



Environment  
Agency

# flood risk management

The Ely Ouse Lodes Strategy Study

Consultation on the preferred option

November 2007

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Published by:

Environment Agency  
Kingfisher House  
Goldhay Way, Orton Goldhay  
Peterborough PE2 5ZR  
Tel: 08708 506 506 Fax: 01733 231 840  
Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

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November 2007

# Introduction

The preferred strategic option for the Ely Ouse Lodes is to continue to maintain them at their current level.

The Ely Ouse Lodes are artificial river channels raised above the surrounding ground that carry water across the low lying fens to the north of Cambridge and release it into the River Cam.

The area through which the lodes pass was historically undrained fenland. It is now drained for agriculture by an independent drainage system managed by the Swaffham Internal Drainage Board. Centuries of drainage has resulted in peat wastage and shrinkage causing the land to sink. As the land has sunk, the lodes have been retained at their original level by piecemeal bank raising so they can continue to drain into the River Cam and can be used for navigation. The raised banks were not engineered but were constructed as and when necessary using local materials which were not ideal for flood bank construction. The water level in the lodes is now up to 3m above the surrounding ground level.

There is a long history of embankment slips and leakage of the lodes and

it has been necessary to periodically repair the raised embankments to prevent failure which would result in flooding of the surrounding land. Continued shrinkage and wastage of the peat may cause this problem to become worse, particularly on Reach Lode as this is the highest and least stable. At the current time, maintenance and rebuilding works will be required indefinitely.

The purpose of the Ely Ouse Lodes Strategy Study is to formulate an appropriate and sustainable approach to the future maintenance and operation of the lodes on the basis of current land use, whilst taking into consideration potential land use changes over the next 100 years.



**Burwell Lode**

# Identifying a solution

We have investigated a range of possible options for the future management of the lodes.

In April 2007 a list of potential strategic options was presented in a consultation document issued to statutory bodies, key stakeholders, and local and regional interested parties. Following this consultation, we have undertaken a technical, economic and environmental assessment of each option. Details of all of the options, and the environmental assessment undertaken, are provided in the Environmental Report (November 2007). In brief, the options considered were as follows:

1. Do nothing.

2. Maintain the lodes at their current level by carrying out repairs as and when required.
3. Strengthen the embankments now, to reduce the risk of having to carry out future repairs.
4. Reconstruct Reach Lode at a low level (reprofiling the lode banks so they are about 1.5m above ground level, and excavating the channel so the water level is about 1m above ground level); and construct a new channel from Reach to Burwell Lode on high ground.
5. Reconstruct Reach and Burwell Lodes at a low level and provide a new pumping station immediately



**Reach Lode**

upstream of the confluence with Wicken Lode, to pump water into the downstream channel. Install a new lock adjacent to the new pumping station to allow navigation into Reach and Burwell Lodes.

6. As Option 5, but with the addition of reconstructing Swaffham Bulbeck Lode at a low level, and providing another new pumping station at the downstream end of the lode to replace the existing one.
7. As Option 6, but with the addition of a new channel parallel to the Cam, connecting Bottisham and Swaffham Bulbeck Lodes, with a new pumping station at the end of Swaffham Bulbeck Lode to pump water into the River Cam. Abandonment of pumping at the end of Bottisham Lode.
8. Construct spillways at suitable points along the lodes (except Wicken Lode) to lower the water level in the lodes, and divert the outfalls to an upgraded Internal Drainage Board (IDB) pumping station via the IDB drainage system. Install a weir at the downstream end of Wicken Lode to maintain water levels for Wicken Fen.

## The preferred option

The technical, economic and environmental assessment has concluded that the preferred option is Option 2 (reactive maintenance).

However, if changes in land use occur that alter the risk of embankment failure, it may be necessary to carry out an alternative option. If there is an increased risk of bank failure for example, the recommendation would be to apply Option 3 (carrying out advance works to reduce the risk of failure).

On the basis of current land use, the environmental assessment has concluded that maintaining the lodes at their present level will not

cause detriment to any existing environmental features in the area.

A review will be undertaken approximately every five years, to ensure that the most appropriate management regime is being followed.

Many responses received from local people during the initial phases of the strategy study indicated that there is a strong desire locally to maintain the lodes as they are at present.

# Key issues for the preferred option

One of the benefits of our preferred option is that it provides a cost-effective and flexible approach to deal with possible future land use changes within the strategy area, for example, the continued development of the National Trust’s Wicken Vision.

Option 2 is a continuation of the current management approach for the lodes and as such should not give rise to any new or significant environmental effects. Where works are undertaken there may be opportunities for localised environmental enhancements. Similarly if Option 3 is carried out it would result in limited impacts and also offer wider opportunities for enhancements. Before either option was implemented it would be subject

to more detailed environmental assessment.

The choice of preferred option is based on our current understanding of circumstances and the assessment and decision-making criteria set out in government guidance. As noted already, the strategy will be subject to review and should any of these background factors change, it is possible that the preferred option may have to change as a consequence.



**Swaffham Bulbeck Lode**



Wicken Lode

# Consultation

This document has been issued to statutory bodies, key stakeholders, and local organisations and is accompanied by an Environmental Report (November 2007).

It is also available to members of the general public who have an interest in the scheme.

Comments on any aspect of the proposed strategy or the Environmental Report are welcomed and should be sent to the Project Manager at the following address by 30 November 2007.

The project manager for the Ely Ouse Lodes Strategy is Jonathan Fearnley. His contact details are as follows:

Jonathan Fearnley  
Project Manager  
Environment Agency  
Bromholme Lane  
Brampton  
Huntingdon  
PE28 4NA

Copies of this document can be obtained from our consultants at the address below:

Environment Team  
Halcrow Group Ltd  
Endeavour House  
Forder Way  
Cygnet Park  
Peterborough  
PE7 8GX

**Would you like to find out more about us,  
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**08708 506 506** (Mon-Fri 8-6)

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**[enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)**

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