

# LOWER NENE CATCHMENT MANAGEMENT PLAN



National Rivers Authority  
Information Centre  
Head Office  
Class No .....  
Accession No APR 71 .....



*National Rivers Authority  
Anglian Region*

## INTRODUCTION

Catchment management planning aims to create a consistent framework within which all the NRA's functions and responsibilities can be applied in a co-ordinated manner within a particular catchment area.

The current state of the water environment and associated land is systematically analysed and compared with appropriate standards. Where these standards are not being met or are likely to be affected in the future, the shortfalls, together with options for action to resolve them, are presented as issues in a table at the end of this brochure.

## YOUR VIEWS

Formulation of this plan involves consulting and working with many public bodies and individuals. Your views on the issues identified are welcomed. You may also wish to comment on other matters affecting the water environment in the catchment area which you think should be examined by the NRA.

Please write with your comments to the following address, from which a full copy of the consultation report may also be obtained:

**Lower Nene Catchment Management Plan, Area Manager, National Rivers Authority, Northern Area, Aqua House, Harvey Street, Lincoln, LN1 1TF.**

Comments must be received by 19 January 1994.



*Aerial view of River Nene, Wisbech.*

## WHAT IS CATCHMENT PLANNING

River catchments are subject to increasing use by a wide variety of activities, many of which interact giving rise to some conflicts. The many competing demands on the water environment and the interests of users and beneficiaries must be balanced.

Catchment management involves the NRA working with many people and organisations and using its authority to ensure rivers, lakes, coastal and underground waters are protected, and where possible improved, for the benefit of present and future users.

The NRA uses its resources to:

- Respond promptly to all reported pollution incidents and to emergencies due to flooding.
- Control pollution by working with dischargers to achieve improvements and monitor effluent compliance with standards.
- Maintain existing assets and invest in new ones to provide flood protection, manage and develop water resources and provide other NRA services.



*Sutton Bridge.*

- Monitor, survey and investigate the existing quality of controlled waters to determine short and long term changes.
- Determine, police, enforce and review conditions of water abstraction licences, discharge consents and flood defence consents in order to achieve operational objectives.
- Develop fisheries; promote recreation, navigation and conservation.
- Influence planning authorities to control development through Town and County Planning legislation.

## THE CATCHMENT

The Lower Nene catchment is principally a lowland area with very fertile alluvium and fen deposits particularly in the east of the catchment. Consequently the catchment is rural in nature providing arable farming products. Peterborough provides a centre for industry at the upper end of the catchment while Wisbech is a focus for agriculture and is served by the River Nene navigation.

Much of the Catchment lies below mean high spring tide level and therefore





flood defence is vital. An artificial drainage network has been established, the maintenance of which is the responsibility of local Internal Drainage Boards.

The Catchment lies in an area of relatively low rainfall and of increasing population. During summer months, flows in the River Nene can be very low making management of the limited water resources particularly important.

The upstream extremity of the catchment has been taken to be Anglian Water Services Ltd Wansford abstraction point for Rutland Reservoir, since this has significant influence on both the quality and quantity of water entering the catchment.

## CATCHMENT FACTS

Area 830km<sup>2</sup>

Population 230,500 (1993) 253,000 (projection 2001)

### WATER QUALITY

Length of river in National Water Council (NWC) Class for 1992

Class:	km
1A (very good)	N/A
1B (good)	N/A
2 (fair)	25
3 (poor)	N/A
4 (bad)	N/A

Length of estuary in NWC Class 1992

Class	km
A	0
B	0
C	0
D	40.3

Minor tributaries not included.

### WATER RESOURCES

Availability: **Groundwater** None reliably available

**Surface water** Only reliably available during the winter.

### FLOOD PROTECTION

Length of designated main river	108.6km (maintained by NRA)
Length of Tidal Main River	39.5km
Area Protected from Tidal Flooding	688.0km <sup>2</sup>
Area Protected from Fluvial Flooding	694.0km <sup>2</sup>
Area of Natural Flood Plain	6.0km <sup>2</sup>
Area of Designated Washland	14.5km <sup>2</sup>

### FISHERIES

Length of salmonid fishery

0km

Length of cyprinid fishery 142km

### CONSERVATION

Sites of Special Scientific Interest (SSSI) 14

Water dependent SSSIs 8

## LAND USE

The catchment is predominately rural with 80% of the population living in Peterborough and Wisbech. The catchments highly developed modern farming industry makes a major contribution to the national economy.

Arable farming is the primary land use, 75% of the catchment being Grade 1 and 2 under the MAFF classification.

## INFRASTRUCTURE

The catchment is served by a good road network, particularly in the west around Peterborough, with trunk and 'A' roads serving the main population centres and by-roads linking the rural centres. There is a proposal to uprate the A1 trunk road, west of Peterborough, to motorway standard but other major highway proposals are limited to existing system maintenance and by-pass construction.

There is a limited rail network in the catchment, however the main population and industrial centre of Peterborough is served by the East Coast main line with easy access to London and the North East.



*Peterborough embankment.*

The River Nene is a navigable river with sea going commercial transport currently reaching Wisbech. There is access to the Grand Union Canal at Northampton, and to the Middle Level (and hence the River Great Ouse) at Stanground, Peterborough.

The existing infrastructure and the current planned improvements provide adequately for the established catchment uses.

## DEVELOPMENT

The total population of the catchment is approximately 230,500, with 208,400 located in the towns and main villages and the remainder in minor villages, hamlets and farms.

Industry is diverse; in rural areas it is based upon agriculture but within the larger towns food processing, general engineering, manufacturing and high technology industries exist.

Population growth is identified in the County Structure Plans covering the catchment, but is generally restricted to the towns and main villages.



*Urban development on the River Nene.*



## WATER QUALITY

Large volumes of water are abstracted from the River Nene at Wansford and pumped to Rutland Water. This source forms a major part of Anglian Water Services drinking water supply strategy.

Downstream of Peterborough a number of significant discharges occur which, combined with the high abstractive demands for this catchment, make water quality planning a complex issue. Approximately 40 kilometres of the river downstream of Dog-in-a-Doublets Sluice is tidal.

Low lying areas are served by Internal Drainage Board systems which convey drainage from a number of small Sewage Treatment Works and agricultural and developed land areas.

Water quality throughout the catchment is variable. The Counter Drain (north) and the tidal River Nene are currently particularly notable for their poor quality. The recent drought has caused deterioration in some watercourses, for example, by salt water ingressing into some IDB systems.





## WATER RESOURCES

The major water resource is the River Nene which has very little natural baseflow but dry weather flows are influenced by effluent returns to the river. There are gravity and pump discharges to the River Nene and also gravity feeds to the IDB drain systems.

There are no significant water resources under-ground (groundwater) in the catchment since any water-bearing rock strata are thin and offer little development potential.

The major water demands in the catchment are as follows:

- a) surface water intake works operated by Anglian Water Services at Wansford abstracts water and pumps it via a pipeline to fill Rutland Water.
- b) summer demand from the River Nene via Stanground Lock supports irrigation and maintains navigation levels in the Middle Level Drain system.
- c) summer demand for irrigation use in the Fenland area.

The balance between water availability and water abstracted is of key importance in this catchment. There are a number of major water transfers from the River Nene which do not require licencing by law which have effectively unlimited abstraction. Consequently in dry years demand exceeds supply.

## FLOOD DEFENCE

The lower Nene characterises two distinct methods of flood control. Upstream of Peterborough City the river retains a natural quality with regular extensive use being made of the flood plains found on either side of the watercourse for storage of water within the Nene valley. Downstream of the City the landscape becomes low lying fen with a straightened river contained within raised flood embankments.

The fen makes up the largest part of the lower Nene catchment. Drainage throughout this area is provided by 8 Internal Drainage Boards. Maintenance of the main river and its embankments are the responsibility of the NRA.

A number of small tributaries convey water from the hills surrounding the Nene valley to main river. Urban watercourses discharge to the Nene in Peterborough providing for approximately 50% of the City's drainage.



The tidal limit is some 7km downstream of Peterborough City. During periods of tidelock when discharge of floodwaters is precluded, the Nene Washlands becomes of strategic importance in preventing flooding of low lying areas in Peterborough City.

The tidal estuary is approximately 40km long. The channel crosses extremely low lying fenland. Flood protection embankments exist to provide protection from flooding by tidal waters.

## FISHERIES

The fish population in the Lower Nene catchment is typical of lowland rivers in eastern England. In terms of biomass (ie. weight of fish) common bream, roach and eels are the dominant species in the catchment. No breeding trout populations occur.

The presence of the continental species zander in the River Nene around Peterborough is significant and carp have been recorded in the Nene from Northampton to Peterborough.

On the tidal section of the River Nene (downstream of the Dog-in-a-Doublet



Sluice) a coarse fish population, dominated by eels, occurs but changes to species associated with brackish conditions below Sutton Bridge.

Angling, both for pleasure and in competition occurs throughout the catchment with particularly popular stretches being on the Nene from Wansford down through Peterborough to the Dog-in-a-Doublet Sluice, the South Holland Main Drain and the North Level Main Drain.

Commercial exploitation of eels occurs throughout the catchment.

## NAVIGATION

Once operated as a commercial navigation the Nene is now used only for recreational boating from the tidal limit at the Dog-in-a-Doublet Sluice downstream of Peterborough to its junction with the Grand Union Canal at Northampton.

Commercial operations are still ongoing on the tidal reach with 1,500 tonne ships using the port facilities at Wisbech and 3,500 tonne ships using the busy port at Sutton Bridge.

The NRA is the body responsible for navigation throughout the fluvial (non-tidal) length of the river and along the tidal reach down to Bevis Hall, Wisbech.

## CONSERVATION

The Lower Nene Catchment has two distinctive areas. In the upper section to the west of Peterborough the Nene meanders in semi-natural state through a rolling mixed landscape. East of Peterborough the Nene is a wide embanked highland carrier surrounded by low, flat, fen farmland.

Conservation interests are dominated by the Wash and the Nene Washes both large, internationally important wetlands. In total there are 14 Sites of Special Scientific Interest; SSSI's; (8 with wetland interests, 4 woodland and 2 geological), 8 County Wildlife Trust Reserves and 25 sites of nature conservation importance.

The quantity of water available to the catchment and its dynamic attributes are crucial to the character of the wetland and river habitats. Environmental demand for water to maintain a high summer watertable is growing concurrently with agricultural and public water supply demands. In the drought summer of 1992 the Nene effectively ceased to flow compromising water management regimes on the Nene Washes which has been designated a Special Protection Area.



## RECREATION

Many riverbanks in the catchment have access available to the general public and public footpaths are shown in the plan. The “Nene Way” passes through much of the catchment and follows the river from Wansford to downstream of Guyhirn.

Angling for coarse fish occurs throughout the catchment on rivers, drains and lakes. Trout fishing only occurs on some lakes. Angling on the River Nene is aided by the ease of access to much of the river length.



*Navigation on the River Nene.*

## ISSUES AND OPTIONS

### GENERAL

This section of the plan considers options to address the issues that have been raised in the preceding sections. The options as presented are the initial thoughts of the Anglian Region of the NRA and do not constitute policy statements. Comments on the issues and options are requested together with any new ideas/suggestions.

Wherever possible the body responsible for carrying out each option has been identified. In some areas this is identified as someone other than the NRA. However, the options as presented are intended as a plan to facilitate improvements to the water environment for the benefit of all users. Obviously this will entail many bodies and individuals working together to fulfil the aims and objectives as detailed in this Catchment Management Plan.

The issues and options are *not* shown in priority order, not costed and to any timescale. After publication of this Consultation Document, the NRA will prepare a Final Report to provide an overview of the catchment, a policy framework and series of strategies to deal with the issues. Details of a proposed monitoring programme will also be identified.

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 1</b> THE RIVER NENE FAILS TO MEET ITS WATER QUALITY OBJECTIVES AS A CONSEQUENCE OF NUTRIENT ENRICHMENT IE. EUTROPHICATION.</p> <div data-bbox="227 954 624 1449" style="border: 1px solid black; padding: 10px; margin-top: 20px;"><p><b>ABBREVIATIONS USED</b></p><p><b>AWSL</b> Anglian Water Services Ltd.</p><p><b>IDB</b> Internal Drainage Board</p><p><b>MAFF</b> Ministry of Agriculture, Fisheries and Food</p><p><b>STW</b> Sewage Treatment Works</p><p><b>UWWT</b> Urban Waste Water Treatment</p></div>	<p>Designate the River Nene upstream of Wansford as sensitive under the UWWT Directive.</p> <p>Maintain a positive residual flow at Dog-in-a-Doublet Sluice.</p> <p>Discourage the use and formulation of phosphate rich detergents.</p> <p>Storage of water in the upstream catchment.</p> <p>Changes in land use.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
NRA	<p>Legislative support for requiring nutrient removal from discharges to the River Nene upstream of Wansford will be provided.</p> <p>River water quality in the Upper and Lower Nene will improve as the degree of Eutrophication decreases.</p>	<p>The financial cost of nutrient removal will be borne by those responsible for making the discharge and their customers.</p>
NRA		<p>This option on its own may not reduce the degree of eutrophication sufficiently.</p> <p>The catchment may not be capable of providing a minimum residual flow, and Anglian Water Services may claim compensation for loss of resource.</p> <p>The use of water for this purpose may be challenged as it could be perceived as not to be making best use of a water resource.</p>
NRA/detergent manufacturers/ members of the public.	<p>Reduction in phosphates discharged through sewage treatment works to the River Nene.</p>	<p>Would only produce a partial solution to the problem.</p>
NRA	<p>Reduces the potential for the conditions under which excessive algal growth develops.</p>	<p>Cost, partial solution.</p>
NRA/land owners.	<p>Reduction in nutrient enhancement</p>	<p>Cost, restrictions in land use</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 2</b>  <b>WATER QUALITY IN THE TIDAL RIVER NENE FAILS TO MEET ESTUARY CLASS A STANDARDS.</b></p>	<p>Require improvements in effluent quality for those effluents discharging to this section of the River Nene.</p> <p>Maintain a positive minimum residual flow at the Dog-in-a-Doublet Sluice.</p>
<p><b>ISSUE 3</b>  <b>WATER QUALITY IN THE COUNTER DRAIN (NORTH) FAILS TO MEET AMENITY STANDARDS.</b></p>	<p>Require improvement in the quality of effluent discharged by Flag Fen STW.</p> <p>Relocation of the discharge point.</p> <p>Reduce the target quality specification for the Counter Drain.</p>
<p><b>ISSUE 4</b>  <b>SURFACE WATER SEWERS DISCHARGING TO THE PADHOLME DRAIN REQUIRE CONTROL IN ORDER THAT THEY DO NOT COMPROMISE A SUSTAINED RECOVERY IN WATER QUALITY.</b></p>	<p>Liaise with dischargers re: monitoring of the systems.</p> <p>Increase public awareness of the link between watercourse and surface drains.</p>



RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>NRA/Consent holders.</p> <p>NRA</p>	<p>Water quality will improve in the tidal section of the River Nene.</p> <p>Marginal improvement in water quality</p>	<p>Significant capital investment will be required to meet improved effluent quality standards.</p> <p>Derogation of existing users.</p> <p>Possibly not the best use of water resources.</p> <p>Only a partial solution.</p>
<p>NRA/AWSL.</p>	<p>Water quality in the Counter Drain will improve.</p> <p>Water quality in the Counter Drain will improve.</p> <p>Water Resource improvement may be available, dependent upon the alternative discharge location.</p> <p>Flag Fen STW improvement programme would not be required. The new target standard would be complied with.</p>	<p>Significant investment will be required to improve effluent quality in the Counter Drain, and the tidal Nene, into which the Counter Drain discharges.</p> <p>Significant investment will be required to improve effluent quality to an acceptable standard for a discharge at an alternative outfall location.</p> <p>Water quality in the Counter Drain would remain poor.</p>
<p>NRA/Dischargers.</p>	<p>Maintenance of water quality in the Padholme Drain.</p> <p>Improvement to amenity value of Flag Fen archaeological site.</p> <p>Reduce pollutants input.</p>	<p>Cost of monitoring.</p> <p>None.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 5</b> SALINITY IN THE SOUTH HOLLAND MAIN DRAIN CAUSES FAILURE OF THE F2 FISHERY STANDARD AND COMPROMISES ITS USE FOR SPRAY IRRIGATION.</p>	<p>To ensure that saline intrusion via the tidal sluice is minimised.</p> <p>To further evaluate the degree to which natural saline water ingress occurs from tributary land drain systems.</p> <p>Import water from the River Welland.</p> <p>Construct a bed weir.</p>
<p><b>ISSUE 6</b> POLLUTION CAUSED BY OVERFLOWS FROM EXISTING SEWERAGE SYSTEMS.</p>	<p>Provision of improved sewerage.</p> <p>Reduce solids eg plastics at source ie. bag it and bin it.</p>
<p><b>ISSUE 7</b> POLLUTION CAUSED BY INADEQUATE SEWERAGE AND SEWAGE TREATMENT FACILITIES IN RURAL AREA'S CAUSING FAILURE OF AMENITY STANDARDS</p>	<p>Provision of improved sewerage/sewage</p> <p>Increase routine maintenance of sewerage system</p> <p>Object to relevant planning permission in affected areas.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>IDB.</p> <p>NRA/IDB.</p> <p>NRA.</p> <p>IDB.</p>	<p>Improved water quality will enhance the fishery potential of the watercourse.</p> <p>Improve management information.</p> <p>Improved water quality.</p> <p>Reduce the length of river affected by saline intrusion.</p>	<p>The degree to which saline intrusion is minimised may require significant investment or even replacement of the tidal structure. Possibly only a partial solution.</p> <p>Manpower resources (NRA and IDB) will be required to carry out this work.</p> <p>Insufficient water resources are available to sustain a transfer of water at all times</p>
<p>AWSL.</p> <p>AWSL/members of public/ industrialists.</p>	<p>Reduced frequency of sewerage overflows leading to improved water quality.</p> <p>May reduce the frequency of overflows.</p>	<p>Reducing the frequency of overflow from public foul sewerage systems may require significant financial investment.</p> <p>Unlikely to result in a complete solution to the problem.</p>
<p>Local Councils/AWSL.</p> <p>AWSL</p> <p>NRA/Planning Authority</p>	<p>Improved water quality.</p> <p>Reduce frequency of overflow.</p> <p>Prevents additional pollution.</p>	<p>The financial cost of improved sewerage and sewage treatment will be borne by those responsible for making the discharge and their customers.</p> <p>Cost.</p> <p>Partial Solution. Restrictions on development.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 8</b> CURRENT AND FUTURE WATER DEMANDS CANNOT BE MET TO TARGET STANDARDS OF RELIABILITY.</p> <p><b>Sub Issue 1</b> WATER DEMANDS FROM THE RIVER NENE FOR SPRAY IRRIGATION, INDUSTRY AND NAVIGATION PURPOSES CANNOT BE MET TO TARGET STANDARDS OF RELIABILITY.</p>	<p>Restrict transfer of water to Middle Level catchment.</p> <p>Increase minimum residual flow downstream of Orton Sluice.</p> <p>Reduce demand by refusing applications to re-grant temporary abstraction licences.</p> <p>Develop winter storage reservoir to augment River Nene in Critical periods</p>





## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 8 Sub Issue 1 continued</b></p>	<p>Reduce demand by achieving voluntary and/or compulsory restrictions.</p> <p>Divert effluents into freshwater section of the catchment.</p> <p>Import water from River Trent to augment River Nene in critical periods.</p> <p>Utilise Eyebrook Reservoir to meet selected IDB demands from River Welland and reduce demand from River Nene.</p>









## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 9</b>  <b>THE NRA DOES NOT HAVE EFFECTIVE REGULATORY CONTROL OVER WATER ABSTRACTIONS FROM THE LOW RIVER NENE.</b></p> <p><b>Sub Issue 1</b>  <b>ANGLIAN WATER SERVICES' ABSTRACTION LICENCE AT WANSFORD HAS NO EXECUTIVE DAILY OR ANNUAL ABSTRACTION LIMITS.</b></p>	<p>Review abstraction licence conditions.</p>
<p><b>ISSUE 9 Sub Issue 2</b>  <b>THE CURRENT MINIMUM RESIDUAL FLOW CONTROL POINT ON ANGLIAN WATER SERVICES ABSTRACTION AT ORTON SLUICE IS REMOVE FROM THE ABSTRACTION POINT AND IS AN INACCURATE FLOW GAUGING STATION.</b></p>	<p>Make structural allocations to Orton Sluice to improve flow gauging accuracy.</p> <p>Construct new flow gauging facility at Wansford, close to the Anglian Water Services abstraction point.</p>
<p><b>ISSUE 9 Sub Issue 3</b>  <b>MAJOR WATER ABSTRACTIONS DOWNSTREAM OF ORTON SLUICE EFFECTED BY "SLACKERS" ARE NOT LICENSED AND ARE OUTSIDE THE REGULATORY CONTROL OF THE NRA.</b></p>	<p>Achieve operational agreements with "slacker" abstraction.</p> <p>Achieve legislative change to bring "slacker" abstractions within abstraction licensing regulations.</p>



## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 9 Sub Issue 4</b> PRINCIPAL WATER ABSTRACTIONS FROM THE RIVER NENE ARE NOT MEASURED AND INFORMATION IS NOT AVAILABLE TO THE NRA IN CRITICAL RESOURCE PERIODS.</p>	<p>NRA to install measuring facilities.</p> <p>Achieve operational agreements with abstractors to require installation of measuring facilities and make information available.</p> <p>Seek legislative change to require metering provisions under water abstraction licensing regulations.</p>
<p><b>ISSUE 10</b> WATER RESOURCE MANAGEMENT OF THE RESOURCE OF IDB AREAS IS LIMITED BY INADEQUATE UNDERSTANDING OF RESOURCE BALANCES.</p>	<p>Carry out resource investigations.</p>
<p><b>ISSUE 11</b> LONG TERM SILTATION PROBLEMS IN THE TIDAL NENE ESTUARY.</p> <p><b>Sub Issue 1</b> EXCESSIVE SILTATION AT UPPER LIMIT OF ESTUARY.</p>	<p>Relocate tidal limit to new position downstream.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>NRA.</p> <p>Abstractors.</p> <p>NRA.</p>	<p>Achieves resource management information.</p> <p>Achieves resource management information.</p> <p>Preferred by abstractors.</p> <p>Achieves resource management information.</p> <p>Achieves regulatory control.</p>	<p>Cost to NRA.</p> <p>Not legally enforceable.</p> <p>Cost to abstractors.</p> <p>Does not achieve regulatory control.</p> <p>Requires cooperation of abstractors.</p> <p>Cost to abstractors.</p> <p>Opposed by abstractors.</p> <p>Requires legislative change.</p>
<p>NRA.</p>	<p>Achieves improved understanding.</p> <p>Improved prediction of future agricultural demands.</p>	<p>Cost.</p>
<p>NRA.</p>	<p>Reduction in length of tidal defence.</p> <p>Increased potential of freshwater resource.</p> <p>Improved amenity value and potential for recreational and urban developments.</p> <p>Increased length of Class 2 waterway.</p> <p>Increased length of F<sub>2</sub> fishery.</p>	<p>Increased risk of saline intrusion.</p> <p>Pumped discharge required for Nene Wash.</p> <p>Cost.</p> <p>Possible effect on SSSI.</p> <p>Possible affect on loss of tidal habitat.</p> <p>Cost to discharges.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<b>ISSUE 11 Sub Issue 1 Continued</b>	
<b>ISSUE 11 Sub Issue 2</b> <b>EXCESSIVE SILTATION AT OUTFALL TO THE WASH.</b>	<p>Extend length of training walls into channel in Wash.</p> <p>Dredging to maintain clear channel.</p> <p>Construct flushing reservoir at the tidal limit.</p>
<b>ISSUE 12</b> <b>FACILITIES FOR SAFE ACCESS AND EGRESS TO LOCKS FROM BOATS NOT CURRENTLY AVAILABLE.</b>	Improve existing/provide new landing stages at locks.





## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 13</b> NAVIGATION OVERNIGHT FACILITIES ARE POOR.</p>	<p>Provide overnight moorings, NRA owned.</p> <p>Provide overnight moorings through joint ventures with landowners/DC.</p>
<p><b>ISSUE 14</b> ADEQUATE SEWAGE DISPOSAL POINTS FOR BOATS NAVIGATING THE RIVER ARE NOT AVAILABLE.</p>	<p>Provide additional sites, NRA owned</p> <p>Provide additional sites through joint ventures with others eg. boat club, DC.</p>
<p><b>ISSUE 15</b> RESTRICTED ACCESS TO DISADVANTAGED PERSONS DUE TO PHYSICALLY DEMANDING LOCK OPERATIONS.</p>	<p>Power guillotine gates.</p> <p>Power pointing doors.</p> <p>Use of lock keepers.</p>

	RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
	<p>NRA + developers/landowners.</p> <p>NRA.</p>	<p>Improved level of service to boating customer.</p> <p>Cost sharing.</p>	<p>Cost.</p> <p>Lack of NRA land ownership.</p>
	<p>NRA.</p> <p>NRA +.</p>	<p>Improved level of service to boating customers.</p> <p>Reduction in pollution risk.</p> <p>Cost sharing.</p>	<p>Cost.</p>
	<p>NRA.</p> <p>NRA.</p> <p>NRA.</p>	<p>Ease of operation.</p> <p>Improve speed of locking process.</p> <p>Operations by elderly or infirm improved.</p> <p>Assistance available to river users.</p> <p>Improved liaison with customer.</p>	<p>Cost.</p> <p>Loss of traditional methods of operation.</p> <p>Increased maintenance requirement.</p> <p>Cost.</p> <p>Loss of traditional methods of operation.</p> <p>Increased complexity of control systems required leading to possible decrease in reliability.</p> <p>Increased maintenance requirement.</p> <p>Cost.</p> <p>Availability when required.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>ISSUE 16</b> THE PRESENCE OF NON-NATIVE ZANDER IN THE NENE IS POTENTIALLY DAMAGING TO THE COARSE FISH POPULATIONS.</p> <p><b>ISSUE 17</b> FREE PASSAGE OF MIGRATORY FISH IS PREVENTED BY DOG-IN-A-DOUBLET SLUICE DURING LOW FLOWS.</p>	<p>Monitor in normal 3 year fish survey programme.</p> <p>Undertake specific detailed investigation into their impact on the Nene system.</p> <p>Undertake cull of zander.</p> <p>Construct a fish pass.</p>
<p><b>ISSUE 18</b> HABITAT DIVERSITY DOWNSTREAM OF PETERBOROUGH IS LOW.</p>	<p>Increase habitat diversity through routine maintenance and/or capital programme.</p>
<p><b>ISSUE 19</b> RECREATIONAL USE OF THE CATCHMENT MAY BE UNDER UTILISED.</p>	<p>Undertake study.</p> <p>Develop Catchment User Group.</p>
<p><b>ISSUE 20</b> LAND-USE IMPACTS UPON THE WATER ENVIRONMENT.</p>	<p>To gain a direct influence in the planning process using existing legislation and adoption of NRA Anglian Region Model Policies.</p> <p>Achieve legislative change in land-use approval system.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
NRA.	Gather additional information.	Allow time for zander to increase range.
NRA.	Gather detailed information and assess zander impact .	Cost and allow time for zander to increase range.
NRA.	Reduce numbers and possibly range.	Cost. Impact of zander on the coarse fish population is unknown.
NRA.	Permit free passage and completion of life cycles.  Improve angling upstream of tidal sluice.  Provide fish access upstream during poor quality conditions in the Lower Nene.	Cost.  Minimum flow is required down the fish pass.
NRA.	Improve conservation and amenity value of the river.	Cost.
NRA + other bodies.	Quantify recreational potential.	Cost.
NRA + other bodies.	Quantify recreational potential.	Cost.
Local Authorities/NRA/Developers/Landowners.	Ensure protection and enhancement of the water environment is taken into account and land-use.  Clear guidance for landowners/ developers.	Implications on LA control.  Possible cost implications to landowners/developers.  Restrictions on land-use.



# The National Rivers Authority

## Guardians of the Water Environment

The National Rivers Authority is responsible for a wide range of regulatory and statutory duties connected with the water environment.

Created in 1989 under the Water Act it comprises a national policy body coordinating the activities of 8 regional groups each one mirroring an area(s) served by a former regional water authority.

The main functions of the NRA are:

- |   |  |
|---|--|
| Water resources                             | — The planning of resources to meet the water needs of the country; licensing companies, organisations and individuals to abstract water and monitoring the licences.                    |
| Environmental quality and Pollution Control | — maintaining and improving water quality in rivers, estuaries and coastal seas; granting consents for discharges to the water environment; monitoring water quality; pollution control. |
| Flood defence                               | — the general supervision of flood defences; the carrying out of works on main rivers and sea defences.  |
| Fisheries                                   | — the maintenance, improvement and development of fisheries in inland waters including licensing, re-stocking and enforcement functions.   |
| Conservation                                | — furthering the conservation of the water environment and protecting its amenity.   |
| Navigation and Recreation                   | — navigation responsibilities in three regions — Anglian, Southern and Thames and the provision and maintenance of recreational facilities on rivers and waters under its control.       |

ENVIRONMENT AGENCY



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