land, and improving wildlife habitats.

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Background

Heybridge is a settlement close to the town of Maldon, Essex (indicative grid reference TL 850 070, see Figure 1).

This document has been produced as part of a study looking at ways of reducing the flood risk to Heybridge. The purpose of this document is to inform you of the progress of the study and invite your comments.

An engineering study of the flood risk to Heybridge was commissioned by the Agency in 2001. This gave a better understanding of the mechanism and frequency of flooding and identified a number of properties at risk.

The study area for this consultation document includes residential and commercial areas surrounded by agricultural and amenity land. The Blackwater Estuary is a nationally and internationally important site for nature conservation. Significant archaeological remains from late Iron Age and Roman settlements have been discovered in the vicinity of the Elms Farm housing development near Langford Place.

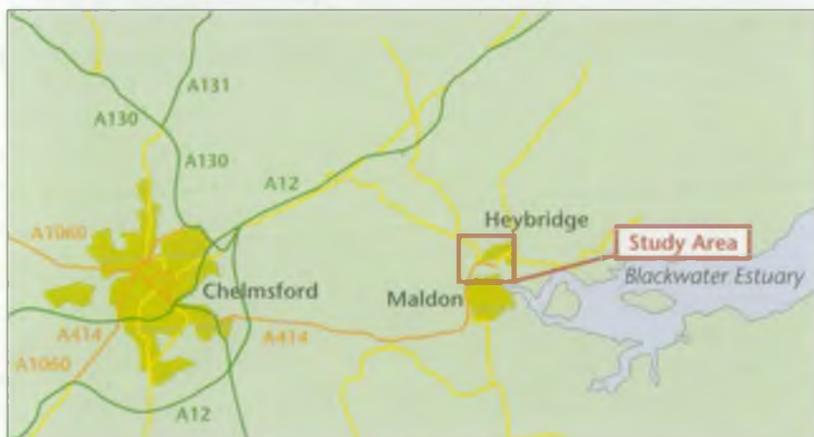


Figure 1 Location Map

The issue

The flooding in the Heybridge area is from the Langford Ditch, Heybridge Hall Ditch and the Holloway Road Ditch.

The flooding problem is compounded because structures, known as 'chunkers', which pass the flows beneath the Chelmer and Blackwater Navigation, restrict flows downstream causing water to pond upstream of the canal. The chunkers are over 200 years old and it is impossible to inspect them. They are believed to comprise small culverts constructed from timber planking. It is probable that they are in poor condition and therefore liable to fail, the situation may worsen if the chunkers become blocked. The River Blackwater discharges into the Blackwater Estuary through a tide locked structure known as Sadds Dam. This dam may also contribute to the flooding problem, because, during high tides, flood flows cannot be discharged and therefore collect upstream of the dam.

The Environment Agency has permissive powers for flood alleviation on 'main rivers' and the local authority, in this case Maldon District Council, has powers to carry out flood alleviation on 'non-main' rivers (such as parts of Heybridge Hall Ditch). The Environment Agency, Maldon District Council and Essex County Council (who are responsible for the highway drainage into the Holloway Road Ditch) are working in co-operation to provide flood alleviation to the residents and properties of Heybridge.



Photo 2 Flooding in Holloway Road



Photo 3 Holloway Road Ditch

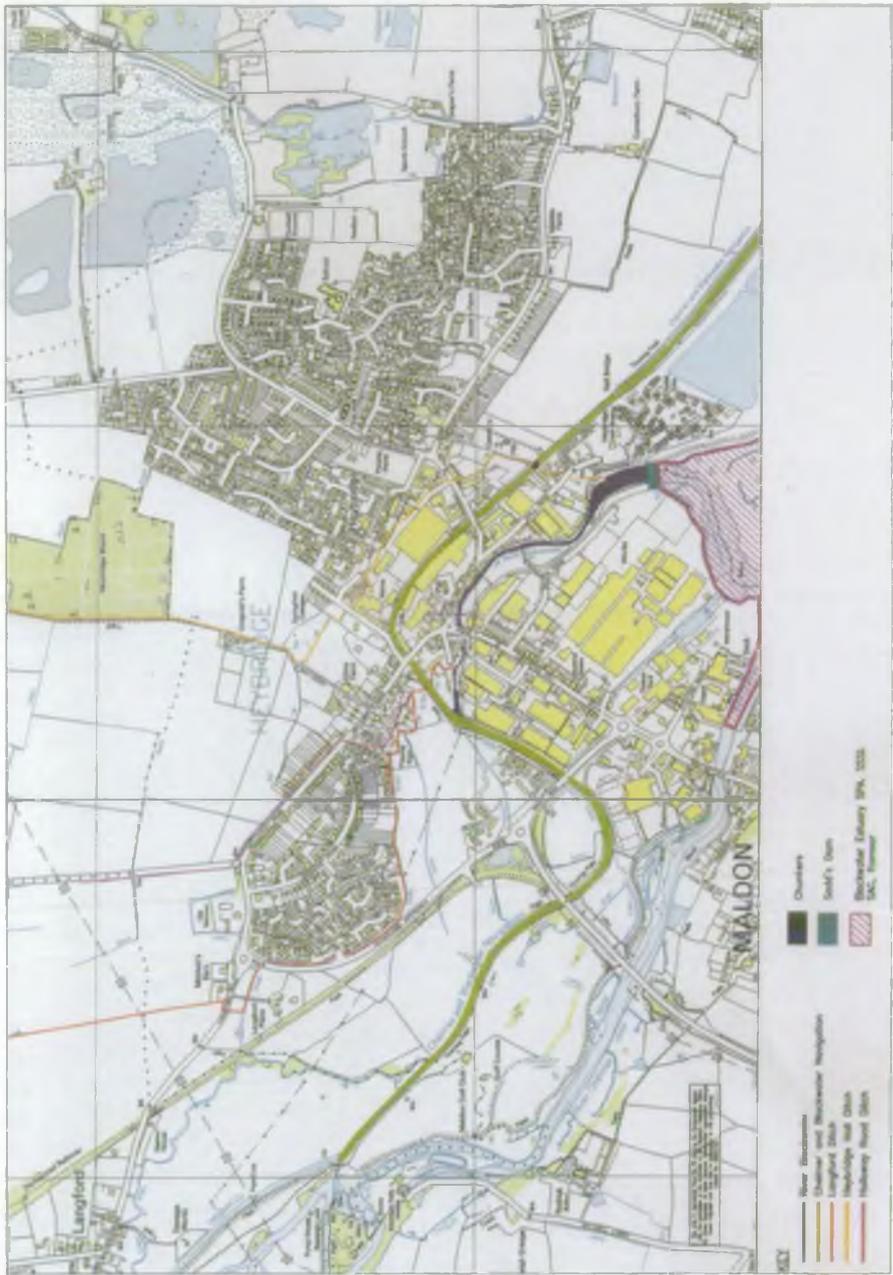


Figure 2 Study Area

Environmental appraisal process

The Agency aims to conserve and enhance the environment when carrying out its work and so any flood alleviation works will be subject to the appropriate level of Environmental Appraisal.

The objectives of Environmental Appraisal are to:

- Describe the existing environment;
- Identify the potential environmental impacts of the proposed works;
- Identify possible mitigation and enhancement measures; and
- Identify monitoring requirements.

The consultation process

Consultation with interested organisations and landowners will be undertaken throughout the programme as shown in the following table. This consultation document provides interested organisations and landowners with an opportunity to express their opinions and concerns on the proposed flood alleviation options. A consultation reply slip is enclosed for this purpose.

Table 1 Outline of the Consultation Process

Stage in Programme	Consultation Opportunity	Timescale
Initial appraisal and outline benefit / cost assessment	<ul style="list-style-type: none"> ● Level survey and questionnaire to residents and businesses affected by flooding in February 2001 ● Informal meetings and consultation with local stakeholders 	May 2001 to August 2002
Option identification and technical, economic and environmental evaluation. Scoping of environmental assessment	<ul style="list-style-type: none"> ● Distribution of this consultation document ● Public exhibition and press release ● Meetings with various consultees 	January 2003 to September 2003
Selection of preferred option Detailed environmental assessment of preferred option. Issue of environmental report	<ul style="list-style-type: none"> ● Distribution of stage 2 consultation document to present the preferred option ● Public exhibition (if considered necessary) and press release ● Meetings with consultees and stakeholders 	September 2003 to December 2003
Application for planning permission (subject to selected option)	<ul style="list-style-type: none"> ● Local Planning Authority consultation process 	2004
Detailed design	<ul style="list-style-type: none"> ● Continuing consultation with affected stakeholders 	2005
Construction	<ul style="list-style-type: none"> ● Continuing consultation with affected stakeholders 	2006

The options

A number of possible options have been proposed for this scheme. These are outlined below and presented on the Options map (Figure 3):

Table 1 | Flood Alleviation Options

Option	Description
1 Do nothing	No improvement work undertaken and no ongoing maintenance. This would result in increased flooding as the condition of the channel and the chunkers deteriorates. The purpose of the 'Do nothing' option is to establish the damage and loss if no works were carried out
2 Do minimum and replace chunkers when they fail	Ongoing maintenance and replacement of the canal chunkers as they fail
3 Do minimum and replace chunkers prior to failure	Ongoing maintenance and replacement of the canal chunkers to a planned programme before failure occurs
4 Construction of upstream flood storage areas. Standard of Protection (SoP) up to 1 in 25 years	Construction of an upstream flood storage area (FSA) on each of Langford Ditch, Holloway Road Ditch and Heybridge Hall Ditch. Embankments would be built to collect floodwaters for release in a controlled manner. The possible locations, described below, are shown on Figure 3. <ul style="list-style-type: none"> ● Two options for Langford Ditch, either at Langford Place or to the north of Langford Road ● One option for Heybridge Hall Ditch ● One option for the Holloway Road Ditch
5 Flood storage plus diversion of Holloway Road Ditch into Langford Ditch. SoP up to 1 in 25 years	As Option 4 above, except with a new channel constructed to divert flows from the Holloway Road Ditch to one of the Langford Ditch flood storage areas, therefore, eliminating the need for the Holloway Road Ditch FSA. There are two possible routes for this diversion channel, as shown on Figure 3

Option	Description
6	Channel improvements and pumping station at Sadd's Dam. SoP up to 1 in 50 years
7	Combination of options 4, 5 and 6. SoP up to 1 in 100 years
8	Local protection. SoP up to 1 in 100 years

Options 4-8 would include ongoing maintenance of the channels and replacement of the canal chunkers prior to failure.

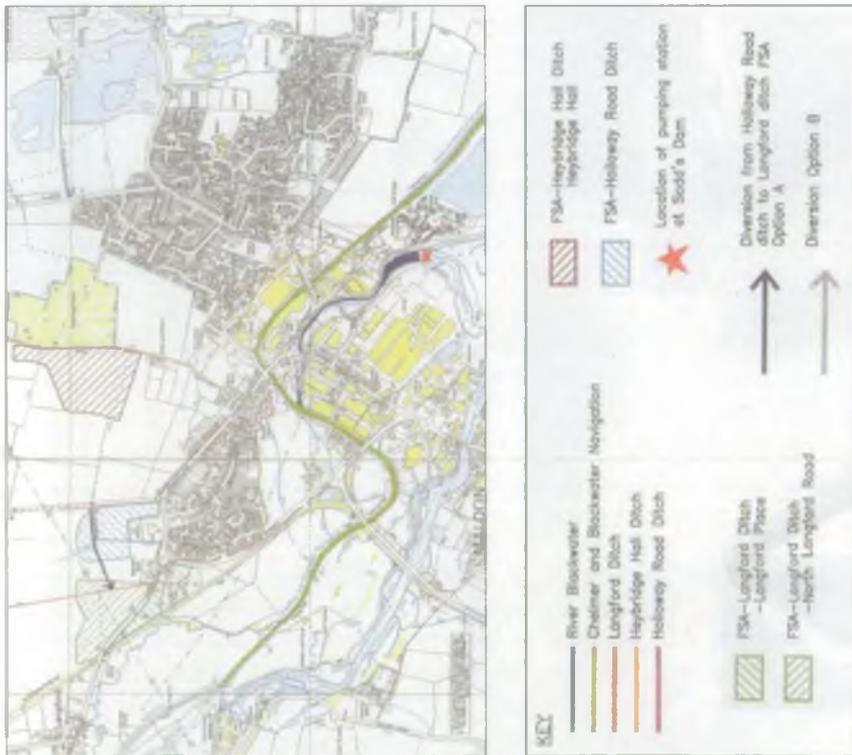


Figure 3 The Flood Alleviation Options

Preferred option selection

The selection of the preferred option to provide flood alleviation to Heybridge will depend upon the outcome of detailed technical, economic and environmental assessment of the various options.

The option chosen will be that which provides the best technical, economic and environmental solution to the problem. It is the intention that the preferred option will provide a 1 in 100 year standard of flood alleviation, provided that this can be justified technically, economically and environmentally.

Technical considerations will include:

- How the option will be built and operated;
- The standard of flood alleviation provided;
- How the option will affect the drainage of the land, both under normal and flood conditions.

Economic considerations will include:

- The cost of the damage caused by the flooding if nothing is done;
- The cost of construction and operation of the option;
- The cost-effectiveness of the option in terms of the benefit it provides.

Environmental considerations will include:

- The potential adverse and beneficial environmental impacts resulting from the option both during construction and operation;
- The potential for environmental enhancements that can be incorporated into the option.

Key environmental issues

An initial examination of the study area as part of a pre-feasibility assessment has identified the following key issues to be considered. The key issues will be incorporated into the Environmental Impact Assessment of the flood defence works, along with the additional issues identified during this consultation process. This list is not exhaustive:

- Positive effects on residents of the study area due to increased flood protection following construction;
- Positive effects from habitat creation following construction;
- Potential adverse effects on residents of the study area from noise, traffic and visual intrusion during construction works;
- Potential adverse effects on agricultural land to the north of Heybridge during periods of flood storage;
- Potential disruption and disturbance to recreational users of the study area during and following construction, including diversions to public rights of way;
- Effects on the nature conservation value of the river and ditches and immediate surroundings;
- Effects on the nature conservation value of designated conservation sites including the Blackwater Estuary and several County Wildlife Sites;
- Potential visual impacts of flood storage embankments;
- Potential adverse effects on the landscape character of the study area following construction;
- Changes in water levels and flows and any resultant impacts upon the downstream designated sites;
- Effects on water quality from a pollution incident or during in-channel working;
- Effects upon the setting of the Conservation Area; and
- Potential impacts upon archaeological features.



Photo 4 Possible flood storage area



Photo 5 Possible flood storage area at Langford Place

Consultees

The following organisations will be consulted as part of this process, responses from any other interested parties are welcome:

Boating Organisations	Great Totham Parish Council
British Canoe Union	Heybridge Parish Council
British Horse Society	Inland Waterways Association
Chelmer and Blackwater Navigation Company	Langford Parish Council
Council for the Protection of Rural England	Local Angling Clubs
Countryside Agency	Local Community/ Residents Groups
Defra	Local Flood Defence Committee
Developers	Maldon District Council
English Heritage	Maldon Town Council
English Nature	North East Essex Badger Group
Environment Agency	Ramblers Association
Essex County Council	Royal Society for the Protection of Birds
Essex Wildlife Trust	Service Providers
Farming and Wildlife Advisory Group	Sports England
National Farmers Union	The Blackwater Project

This consultation document will also be distributed to landowners, affected residents and internally within the Agency.

Consultation contact

If you have any queries or issues you wish to discuss please contact:

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The Environment Agency would be grateful if responses are returned on the enclosed consultation slip to the above address by the date shown on the slip.

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