

HARTSBOURNE STREAM

PROPOSED FLOOD ALLEVIATION SCHEME



Flooding within the Hartsbourne Stream catchment occurs regularly, causing disruption to roads and footways and damage to property. Following detailed hydrological and hydraulic studies the National Rivers Authority (NRA) proposes to reduce the risk of flooding in the Carpenders Park area by constructing a flood storage reservoir in open farmland immediately upstream of Oxhey Lane. The reservoir will only impound water in times of high rainfall. Subject to receiving planning approval and successful land negotiations, the scheme will, when built, substantially reduce flooding in the Mead and Delta Gain, and will provide a marginal reduction in the incidence of flooding in Brookdene Avenue. However the flood storage area will not provide any reduction in flood risk to properties flooded from the Oxhey Stream. The NRA are still considering possible solutions to this problem.

Perspective view (5 years on) of the site showing the proposed Carpenders Farm dam across the Hartsbourne Stream upstream of Oxhey Lane.



NRA
Thames Region

HARTSBOURNE STREAM

The Hartsbourne Stream rises on the mainly open ground surrounding the Hartsbourne Country Club golf course and flows in a westerly direction for some 5 km through Carpenders Park and South Oxhey to join the River Colne north west of Oxhey Hall.

Interviews with local residents have revealed flooding in the Carpenders Park area to be a regular occurrence.

The floods of 8 May 1988, for example, affected an area of some 32 hectares and inundated some 29 properties. They also disrupted road and foot traffic.

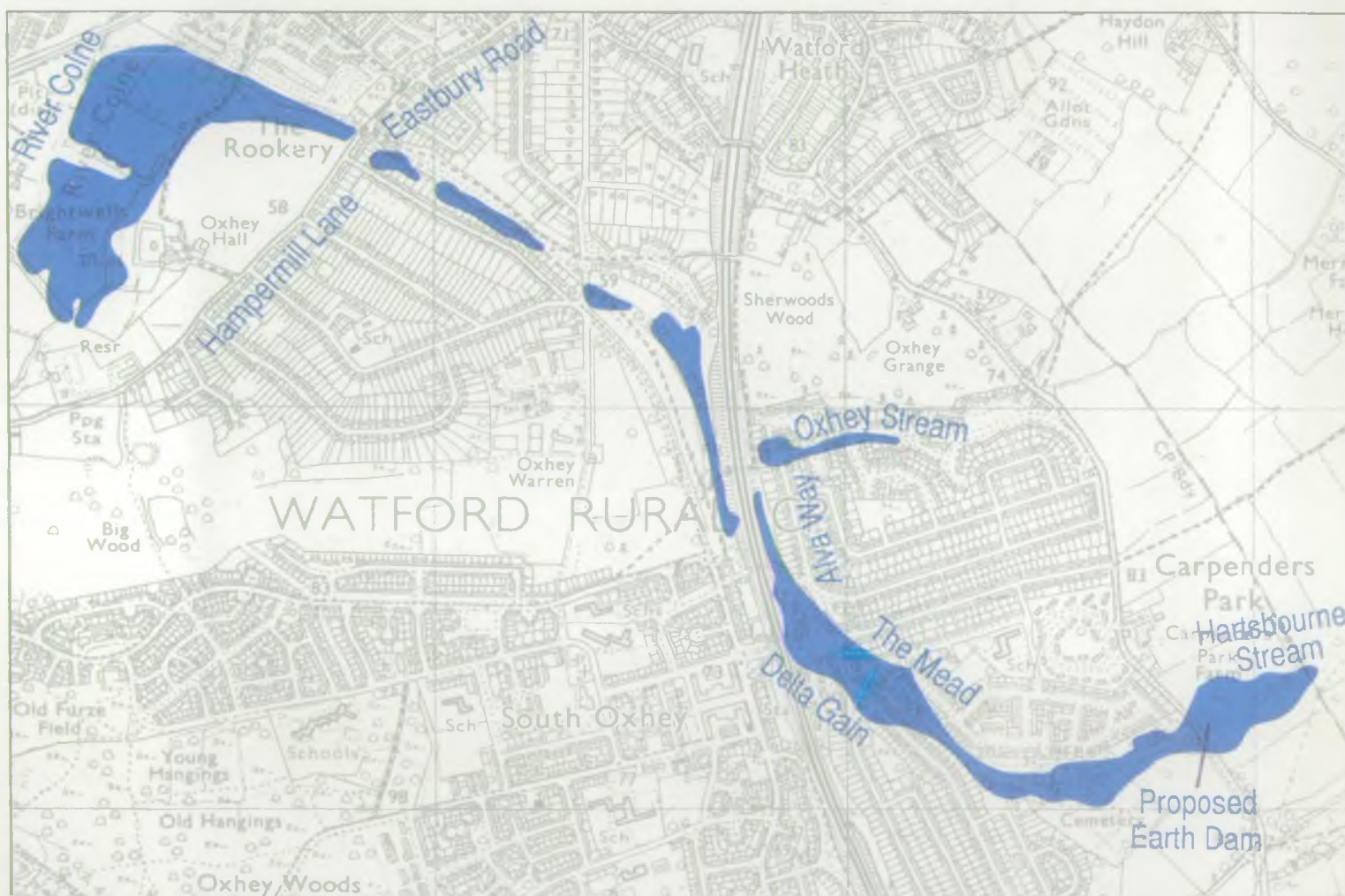
Without some flood alleviation works, regular flooding at lower levels will continue to occur and more severe flooding than previously experienced will be a possibility.

THE NRA

Responsibility for the area's flood

defences passed to the Thames Region of the National Rivers Authority on 1 September 1989. The NRA is an independent public body charged with safeguarding and improving the natural water environment. Alongside flood defence, it is responsible for regulating rivers and ground waters, protecting and improving fish stocks and promoting water based recreation of all types. The NRA is committed to improving wildlife habitats and conserving the natural environment in everything it does.

Location Plan showing flooded area in 1988.



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THE SOLUTION

The proposal is to place an earth dam across the stream, immediately above Oxhey Lane to create the flood storage reservoir. The dam will be designed to allow normal stream flows to pass through unhindered and continue their present

course under Oxhey Lane and down through Carpenders Park.

The NRA has investigated stream channel improvement works and flood storage schemes for relieving flooding and has selected the flood storage option as being the most cost effective and least disruptive to the environment and local community.

THE ENGINEERING PROPOSALS

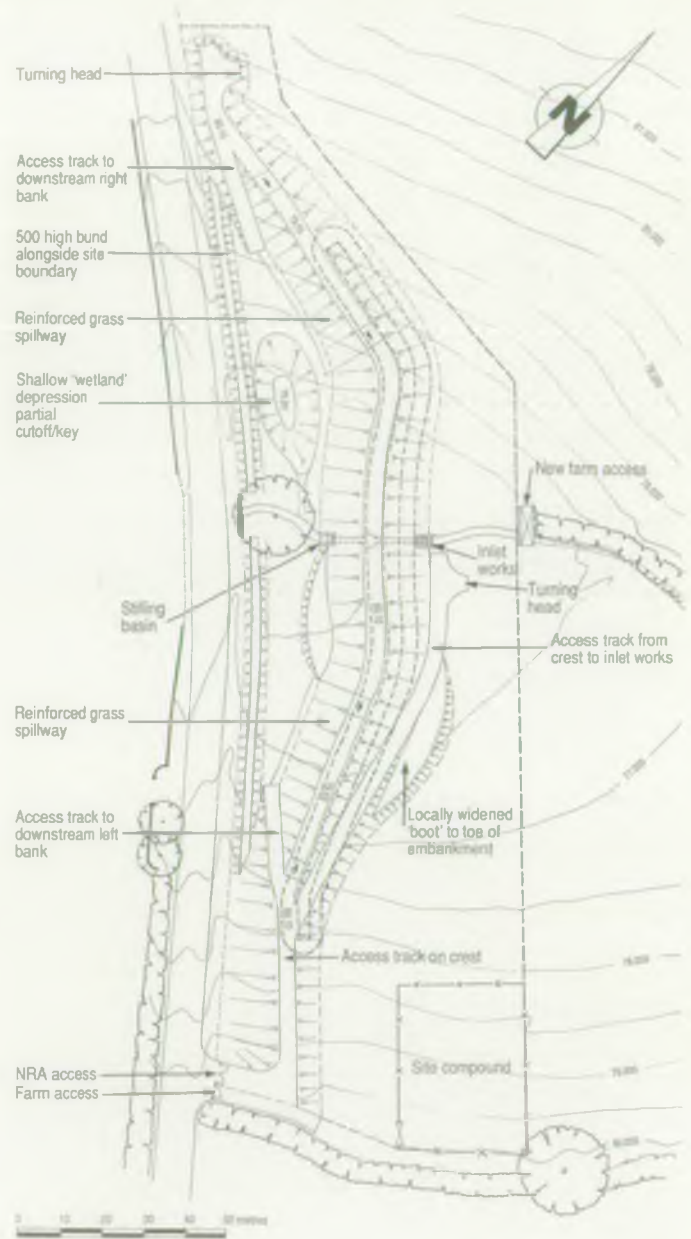
The earth dam constructed from imported clay materials, dressed with topsoil and seeded with grass, will be 280m long and its top line will be 4.1m above the field level of the valley floor at its highest point. The construction will affect an area of approximately one-sixth of the present field and will remove three trees and a short length of hedgerow in the immediate vicinity of the embankment.

However, it will not be necessary to disturb the remaining extent of the field and both stream channel and existing hedgerow vegetation will be conserved. During times of very heavy rainfall, a small pipe in the earth dam will limit the volume of water discharging downstream causing excess water held behind the earth dam to flood across part of the field. As the rain stops the temporarily flooded area will drain away through the small pipe at a controlled rate. In this way the field area could be flooded for a few hours but no permanent water body will be retained, and the field will return to its previous state.



Extent of flood storage area.

Engineers drawing: proposed dam layout



SOME QUESTIONS YOU MAY HAVE:

- Q. How often would flood water be stored behind the dam?
A. On average once or twice per year to a varying degree dependent upon the amount of rainfall.
- Q. How much flood water will the earth dam hold back?
A. It will be approximately 42,000 cubic metres, (9.24 million gallons).
- Q. What is being done about the downstream incidence of flooding from foul and surface water sewers?
A. This is the subject of a separate investigations by Three Rivers District Council acting as agents for Thames Water Utilities.
- Q. How long will the dam construction take to complete?
A. About six to nine months.
- Q. Will the land be reinstated after the dam has been constructed?
A. Yes, the main field area will remain as farm land and the area around the dam will be reinstated and landscaped as space for nature conservation.
- Q. How long would the flood waters be stored behind the dam?
A. This depends on the severity of rainfall but will be essentially short duration (hours rather than days).

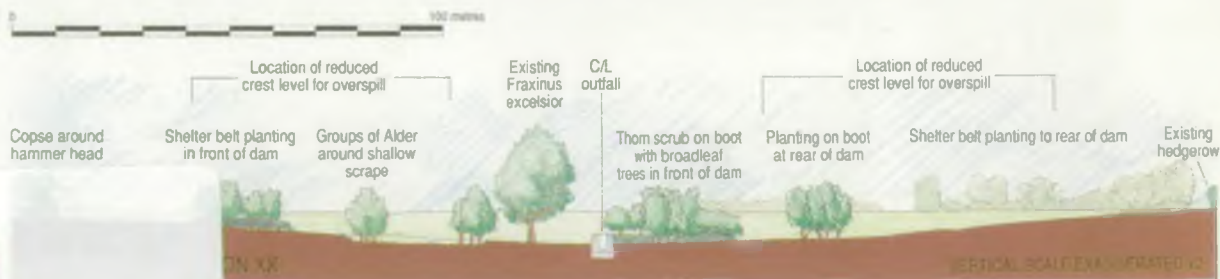
THE LANDSCAPE PROPOSALS

The landform of the earth dam will partially block existing views up the valley from the lowest point on Oxhey Lane, but care has been taken to set it back some 30m into the field, and to vary its shape and alignment in order to soften its impact. Planting of trees and shrubs is also proposed in particular areas on both sides of the earth dam to relate to existing landscape features of hedgerows and tree groups and to further soften the linearity of the dam. These proposals include reinforcing/extending the existing roadside hedgerow, planting groups of trees between the dam and the road and beyond the dam. A new agricultural access will be provided into the field, and access provided for maintenance of the dam.

Landscape Plan



Landscape Sections



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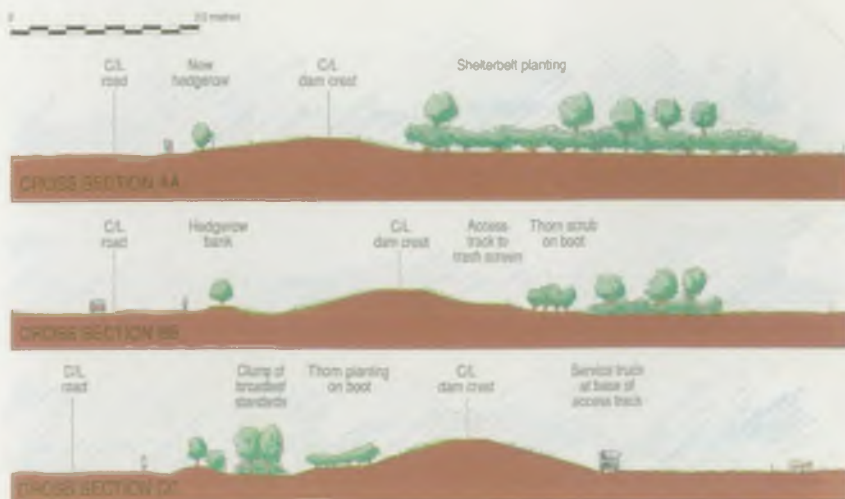


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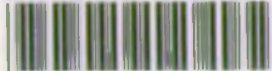
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