

# GIPPING/STOUR CATCHMENT MANAGEMENT PLAN

## CONSULTATION REPORT SUMMARY



National Rivers Authority  
Information Centre  
Heca Office  
Class No. ....  
Accession No. AEIW



*National Rivers Authority  
Anglian Region*

ENVIRONMENT AGENCY



099638

## INTRODUCTION

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

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 are presented as issues in a table at the end of this brochure, together with options for action to resolve them.

## 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 to the following address, from which a full copy of the consultation report may be obtained:

Gipping/Stour Catchment Management Plan, Corporate Systems,  
National Rivers Authority, Kingfisher House, Goldhay Way  
Orton Goldhay, Peterborough PE2 5ZR

Comments must be received by 19th May 1993



*Upstream of Stratford St. Mary Sluice, R. Stour.*

## 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 water resources and the interests of users and beneficiaries must be balanced.

Catchment management involves the NRA in working with many people and organisations and in 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.
- 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 land drainage consents in order to achieve operational objectives.
- Develop fisheries; promote recreation, navigation and conservation



*Estuary between Mistley and Brantham  
Taken at Manningtree, R. Stour.*

## CATCHMENT FACTS

Area 1485 km<sup>2</sup>

Population 402,000 (1990) 423,000 (projection 2001)







*Biological sampling.*

## **WATER QUALITY**

Length of river in National Water Council Class - 1991 Survey

### **River Gipping**

Class 1A (very good)	0 km	Class 3 (poor)	9.5 km
Class 1B (good)	25.8 km	Class 4 (bad)	0 km
Class 2 (fair)	20.1 km		

### **River Stour**

Class 1A (very good)	0 km	Class 3 (poor)	6.4 km
Class 1B (good)	78.7 km	Class 4 (bad)	0 km
Class 2 (fair)	87.3 km		

(Minor main river tributaries not included in the above)

Length of estuary in Coastal and Estuarine Working Party Classification - 1991 survey

### **Tidal Orwell**

Class A (good)	9.5 km	Class C (poor)	2.0 km
Class B (fair)	8.0 km	Class D (bad)	2.0 km

### **Tidal Stour**

Class A (good)	27.0 km	Class C (poor)	0 km
Class B (fair)	2.0 km	Class D (bad)	0 km

## WATER RESOURCES

### Gipping catchment

Availability: Chalk aquifer - none

Gravel- none

Surface water - winter only, minor quantities

### Stour catchment

Availability: Chalk aquifer - minor quantities

Sand and Gravel - minor quantities where abstraction will not affect low summer flows

Surface water - minor quantities in winter- summer, when supported by Ely Ouse to Essex River Support Scheme

## FLOOD PROTECTION

### River Gipping and associated tributaries

Length of designated main river:	Fluvial	29.0 km	(watercourses maintained by NRA)
	Tidal	17.3 km	
Length of embanked main river:	Tidal	16.7 km	
Length of sea defences:		2.6 km	

Area at risk from tidal flooding 391 ha

Area at risk from fluvial flooding 828 ha

### River Stour and associated tributaries

Length of designated main river:	Fluvial	300.5 km	(watercourses maintained by NRA)
	Tidal	41.0 km	



*Part of A45 Flood Alleviation Scheme, R. Gipping, Stowmarket.*

Length of embanked main river	18.0 km
Length of sea defences	55.0 km

Area at risk from tidal flooding	1,748 ha
Area at risk from fluvial flooding	5,000 ha

#### FISHERIES (monitored by NRA)

Length of game fishery:	30.7 km
Length of course fishery:	140.1 km

#### CONSERVATION

Number of Sites of Special Scientific Interest (SSSIs):	39
Number of water dependent SSSIs:	14



*Carrying out a fish survey.*

## THE CATCHMENT

The Gipping/Stour catchment includes the freshwater catchments of both rivers, the Orwell/Stour estuary complex, Walton Backwaters and the adjacent coastal





zone. All tributaries of the Gipping and Stour are included as well as the small streams draining directly to the sea.

Much of the 1485 square km plan area lies within the county of Suffolk, though a substantial part of Essex, within the Stour catchment, is included. A small area of Cambridgeshire is also involved.

The Stour catchment is divided into nine hydrological subcatchments; the Gipping into three.

A varied surface geology results in a complex hydrology. Dominated by Boulder Clay it has underlying sands and gravels which are exposed on valley slopes. London clay, outcrops of chalk and deposits of alluvium and river gravels are also found.

Average annual rainfall is 595 mm with yearly evaporation losses around 475 mm. These losses are mainly concentrated in summer months, so effective rainfall is considerably higher in winter.

## LAND USE

Of the 402,000 total population in the catchment, approximately 218,000 is centred in seven main towns of which the largest is Ipswich. The major ports of Felixstowe and Harwich handle large scale international traffic.

Agriculture, primarily arable, dominates the catchment area. Land quality is good, rated mainly within grades 2 and 3 under the MAFF classification.

Much of the industrial activity in the area relates to agriculture and there are numerous commercial and industrial business parks as well as other significant industries, such as chemical plants and cement works.

Tourism is important bringing many visitors into the area for holidays and day trips.



Simplified

# FUTURE TARGETS - WATER QUALITY



The Stour Valley, where Dedham Vale is immortalised in the paintings of John Constable, is designated an Area of Outstanding Natural Beauty and attracts many visitors.

## DEVELOPMENT

Structure Plans of the relevant counties recognise a need for growth and provide for a potential increase in housing in the catchment area of approximately 21,500 new houses by the year 2000.

With the population forecast to increase to 423,00 by 2001, employment growth is also recognised and provision for development sites for industry, retail and warehousing could be in excess of 150 hectares in the coming decade.

Most of this growth is expected to be within the existing towns with limited infill in rural villages.

## WATER QUALITY

Of the 228 km of the combined Gipping and Stour rivers, 212 km - 93% are in the good to fair categories. Only 16 km are rated poor while no stretch is designated as bad.

The many varied activities in an area, which contains a major commercial dock complex, industrial development and extended agricultural use, make it essential to ensure water of a high quality.

Tourism and high amenity uses including boating and sea bathing must be provided for; in the case of beaches compliance with EC quality limits is required.

## FLOOD PROTECTION

All the main towns, many of the smaller ones plus large areas of agricultural land in the catchment area are potentially vulnerable to either fluvial or tidal flooding. In the area of the two rivers over 2,000 ha are susceptible to tidal flooding and almost 6,000 ha to fluvial flooding.

There are 18 km of embanked watercourses on the River Stour and 55 km of sea defences. On the River Gipping there are 16.7 km of embanked watercourses and 2.6km of sea defences.

The NRA maintains sea defences and has commissioned a sea defence management study to examine coastal processes.

Following the East Coast Flood Disaster in January 1953, the sea defences were reconstructed during the 1960s and 1980s to improved standards. In areas of major urban development flood defence works have ensured protection from

fluvial flooding as well as tidal inundations. A flood forecasting and warning system is operated by the NRA. Essential maintenance of sea defences and river channel is always carried out in ways sympathetic to the environment.





## WATER RESOURCES

Within the catchment water resources are derived from both surface and groundwater.

Groundwater resources are fully committed and additional surface water is only available during winter. Current demands for water are heavily dependent on water imported into the catchment. This is provided by the Ely Ouse to Essex transfer and Stour Augmentation. Future demand is likely to be met by enhancements to these schemes.

Anglian Water Services is the major abstractor of groundwater while Essex Water Company abstracts the largest amount of surface water.

Water abstractions for public water supply, industry, agriculture and private use are controlled by licences and it is becoming common practice to include conditions such as derogation agreements, control levels and minimum flow requirements in order to safeguard the water environment and the rights of existing users.

## FISHERIES

The River Gipping has a diverse and well-balanced fish fauna and supports many large fish. Belstead Brook contains a thriving population of native brown trout.

Stocks in the Stour are dominated by coarse fish, mainly bream, chub, dace, gudgeon and roach. Salmonid species occur to a lesser extent in the rivers Stour, Glem and Box.

An outstanding carp population is found in the River Ramsey.

## NAVIGATION

Inland the Stowmarket to Ipswich navigation rights dating from the 1700s on the River Gipping were revoked in 1932 and only limited boating now takes place.

On the Stour the only right of navigation is between Brandon Mill and Brantham. Boat traffic is mostly limited to manual or sail propelled craft. Flatford and Dedham Locks have been re-opened.

The tidal Orwell is extensively used by private pleasure craft and there are several marinas and river moorings.

Commercial shipping makes use of Harwich Harbour and the River Orwell while the tidal estuary of the Stour sees a complete range of activity from Commercial containers and ferries to local dinghy hards.

There are many sailing and cruising clubs in the catchment.

## CONSERVATION

Many parts of the catchment enjoy designation as special areas of conservation or landscape importance.

There are a number of Sites of Special Scientific Interest, Nature Reserves and County Wildlife Sites throughout the area.

Dedham Vale, affectionately known as 'Constable Country', is an Area of Outstanding Natural Beauty while the Walton Backwaters and the Stour Estuary are Wetland Sites of International Importance and Special Protection Areas.

Bird and plant communities and habitats are recorded, and the flora associated with the tidal and sea defences is particularly rich, containing 675 noteworthy species, including the rare Sea Hogs Fennel.

Archaeological sites are numerous in the area, mostly located in the middle and lower reaches of the three main river valleys. Varying with the landscape they date from the Bronze and Iron Ages, Roman and Medieval times.



*Sympathetic dredging.*

## RECREATION

Both the Gipping and Stour watercourses are high amenity and recreation areas.



Walking routes, picnic sites and wildlife habitats abound and there is a proposal for a new park on Belstead Brook.

The Stour Valley and Dedham Vale has been a tourist destination since the latter





part of the nineteenth century. Its associations with the life and landscapes of John Constable continue to attract photographers and painters.

Recreational waterways offer facilities for rowing and canoeing and well as sail and motor powered boats.

On the coast popular bathing beaches include EC designated sites at Felixstowe, Dovercourt and Walton. Other marine sports enjoyed are sailing, water skiing, jet skiing and sailboarding.

## 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. It must be re-emphasised that at this stage, it is not the objective to present a detailed programme of action or to prioritize the issues and options identified. It is recognised that considerable consultation and negotiation will be necessary before an acceptable and practicable action plan can be drawn up. This will be the next stage. Comments on the issues and options are therefore requested together with any new ideas/suggestions.

Wherever possible the body responsible for carrying out each option has been identified. In some cases 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.



*Spray irrigation.*

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 1</b> River Gipping. Headwaters to Sproughton - Failure to achieve target class.</p>	<p>Review of Consents for existing dischargers leading to imposition of River Needs Limits.</p> <p>Relocate sewage and industrial discharges downstream of failing river stretches.</p> <p>Increase river flows to afford greater dilution.</p>
<p><b>Issue No. 2.</b> River Gipping. Sproughton to Tidal Limit - Failure to achieve target class and fishery status.</p>	<p>Upgrade sewerage system.</p>
<p><b>Issue No. 3.</b> Belstead Brook. Failure of fishery use.</p> <div data-bbox="225 1255 580 1444" style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p><b>ABBREVIATIONS USED</b></p> <p><b>AWS</b> Anglian Water Services Ltd.</p> <p><b>STW</b> Sewage Treatment Works</p> </div>	<p>Improvements to Chantry STW to meet river needs consent, plus survey to assess other possible sources of pollution.</p> <p>Relocate outfall from Chantry STW to below tidal sluice.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>AWS/Industrial dischargers.</p> <p>AWS/Industrial dischargers.</p> <p>NRA.</p>	<p>i) Compliance with target values. Benefit to other river users.</p> <p>ii) Effluents, which contribute a significant proportion of river flow, are retained.</p> <p>Compliance with target levels.</p> <p>i) General benefit to all river users.</p> <p>ii) Possibly satisfying future demands.</p> <p>ii) Possible improvement to habitat and amenity use.</p>	<p>Cost of improving effluent treatment to higher standards.</p> <p>i) Major loss of river flow in upper stretches.</p> <p>ii) Cost of relocation.</p> <p>i) Cost of augmenting flows.</p> <p>ii) Possible adverse environmental impact.</p>
<p>AWS.</p>	<p>i) Compliance with class and fishery targets.</p> <p>ii) Improvement to river aesthetics.</p> <p>iii) Removal of existing development restrictions.</p>	<p>Cost.</p>
<p>AWS/NRA.</p> <p>AWS.</p>	<p>Compliance with fishery limits.</p> <p>Compliance with fishery limits.</p>	<p>Cost.</p> <p>i) Cost.</p> <p>ii) Decrease in river flow in lower stretches.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 4.</b> Belstead Brook. Saline intrusion at tidal limit.</p>	<p>Modify sluice.</p>
<p><b>Issue No. 5.</b> River Orwell - Ipswich to Chelmondiston. Failure to achieve EC limits for copper and zinc.</p>	<p>Research to assess sources and extent of effect.</p>
<p><b>Issue No. 6.</b> River Stour and Stour Brook - Downstream of Haverhill STW. Failure to meet class targets and use objectives coupled with odour problems.</p>	<p>Improvements to Haverhill STW to meet River Needs Consent limits and odour limits.</p> <p>Relocation of discharge from Haverhill STW, downstream.</p>
<p><b>Issue No. 7.</b> Chad Brook - Headwaters to Acton. Failure to achieve class target.</p>	<p>Survey to identify polluting sources.</p> <p>Review consent limits on discharges.</p> <p>Research to assess reason for declining river flows.</p>



RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
NRA.	Reduction in chloride level in lower stretches.	Cost for little benefit.
NRA.	Determines the problem.	Cost.
AWS.	<ul style="list-style-type: none"> <li>i) Compliance with class objectives and reduction in odour complaints.</li> <li>ii) General improvement to downstream quality.</li> <li>iii) Reinstatement of fishery in Stour Brook.</li> </ul>	Cost.
AWS.	Compliance with class objectives in Stour Brook.	<ul style="list-style-type: none"> <li>i) Cost.</li> <li>ii) Odour problem not resolved.</li> <li>iii) Loss of flow from Stour Brook.</li> <li>iv) Loss of self-purification presently afforded by Stour Brook.</li> </ul>
NRA.	Action can be targeted.	Cost.
NRA.	Identify discharges requiring improvement.	Potential cost to dischargers.
NRA.	Action can be targeted.	Cost.

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 8.</b> River Box - Headwater to Edwardstone. Failure to meet target class and low biological score.</p>	<p>Survey to identify polluting sources.</p> <p>Review consent limits on discharges.</p> <p>Research to assess reason for declining river flows.</p>
<p><b>Issue No. 9.</b> River Box - Boxford to River Stour. Failure to meet target class.</p>	<p>Monitoring to assess effect of recent improvements to Boxford STW.</p>
<p><b>Issue No. 10.</b> River Stour - Kirtling Brook to Tidal limit. Failure to meet predicted biological score with loss of flora due to eutrophication.</p>	<p>Research into factors increasing eutrophication and remedial action required.</p>
<p><b>Issue No. 11.</b> Concern over agricultural pollution from diffuse sources.</p>	<p>Buffer zones encouraged by Set Aside, ESAs, Countryside Stewardship.</p> <p>Pollution prevention, enforcement and encouragement of Code of Good Agricultural Practice.</p>
<p><b>Issue No. 12.</b> Adverse effects from existing Harwich, Dovercourt and Felixstowe sewage outfalls.</p>	<p>Improved discharge quality.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>NRA.</p> <p>NRA.</p> <p>NRA.</p>	<p>Action can be targeted.</p> <p>Identify discharges requiring improvement.</p> <p>Action can be targeted.</p>	<p>Cost.</p> <p>Potential cost to dischargers.</p> <p>Cost.</p>
<p>NRA.</p>	<p>Identify other possible problems.</p>	<p>Cost.</p>
<p>NRA.</p>	<p>Identifies sources of problems leading to possible improvement.</p>	<p>Cost of a major project requiring time for completion and remedial action to be taken.</p>
<p>NRA/MAFF/ Countryside Commission.</p> <p>NRA/Farmers/ MAFF.</p>	<p>i) Reduction in river pollution.</p> <p>ii) Formation of river corridor for wildlife.</p> <p>iii) Attenuation of Surface Water Run-off.</p> <p>Reduction in pollution.</p>	<p>Possible finite life.</p> <p>Staff resources.</p>
<p>AWS.</p>	<p>i) Receiving waters meet quality requirements.</p> <p>ii) Removal of development restrictions.</p>	<p>Cost to AWS.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 12 continued.</b></p>	<p>Relocation to meet needs of receiving water.</p>
<p><b>Issue No. 13.</b> Non-compliance with class limits on River Orwell upstream of Woolverstone.</p>	<p>Improved discharges of sewage and industrial effluents to meet use needs of estuary.</p>
<p><b>Issue No. 14.</b> Concern over the effect of trade effluent discharges on the local salt marsh at Brantham.</p>	<p>Review of Consent limits to liaison with conservation bodies.</p>
<p><b>Issue No. 15.</b> Ramsey River - Upper Reaches. Failure of class limits.</p>	<p>Extend and improve Wix STW (recently completed).</p> <p>Potential further survey work (if river continues to fail class limit).</p>
<p><b>Issue No. 16.</b> Actual minimum flows are perceived to be inadequate to meet river needs.</p>	<p>Review/set MRFs.</p> <p>"In river needs" study to assess requirements.</p>



RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
AWS.	i) Receiving waters meeting quality requirements.  ii) Removal of development restrictions.	Cost to AWS.
AWS, Industry.	i) River meets quality requirements.  ii) Removal of development restrictions.	Cost to Industry and AWS.
NRA.	Enhanced knowledge leading to possible improvement.	Potential cost to industry.
AWS  NRA.	Compliance with class limits.  Fully identifies reasons for failure.	Cost.  i) Cost.  ii) Potential cost to dischargers.
NRA.  NRA.	Improved resource management.  Needed for setting MRFs.	i) Cost of investigations.  ii) No progress can be made until study is complete.  iii) Any reduction in present MRFs would have serious implications on discharge consents and the water environment.  Cost of study.

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 17.</b> Artificial river support by effluent discharges is unreliable.</p>	<p>Co-operation with AWS/Industry.</p> <p>Incentives through charging schemes to encourage non-relocation of outfalls.</p>
<p><b>Issue No. 18.</b> Lack of detailed understanding of the working of the Stour chalk aquifer.</p>	<p>Investigation/modelling of aquifer in Stour catchment.</p>
<p><b>Issue No. 19.</b> Available surface water resources are inadequate to meet present and future seasonal demands.</p>	<p>Await outcome of Strategic Options Study currently being carried out.</p> <p>Encourage winter storage.</p> <p>Enhance existing Ely Ouse to Essex Transfer Scheme.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>NRA/AWS/ Industry</p> <p>NRA/AWS/Industry</p>	<p>Supports river flows.</p> <p>Supports river flows.</p>	<p>Companies subject to economic pressures.</p> <p>Cost to NRA.</p>
<p>NRA.</p>	<p>Better understanding of system.</p>	<p>Cost.</p>
<p>NRA.</p> <p>NRA/Abstractors.</p> <p>NRA.</p>	<p>i) Comprehensive and co-ordinated approach.</p> <p>ii) Multi-disciplinary approach.</p> <p>i) Does not deplete resources elsewhere.</p> <p>ii) More reliable supply could reduce summer demand.</p> <p>iii) Efficient utilisation of water resources.</p> <p>iv) Possible amenity/recreation advantage.</p> <p>i) Limited to rivers receiving support.</p> <p>ii) Optimises existing scheme.</p> <p>iii) Meets demands in short term.</p>	<p>i) Timescale.</p> <p>ii) Cost.</p> <p>i) Cost to abstractor.</p> <p>ii) Subject to planning control.</p> <p>i) Environmental impact.</p> <p>ii) Limited yield.</p> <p>iii) Cost.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue 19 Continued.</b></p>	<p>Re-use of sewage effluent.</p> <p>Influence agricultural bodies to encourage agricultural practices which are more water efficient.</p> <p>Revoking of licences.</p>
<p><b>Issue No. 20.</b> Available ground water resources are inadequate to meet present and future demands.</p>	<p>Await outcome of Strategic Options Study currently being carried out.</p> <p>Reuse of sewage effluents.</p>



RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>NRA/Water Companies.</p> <p>NRA/MAFF (ADAS)/NFU/ Countryside Commission/ Farmers.</p> <p>NRA.</p>	<p>i) Better utilisation of resource.</p> <p>ii) Reduction in discharges of effluents.</p> <p>i) Minimal cost to NRA.</p> <p>ii) Effective use of Government subsidies.</p> <p>iii) Conservation and landscape advantages.</p> <p>i) Environmental improvement.</p> <p>ii) Reduction in summer abstraction.</p> <p>iii) Uses available winter water.</p> <p>iv) Possible higher effluent standards.</p>	<p>i) Loss of flow in receiving water.</p> <p>ii) Emotive.</p> <p>iii) Involvement of different companies.</p> <p>i) Limited in effect.</p> <p>ii) May require change in agricultural practice.</p> <p>iii) Cost to farmers.</p> <p>i) Compensation costs.</p> <p>ii) Possible implications for existing abstractions.</p>
<p>NRA.</p> <p>NRA/AWS/ Water Companies</p>	<p>i) Comprehensive and co-ordinated approach.</p> <p>ii) Multi-disciplinary approach.</p> <p>i) Better utilisation of resource.</p> <p>ii) Reduction in discharge of effluents.</p>	<p>i) Timescale.</p> <p>ii) Costs.</p> <p>i) Loss of flow in existing receiving water.</p> <p>ii) Emotive.</p> <p>iii) Involvement of different companies.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue 20 Continued.</b></p>	<p>Use more surface water via transfer scheme.</p> <p>Encouraging aquifer recharge.</p> <p>Demand management.</p>
<p><b>Issue No. 21.</b> Need to identify catchment zones for wetlands of environmental importance.</p>	<p>Environmental studies to ascertain areas of extent of concern.</p>
<p><b>Issue No. 22.</b> Weirs and Sluices. Problem of funding, responsibility and co-ordination of operation and repairs to private structures.</p>	<p>Do nothing.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
<p>NRA/Water Companies.</p> <p>NRA.</p> <p>NRA.</p>	<p>Meets demand.</p> <p>Re-establishment of ground water levels.</p> <p>i) Reduces demand.</p> <p>ii) Delays major expenditure.</p>	<p>i) Cost.</p> <p>ii) Possible environmental problems.</p> <p>i) Limited yield.</p> <p>ii) Affect on agriculture.</p> <p>iii) Pollution risk.</p> <p>iv) Unproven technique.</p> <p>Possibly expensive to water companies.</p>
<p>NRA/Conservation Bodies.</p>	<p>Maintain and enhance wetland sites.</p>	<p>i) Cost.</p> <p>ii) Timescale.</p> <p>iii) Possible implications for existing abstractors.</p>
<p>NRA.</p>	<p>No cost.</p>	<p>i) Loss of water levels.</p> <p>ii) Loss of amenity.</p> <p>iii) Possible flood defence problem.</p> <p>iv) Environmental concerns.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 22 Continued.</b></p>	<p>Rebuild structures to NRA requirements.</p> <p>Investigation into overall management policy of river system related to structures.</p>
<p><b>Issue No. 23.</b> Flood Protection. Review of tidal flood defence strategy related to future land use and environmental requirements, taking account of 23a.</p>	<p>Do nothing.</p> <p>Maintain present standard.</p> <p>Enhanced or modified standard.</p>
<p><b>Issue No. 23a.</b> Standards of Service for Flood Defence.</p>	<p>To assess the area at risk from flooding, the effective standard of service and the target standards of service in the catchment.</p>



RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
Private Owner/NRA.          NRA.	<ul style="list-style-type: none"> <li>i) Co-ordinated approach.</li> <li>ii) Retains structures and associated benefits to river users.</li> <li>iii) Allow the introduction of more automation into river level control.</li> </ul> <ul style="list-style-type: none"> <li>i) Identifies real needs and environmental impact.</li> <li>ii) Includes co-ordinated approach.</li> </ul>	<ul style="list-style-type: none"> <li>i) Cost.</li> <li>ii) Possible conflict between requirements and apportionment of costs.</li> </ul> <p>Cost.</p>
<p>NRA.</p> <p>NRA.</p> <p>NRA.</p>	<p>Cost savings.</p> <p>Secures existing protection levels.</p> <ul style="list-style-type: none"> <li>i) Could be cost effective in certain areas.</li> <li>ii) Possible environmental benefits.</li> </ul>	<p>Increased tidal flooding resulting from failure of present defences.</p> <ul style="list-style-type: none"> <li>i) Expensive.</li> <li>ii) No improved protection where required.</li> <li>i) Could result in increased costs in certain areas.</li> <li>ii) Could be environmentally detrimental.</li> </ul>
NRA.	<p>Identifies planning gaps and enables capital and maintenance works to be prioritised.</p> <p>Utilises resources to best effect.</p>	<p>Does not cover "non" main river areas.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 24.</b>  <b>River Gipping and Stour.</b>                      Development often increases risks to the water environment but NRA has only limited powers to impose conditions on development.</p>	<p>To gain a direct influence in the planning process using existing legislation and adoption of NRA Anglian Region model policies (Appendix 1).</p>
<p><b>Issue No. 25.</b>                      Impact of proposed scheme to re-instate the River Gipping navigation.</p>	<p>Do nothing.</p> <p>Partial reinstatement.</p> <p>Complete reinstatement.</p> <p>Study of potential impacts.</p>
<p><b>Issue No. 26.</b>                      Impact of renovating Stour navigation structures.</p>	<p>Do nothing.</p> <p>Partial reinstatement.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
Local Authorities/NRA/ Developers/Landowners.	Ensure matters the NRA are responsible for are fully taken into account in all development proposals.	Implications on LA control. Possible cost implications to landowners/ developers
<p>NRA/Inland Waterways Association/County and District Councils.</p> <p>As above.</p> <p>As above.</p> <p>NRA.</p>	<p>i) Environment status quo maintained.</p> <p>ii) No cost.</p> <p>i) Some navigation.</p> <p>ii) Gain to amenity.</p> <p>i) Complete navigation.</p> <p>ii) Gain to amenity.</p> <p>Clearly evaluates problems.</p>	<p>Navigation is not resurrected.</p> <p>i) Incomplete navigation.</p> <p>ii) Possible environmental effect.</p> <p>iii) Cost.</p> <p>iv) Possible effect on Flood Defence.</p> <p>i) Cost.</p> <p>ii) Possible environmental problems.</p> <p>iii) Possible effect on Flood Defence.</p> <p>Cost.</p>
<p>NRA/River Stour Trust/ Riparian owners.</p> <p>As above.</p>	<p>No cost.</p> <p>Gain to amenity.</p>	<p>Navigation is not enhanced.</p> <p>i) Cost.</p> <p>ii) Possible environmental effect.</p> <p>iii) Flooding problems.</p>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 26 Continued.</b></p>	<p>Complete reinstatement.</p> <p>Study of potential impacts.</p>
<p><b>Issue No. 27.</b> Loss of salt marsh.</p>	<p>Co-ordination of existing research and identification of further needs.</p>
<p><b>Issue No. 28.</b> Lock of public access for launching small craft on estuaries.</p>	<p>Identify and promote provision of extra access facilities.</p>
<p><b>Issue No. 29.</b> Lack of public access to estuaries and coastal zone.</p>	<p>Promote and provide facilities.</p>
<p><b>Issue No. 30.</b> Concern over existing and future decline in water level in Cornard Mere.</p>	<p>Limit or revoke abstractions.</p> <p>Monitoring and remedial works.</p>



RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
As above.	<ul style="list-style-type: none"> <li>i) Complete through navigation.</li> <li>ii) Gain to amenity.</li> </ul>	<ul style="list-style-type: none"> <li>i) Cost.</li> <li>ii) Possible environmental problems.</li> <li>iii) Flood problems.</li> </ul>
As above.	Clearly evaluates problems.	Cost.
NRA.	<ul style="list-style-type: none"> <li>i) Identifying cause leading to possible remedies and cost saving on flood defence.</li> <li>ii) Environmental gain.</li> </ul>	Cost.
NRA/Local Authorities.	<ul style="list-style-type: none"> <li>i) Increase access.</li> <li>ii) Reduce congestion at existing sites.</li> </ul>	<ul style="list-style-type: none"> <li>i) Need for regulation of boats.</li> <li>ii) Minor costs.</li> </ul>
Landowners/Local Authorities/NRA.	<ul style="list-style-type: none"> <li>i) Increased access.</li> <li>ii) Possible links with existing coastal paths.</li> </ul>	<ul style="list-style-type: none"> <li>i) Possible environmental damage.</li> <li>ii) Cost.</li> </ul>
NRA/Abstractors.	Protection of Mere.	<ul style="list-style-type: none"> <li>i) Cost of NRA.</li> <li>ii) Difficulty for abstractors.</li> </ul>
AWS.	Protection of Mere.	<ul style="list-style-type: none"> <li>i) Cost to AWS.</li> <li>ii) Possible need for further channel management.</li> </ul>

## ISSUES AND OPTIONS

ISSUE	OPTIONS
<p><b>Issue No. 31.</b> Concern over regulation of river levels and flows.</p>	<p>Reservoir in Upper Stour (Ely Ouse to Essex Transfer Operating Regime).</p> <p>Automated gates throughout river with monitoring of river level and gate setting.</p>
<p><b>Issue No. 32.</b> Excessive use of emergency boreholes at Langham during periods of water quality problems in drinking water supply to local users.</p>	<p>Appropriate limits on effluent discharges.</p> <p>Nitrate removal.</p>

RESPONSIBILITY	ADVANTAGES	DISADVANTAGES
NRA.	<ul style="list-style-type: none"> <li>i) Better regulation of flows.</li> <li>ii) Optimise resource.</li> <li>iii) Create recreational, conservation and fisheries opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>i) Cost.</li> <li>ii) Time of construction.</li> <li>iii) Loss of farmland and dwellings.</li> </ul>
NRA.	Better regulation of flows.	<ul style="list-style-type: none"> <li>i) Cost.</li> <li>ii) Possible visual effect.</li> </ul>
AWS/Industry.	<ul style="list-style-type: none"> <li>i) Protects public water supply.</li> <li>ii) General benefit to river</li> </ul>	<ul style="list-style-type: none"> <li>i) Possible high cost due to effluent treatment plant.</li> <li>ii) Possible difficulty in removing pollutants at source.</li> </ul>
Essex Water Company.	Drinking water complying with EC limits.	<ul style="list-style-type: none"> <li>i) Increased nitrate loading on river.</li> <li>ii) Cost to Water Companies.</li> </ul>

# 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 9 regional groups, 8 of these mirroring the area 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.       |