

**LOWER NENE CATCHMENT
MANAGEMENT PLAN**

**ANNUAL REVIEW
AUGUST 1994 to SEPTEMBER 1995**

FOREWORD

This report details the progress made against those issues identified in the Lower Nene CMP, the Action Plan for which was published in June 1994. Progress made against the issues has been steady; there have however been some notable improvement in effluent quality discharged to the tidal length of the River Nene.

The review process has focused our attention upon a number of inter-related studies being undertaken by the NRA - the Wash Outfall Study, the Water Resource Allocation Policy, Water Level Management Plans and others. As a consequence of this we have revised Issue 20 of the Plan.

The review also identified the need for a Catchment Management Plan to be produced for the Wash Estuary - and it is proposed that this will be added to our schedule of CMP production.

VISION FOR THE LOWER NENE CATCHMENT

The Lower Nene Catchment is home to some 250,000 people who depend on the water environment in many ways. It is principally a lowland area, 688 km² of which is at or below sea level. Without artificial coastal defences much of the area would be marshland inundated by the sea. The catchment's fertile alluvial and fen deposits, which are of significant importance to the local and national economy, depend heavily upon the waters of the Nene for irrigation and upon its fluvial defences and the land drainage it provides.

The key issue in this plan is to ensure that current and future abstractive demands for water and "in-river" ecological needs can both be reliably met.

Others are to:

- To reduce nutrient enrichment of the river by phosphate removal from the large effluents discharging in the Upper Nene catchment.
- To improve the quality of the tidal River Nene to meet estuary Class B standards by improving the five major discharges to the tidal section.
- To improve water quality in the Counter Drain (north) by improving the quality of Flag Fen Sewage Treatment Works effluent.
- To undertake a multifunctional feasibility study to consider relocation of the tidal sluice to resolve long-term siltation problems in the tidal Nene, provide an additional freshwater resource, freshwater fishery and an improved amenity value for the river. The study will also consider the question of extending the commercial navigation.
- To provide a fish pass at Dog-in-a-Doublet Sluice to allow the free passage of migratory fish.

- To utilise every opportunity to increase the habitat diversity in the river corridor downstream of Peterborough through both our routine maintenance and/or capital programme and others actions.
- To investigate and promote the recreational use of the catchment including the provision of additional navigation facilities.

Establishing strong NRA involvement and links with local communities and their representatives is seen to be necessary to ensure that local views are respected and future development decisions reflect this vision for the catchment. We will therefore :

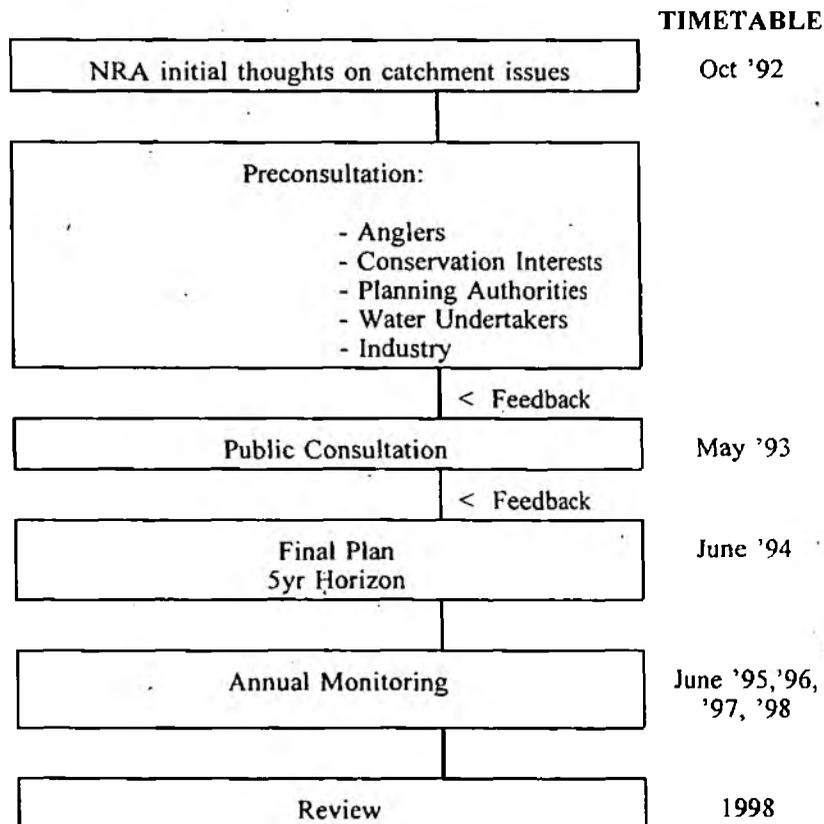
- Work with all relevant parties to implement the principles of sustainable development and thereby gain a direct influence in the planning process using existing legislation to adopt NRA, Anglian Region Guidance Statements.

INTRODUCTION

Established in 1989, the NRA has as its role that of "Guardians of the Water Environment". As such, it is committed to protecting and improving the water environment and protecting people and property from flooding. Establishing a sound planning base for the development of river catchments is essential to their future management.

Catchment Planning is a process through which we set out to identify all water related problems and issues in a catchment through the medium of public and internal consultation, to identify possible courses of action for solving these issues and to produce a proposed plan of action to resolve them.

The planning process itself is identified below:



The NRA published the Lower Nene Catchment Management Plan in October 1993 as a Consultation document and the Final(Action) Plan in June 1994. The purpose of this Review is to ensure target actions are achieved and that the Plan still addresses all significant issues in the catchment in an appropriate manner. This report summarises progress made over the 12 months following the production of the Final Plan in June 1994. It is recommended that this report is read in conjunction with the Final Plan.

The reader may be aware that a Catchment Management Plan has also been published for the Upper Nene Catchment Area (August 1994). An Annual Review for this is scheduled for publication in September 1995.

An adjacent Catchment Management Plan for the Wash Estuary will be produced in due course.

ASSESSMENT OF THE CATCHMENT AND MAJOR CHANGES SINCE PUBLICATION OF THE FINAL PLAN

The catchment has been assessed to review the progress of the Final Plan. Since June 1994 there have been few major changes in the catchment that have significantly affected the CMP, with the exception of the status of a number of Local Authority Development Plans.

The actions in the Final Plan are therefore still considered appropriate, and it has not been necessary to rewrite the CMP. Where any major changes have been made to actions, costs or timescales, these have been highlighted in bold text in tables in the Monitoring Report.

There have been considerable changes in the status of Local Authority Development Plans in the catchment since the publication of both the Consultation Report and the Final Plan. Progress has been made on Unitary Development Plans, district wide Plans, and reviews of County Structure Plans. The current status of Development Plans within the catchment area is summarised in the table below.

CURRENT STATUS OF DEVELOPMENT PLANS IN THE LOWER NENE CATCHMENT

STRUCTURE AND LOCAL PLANS		
PLANNING AUTHORITY	PLAN TITLE	STATUS
Cambridgeshire C.C.	Structure Plan	Adoption due early 1996
Lincolnshire C.C.	Structure Plan Alteration No.3	To be incorporated into Review early 1996
Northamptonshire C.C.	Structure Plan	New Consultation Draft due early 1996
East Northants D.C.	Local Plan	Modification to Deposit due Autumn 1995
Fenland D.C.	Local Plan	Adopted August 1993
Huntingdonshire D.C.	Local Plan	Adoption due Autumn '95
Peterborough City C.	Local Plan	Proposed Modification August 1995
South Holland D.C.	Local Plan	Deposits Draft due July 1995

SUMMARY OF PROGRESS

Progress towards resolving the main issues in this catchment has been good. Three issues have been resolved:

Issue 9: "Pollution is caused by overflow to existing sewerage systems".

This issue pertained specifically to a problem in Peterborough. Early indications suggest that this has been resolved. This is as a consequence of remedial engineering and maintenance works which has been undertaken by AWS to their sewerage infrastructure in parts of Peterborough. The NRA will continue to monitor the situation.

Issue 11: "Facilities for safe access and egress to locks are inadequate".

Works undertaken at Alwalton in 1994 complete a scheme to provide safe access and egress to all locks in this catchment.

Issue 16: "Free passage of migratory fish is prevented by the Dog-in-a-Doublet Sluice".

This issue has been resolved by the construction of a fish pass.

One new issue has been incorporated in the Plan relating to the need of the NRA for a consistent coastal defence strategy between this and adjacent catchments. Issue 20 has been amended for clarification.

Many of the actions in the Plan have involved the NRA working in partnership with other organisations and individuals, for example, AWS have been involved in phosphate removal at their treatment works at Billing, Broadholme and Corby (ISSUE 4); the Middle Level Commissioners and AWS have co-operated with the NRA, reducing abstraction to protect water quality and levels in the River Nene during periods of low flow; and commercial operators have been persuaded to undertake improvement work at a landfill site in the Peterborough area.

With regard to our key issues, progress is as follows:

To Ensure Current and Future Abstractive Demands for Water and in River Ecological Needs can be Reliably Met

A project team has been set up to review National Rivers Authority (NRA) management practices regarding water resources. Consultation with water users will take place over the coming months and an environmental asset survey has also been commissioned. A report detailing these project groups, conclusions and recommendations will be published in 1997.

This summer's hot weather and low rainfall has led to difficulties in balancing available flows with abstractive demands. Boat owners have complained of the low river levels through Peterborough. Water quality downstream of the Dog-in-a-Doublet Sluice has been adversely affected at times although no fish deaths have occurred.

Abstractors have responded to requests (summer 1995) to reduce abstraction in order to balance demands during periods of low flow.

To Reduce Nutrient Enrichment of the River by the Removal of Phosphate from Sewage Treatment Work Effluents

Phosphate removal has been undertaken by Anglian Water Services in the Upper Nene Catchment and automatic water quality monitoring sites have been installed by the NRA. It is anticipated the phosphate removal will improve water quality in the Upper and Lower Nene.

An interim water quality monitoring report produced on phosphorous levels in the Nene has provided some evidence of environmental change occurring. Monitoring to establish the success or otherwise of phosphate removal will continue.

To Improve Water Quality in the Tidal River Nene

Although water quality in the tidal length of the River Nene has not substantially changed, significant progress is being made by improving effluent quality.

Two industrial dischargers - McCains and H L Foods have both successfully commissioned effluent treatment plants. Anglian Water Services have included in their asset plan an improvement scheme for Flag Fen Sewage Treatment works which should be completed in 1999. The NRA and AWS have agreed to defer expenditure at Long Sutton Sewage Treatment Works until this discharge comes under the requirements of the Urban Waste Water Treatment Directive in the year 2000. Following the NRA's review of the discharge consent for Wisbech STW, investment by AWS will ensure that the works consistently comply with the more stringent effluent standards in the revised consent.

Siltation of the Tidal Nene

Three separate but related studies are underway which will impact on this issue:-

- i) A scoping study will be commissioned shortly to consider the consequences of moving the tidal limit which is presently formed by the Dog-in-a-Doublet Sluice. This option has wide ranging implications for all functions of the NRA and a number of issues in this Plan. The scoping study scheduled for completion in December, will consider the merits of investing in a full feasibility study.
- ii) A Wash Outfall study is underway which is evaluating siltation in the rivers which discharge to the Wash, ie. the Nene, Welland, Ouse and Witham. This could be affected by any decisions deriving from the previously mentioned scoping study to consider moving the tidal outfall.
- iii) A Wash Shoreline Management Plan has been initiated to ensure a management strategy is developed for all flood defence concerns around the Wash Estuary. A 1st Stage Shoreline Management Plan has been circulated amongst interested parties for comment.

To Provide a Fish Pass at the Dog-in-a-Doublet Sluice

A fish and elver pass has been constructed at the Dog-in-a-Doublet Sluice and is operating successfully.

Extensive monitoring of its use has revealed a wide range of fish using the pass, Roach being the most abundant; other species caught included Chub, Perch, Eels and even Barbel (1 fish) and Sea Trout (1 fish).

The annual Elver Run has started but numbers have not been as great as anticipated, an apparent migration of larger eels into the freshwater side occurred prior to elver movements. An unexpected benefit of the pass has been the creation of a sanctuary area on the tidal side of the structure which may have prevented fish mortalities during periods of low flow.

OTHER PROGRESS

Other notable progress made by the NRA over the past year includes the NRA's publication of its "Guidance Notes for Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans". It is hoped the guidelines set out in this document

will be replicated where appropriate by planning authorities in their Development plans to ensure the sustainability of the water environment.

FUTURE REVIEWS

We will review progress again next year and aim to publish our 2nd Annual Review of the Lower Nene CMP in September 1996. A major revision of the Consultation Report is not due until 1998.

CATCHMENT PLAN TEAM MEMBERS - LOWER NENE

John Sweeney	-	Project Leader
Richard Kisby	-	Catchment Planning Officer
Irven Forbes	-	Fisheries, Recreation, Conservation & Navigation
David Hawley	-	Water Quality
Tom Youdan)		
Pete Cowie)	-	Flood Defence
Ian Russell)		
Dave Watling)	-	Water Resources
Glen Watts)		

As we migrate from plan production to implementation it has been necessary to review and extend the composition of the Lower Nene Catchment Management team. Changes have been made so that the most appropriate NRA skills are brought to bear on resolving issues in the Plan, and communication lines have been rationalised to ensure that the NRA's vision for the Catchment is clear to all those working on the Plan.

ISSUES	RESPONSIBILITY	ESTIMATED COST	ACTION PERIOD 94/5 95/6 96/7 97/8 98-	DETAILS	PROGRESS TO DATE
4. River Nene fails to meet its River Quality Objectives as a consequence of nutrient enrichment.	NRA/AWS		. . . . .	Designate the River Nene as Sensitive under the Urban Waste Water Treatment Directive. This will require AWS to provide nutrient removal at Great Billing, Broadholme, Wilton and Corby Sewage Treatment Works by 1998. In the interim, ferric dosing to remove phosphate is currently being undertaken at Great Billing, Broadholme and Corby STW on an experimental basis. The impact of this work is being monitored by the NRA.	<p>The river has now been formally designated as an Eutrophic Sensitive Area under the UWWT directive. This will necessitate the removal of phosphate by AWS from their effluent to a prescribed standard by the end of 1998.</p> <p>AWS had previously agreed with the NRA on an experiment to undertake to remove nutrients from Billing, Broadholme and Corby.</p> <p>Automatic water quality monitoring installed along the Nene has provided monitoring data and an initial NRA report on phosphate levels indicates the need for further work to establish any long term impacts. It suggests that although there is evidence of some environmental change occurring, it is too early to determine to what extent this has been as a consequence of phosphate removal or to what extent results have been influenced by the abnormally high river flows during the survey period. It recommends that monitoring is continued.</p>
5. Water quality in the tidal Nene fails to meet its objectives.	NRA/AWS/ Industrialists	£10-20 million	. . . . .	The five significant discharges to the tidal Nene must be improved. The two industrialists (McCains and H L Foods) are to complete effluent treatment plants during the financial year 94/95 at an estimated cost of 3-4 million. The effluent from West Walton STW (Wisbech) has been improved and is currently satisfactory.	<p>McCains & HL Foods: Works have been completed and effluent quality has improved. Consents are currently being reviewed to reflect effluent improvement.</p> <p>Flag Fen STW: The NRA has negotiated investment for Flag Fen STW through the AMP2 process. The works to be completed in 1999 should improve Water Quality in the Counter Drain and subsequently in the Tidal length of the River Nene so that it meets its quality objective.</p> <p>Long Sutton STW: To ensure that expenditure is effectively targeted, the NRA and AWS have agreed to defer expenditure at Long Sutton (part of AWS's discretionary spend) until the discharge comes under the requirements of the UWWT Directive in the year 2000.</p> <p>West Walton STW (Wisbech): Consent has been reviewed and investment by AWS will ensure works consistently comply with the more stringent effluent standards in the reviewed consent, especially during periods of seasonal peak loading.</p>
6. Water quality in the Counter Drain (North) fails to meet amenity standard.	NRA/AWS		. . . . .	Improve the quality of the effluent discharge from Flag Fen STW.	This objective will be met simultaneously with Issue 5 above when the improvements to Flag Fen STW are completed in 1999.
7. Surface water sites discharging to the Padholme Drain require control in order that they do not compromise a sustained recovery in water quality.	NRA/AWS/ Industrialists	£60K	. . . . .	<p>NRA to liaise with dischargers to provide:</p> <ul style="list-style-type: none"> • oil interception on industrial premises. • better control of discharges to surface water sewers under the ownership of AWS. <p>NRA will monitor progress.</p>	<p>Intensive pollution prevention inspections have been carried out. The operators of Eye Quarry landfill site have been persuaded to undertake improvement works.</p> <p>Perkins Engineering have undertaken and completed contaminated land reclamation scheme in Peterborough.</p> <p>Investigations are continuing at other former landfill sites. The government's recently issued "framework for contaminated land" provides useful guidance on how these sites should be dealt with in the future.</p>

• = Feasibility Study/Appraisal Period
• = Work on Site

ISSUES	RESPONSIBILITY	ESTIMATED COST	ACTION PERIOD	DETAILS	PROGRESS TO DATE
			94/5 95/6 96/7 97/8 98-		
8. Salinity in the South Holland Main Drain adversely affects fishery and spray irrigation uses.	IDB/NRA	To be evaluated	. . . . . . .	To minimise the saline intrusion via the tidal sluice. To further evaluate the degree to which natural saline water ingress occurs from "salt pans" in tributary catchments. The NRA to continue water quality monitoring.	Approval has been granted to install a bubble curtain in the South Holland Main Drain this year to evaluate its affect in limiting saline intrusion. Liaison with the South Holland IDB is ongoing. Monitoring is ongoing. Ongoing.
9. Pollution is caused by overflows of existing sewerage systems.	AWS	To be evaluated	Action prior to year 2000.	Provide improved sewerage to prevent sewage and detritus entering the River Nene at the Peterborough Embankment. This has been identified in the 2nd Asset Management Plan for the Water Industry.	ISSUE RESOLVED Early indications are that this problem has been resolved following work undertaken by Anglian Water Services. However, further work is scheduled over the next 2 years. We will continue to monitor the situation.
10. Pollution caused by inadequate sewerage and sewage treatment facilities in rural areas causes failure of amenity standards.	AWS/District Councils/Private Developers	Dependant on requisitions	. . . . .	Unless a change to the legislation is forthcoming the only practical option is for the District Council or the owners to requisition for first time rural sewerage schemes.	Ongoing. Anglian Water Services have a scheme scheduled for the village of Luton. Legislative change is likely to be included in the Environment Bill to accommodate these situations. At the time of writing this review insufficient detail is available to provide further clarification.
11. Facilities for safe access and egress to locks are inadequate.	NRA	£10K	.	Improve existing/provide new landing stages at Alwalton Lock.	ISSUE RESOLVED Works completed at Alwalton in 1994 in association with the lock refurbishment.
12. Navigation overnight facilities are inadequate.	NRA/ Local Authority/ Landowners/Boat Owners/Others	£10K	. . .	Provide additional sites through joint ventures with others.	No progress to date.
13. Sewage disposal points for boats are inadequate.	NRA/ Local Authority/ Landowners/Boat Owners/Others	30K circa	.	Provide additional sites through joint ventures with others.	No progress to date.
14. Restricted access to disadvantaged persons due to physically demanding lock operation.	NRA	£30K	. .	Power guillotine gates experiencing high usage.	The data collated from monitoring "lock usage" will help determine the future need for lock automation.

. = Feasibility Study/Appraisal Period
 * = Work on Site

ISSUES	RESPONSIBILITY	ESTIMATED COST	ACTION PERIOD	DETAILS	PROGRESS TO DATE
			94/5 95/6 96/7 97/8 98-		
15. The presence of zander in the Nene is potentially damaging to coarse fish population.	NRA	Nil	• •	Monitoring zander populations during survey programmes.	Surveys of the fish population sites on the Lower Nene were completed in June 1995. A winter survey of Ferry Meadows zander population is planned.
16. Free passage of migratory fish is prevented by Dog-in-a-Doublet Sluice.	NRA	£48K	•	Construct a fish and eel pass around the sluice.	ISSUE RESOLVED A fish pass has been constructed at the Dog-in-a-Doublet Sluice. Extensive monitoring of fish using the pass is being undertaken and a report will be produced in December 1995.
17. Habitat diversity downstream of Peterborough is low.	NRA	#	• • • • •	Undertake habitat enhancement without the loss of channel capacity downstream of Peterborough via flood defence capital and maintenance work.	A one hectare scrape has been constructed at West Walton downstream of Wisbech, and two others at Rings End. These will provide important habitat for birds such as Snipe. Trees and willow stakes have been provided by the NRA to Castor Parish Council for planting along the R Nene.
18. Recreational use of the catchment may be under utilised.	NRA/ Local Authorities/ Others	£5K	• • • •	Undertake study.	No progress to date.
19. Changes in land use impact on the water environment.	NRA/Planning Authorities/ Developers		• • • • •	Planning Authorities will be encouraged to incorporate all NRA planning guidelines into their structure and development plans.	Initial feedback from PA's indicated a reluctance by some authorities to include NRA guidelines into Development and Structure Plans. However, later plans are showing evidence of increased success in these terms.
20. a) For a strategic and holistic approach to the management of the Lower Nene and its associated environment, a better understanding of the wide-ranging implications of relocating the River Nene's tidal limit (Dog-in-a-Doublet Sluice) is required.	NRA/Planning Authorities/ Conservation Interests	£60K	• • •	To commission a study to consider the implications of moving the tidal limit.	A scoping study has been commissioned to consider the implications of moving the tidal limit (Dog-in-a-Doublet Sluice) and is due for completion in December this year. The need or otherwise for a full feasibility study will be determined from the Scoping Study.
b) Long term siltation in the Tidal Nene Estuary.		£15k	• • •	To commission a study to produce a strategy for dealing with siltation of the Nene in association with other rivers discharging to the Wash. This study to take account of other ongoing initiatives.	Wash Outfalls Strategy Plan - this study has been started and a report is due by the end of this year. Related studies moving the tidal outfall - a scoping study is due December this year. Shoreline Management Plan - a first Stage Shoreline Management Plan has been circulated for comments.
21. Recreational uses of the "de-restricted mile" have the potential to conflict. Users have expressed their concern.	NRA/ Local Authorities/ Peterborough AC/ British Federation of Water Skiers		• • • •	Encourage liaison between various users to minimise conflicts.	No progress to date.

• = Feasibility Study/Appraisal Period

* = Work on Site

= Dependent on flood defence capital and maintenance expenditure

ISSUES	RESPONSIBILITY	ESTIMATED COST	ACTION PERIOD 94/5 95/6 96/7 97/8 98-	DETAILS	PROGRESS TO DATE
22. The present management of coastal defences around the Wash has produced inconsistencies in flood defence standards due to the lack of a long term holistic strategy.	NRA/LFDCs	£60k	* * *	NRA to produce a Shoreline Management Plan for the Wash Estuary in conjunction with consultees.	The first stage Shoreline Management Plan has been circulated amongst interested parties for comments.

* = Feasibility Study/Appraisal Period
 * = Work on Site