

Nene Waterways

Partnership Initiative

STRATEGY CONSULTATION DOCUMENT



Northamptonshire
County Council



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Foreword

The River Nene provides a unique recreational and environmental resource for the people of Northamptonshire, Cambridgeshire and Peterborough, as well as visitors to the area. It has been identified in each of the County Structure Plans as an area of special importance for its historic significance, landscape character, amenity value and biodiversity.

The Nene Waterways Partnership Initiative (NWPI), formerly the Nene Water Level Management Strategy, was initiated by the Environment Agency as a means of delivering sustainable environmental improvements to the valley into the next century.

Since 1996 extensive consultation has been undertaken by the Agency to obtain the views of a whole range of interested parties on the future of the river. Following this exercise, a number of key issues have emerged, together with ideas as to how the river environment could be improved in ways which also contribute in economic regeneration. A number of specific opportunities have also been identified at various locations.

This consultation document sets out a vision and key objectives, together with the key issues and opportunities emerging from the study. It also details a number of specific project opportunities that have been identified. Finally it puts forward key issues related to the future management and funding of the NWPI and which will affect its long-term success.

To be a success it needs your help. To date there has been a tremendous response and show of interest and we are encouraged by the number of project ideas and opportunities which have emerged.

We want to hear your views on the issues and opportunities put forward, and your creative suggestions for other innovative projects on the Nene. Above all we want to hear from other potential partners who can contribute to the success of the venture.

A pre-paid form is enclosed with this document, summarising the main issues on which we would like your views.

The consultation period is due to run from 27 November 1998 to 12 March 1999. You are welcome to comment in writing, by telephoning or in person to the contact address given at the bottom of this page.

SIGNED



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Vision Statement

The Nene Waterways Partnership Initiative (NWPI) is led by the Environment Agency to promote the management of water levels and waterway regeneration along the River Nene in a sustainable way so as to protect and enhance the environmental quality of the valley for present and future generations.

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Summary

The Nene Waterways Partnership Initiative (NWPI) is led by the Environment Agency to promote the management of water levels and waterway regeneration along the River Nene in a sustainable way so as to protect and enhance the environmental quality of the valley for present and future generations.

The NWPI is led by the Environment Agency which is keen to ensure that all opportunities for managing the river have been considered. To this end, the Agency has consulted widely with all parties who have an interest in the river and its future use. The aim is to provide a framework for delivering a series of high-quality environmental improvements for all groups which use the river and draw benefit from it.

More specifically, the NWPI seeks to address a number of key issues identified in the Environment Agency's Local Environment Agency Plan (LEAP) document. The key issue at the heart of the initiative is the future of the navigation locks and associated weirs and sluices (the "river structures") which maintain water levels along the length of the river in a series of pounds. Many of these structures are coming to the end of their useful life and decisions therefore need to be made on their future.

The Environment Agency is obliged to meet minimum statutory obligations but, through the NWPI, there are opportunities to achieve substantially more than this, and achieve lasting benefits for the valley.

A number of project opportunities have been identified during initial consultation, which fulfil the NWPI objectives. These include some projects that are already underway, some that are still at conceptual stage, and others where ideas are waiting to be developed. Some project opportunities involve an adjustment to the existing water levels or structures, others rely on retaining the existing raised water levels.

Management and funding issues are key to the long-term success of the NWPI and this document puts forward a number of ideas for consideration. It is important that the strategy takes a consistent approach to the valley over the length of the study area. One way of achieving this might be to set up some form of central co-ordination for a series of such projects along the length of the river.

Many organisations and individuals are already "on-board" with this strategic approach. The purpose of this consultation is to obtain feedback on the proposals to date, and to encourage other organisations to come forward with more partnership ideas and funding proposals. The initiative is intended as the first step in delivering a programme of such projects into the 21st century.

2 Introducing the Nene Waterways Partnership Initiative

2.1 Background

2.1.1 In October 1997, the Environment Agency commissioned a study to develop a long-term management strategy for the River Nene between Northampton and the Dog-in-a-Doublet sluice about 7km downstream of Peterborough.

As part of the study, over 200 people and organisations have been consulted for their views on the main issues and opportunities for enhancement of the river environment. These have included local authorities, parish councils, landowners and boatyard/marina owners, conservation/heritage groups and recreation and sports clubs which make use of the river corridor.

The main issues and project opportunities arising from the study are summarised in this Strategic Consultation Document. Other available documents include a Strategic Environmental Assessment of the proposals and a Supporting Document which contains full details of the study.

2.2 Objectives

2.2.1 The Nene Waterways Partnership Initiative (NWPI) is an Environment Agency-led partnership initiative covering the River Nene between Northampton and Dog-in-a-Doublet sluice downstream of Peterborough.

2.2.2 The objectives of the initiative are listed below and take into account the many views and suggestions put forward by the various consultees.

2.2.3 The general objectives are to:

- work in partnership with all relevant parties to implement the principles of sustainable development and to improve the quality of life
- promote the Nene Valley as a 'special area'
- encourage the responsible and sustainable use of natural resources in the valley
- protect and enhance landscape character in the valley
- promote opportunities for waterway regeneration and economic development



2.2.4 More specifically, the objectives are to:

- maximise environmental benefits by an integrated approach to water level management, including the production of water level management plans
- maintain, improve and develop appropriate fish populations
- maintain and improve water quality
- protect people and property from flooding
- maintain and enhance biodiversity
- improve navigation and recreational facilities and public access
- maintain and enhance the navigation
- manage water resources to achieve a balance between the needs of abstractors and those of the environment
- conserve local heritage and significant archaeological features and sites
- protect the floodplain against inappropriate development
- ensure the appropriate restoration and after use of mineral workings
- work with landowners and land managers to encourage environmentally sensitive practices
- increase public awareness and enjoyment of the river through education, interpretation and information
- encourage appropriate riverside development within existing urban areas which enhances the landscape and amenity.



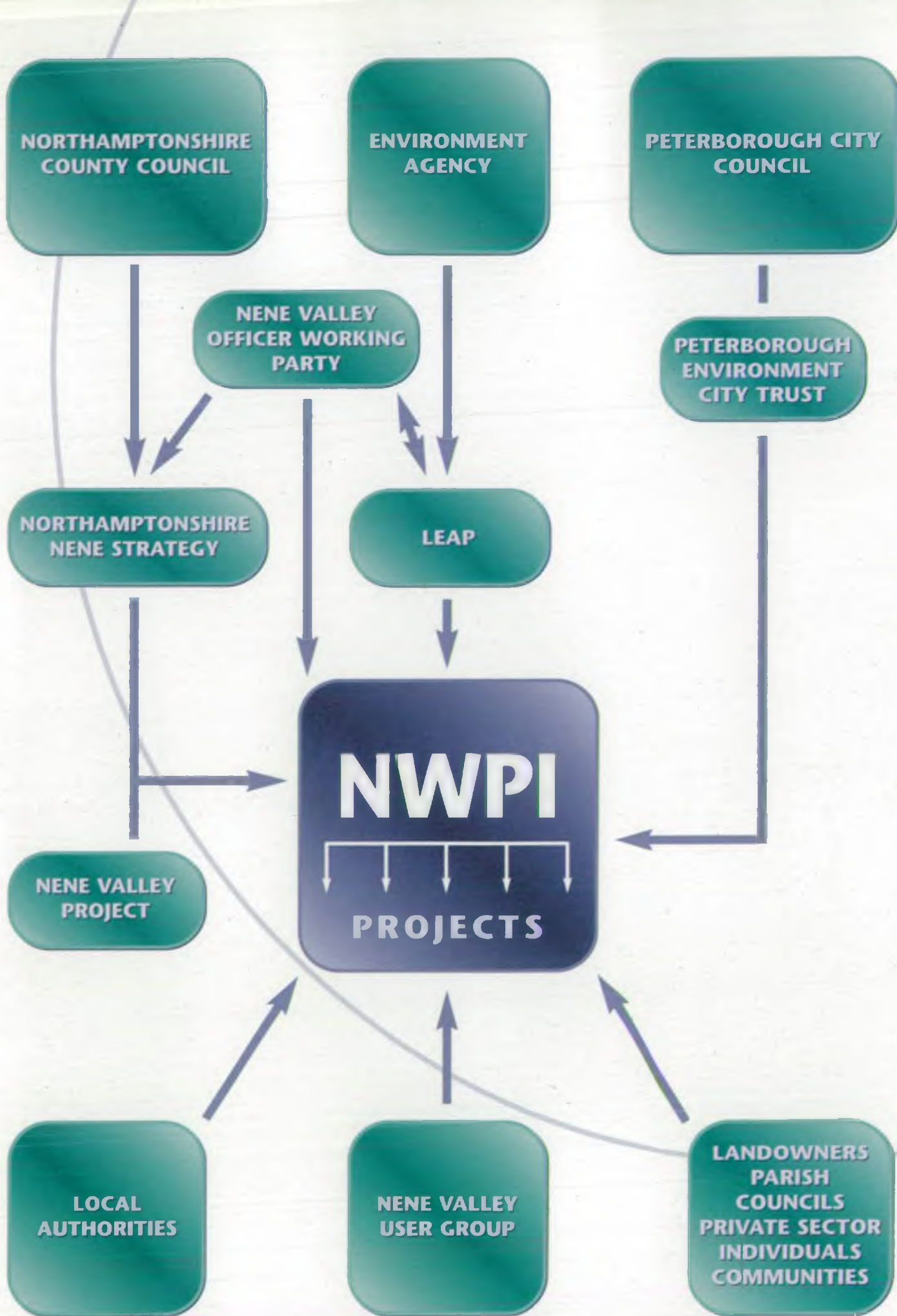


Figure 1 - Nene Waterways Partnership Initiative Contributing Parties

2.3 The Nene Local Environment Agency Plan (LEAP)

- 2.3.1 The NWPI forms a strategy by which we can progress a number of issues and objectives identified in the LEAP which covers the whole of the Nene catchment down to the Wash.
- 2.3.2 The NWPI seeks to address specific issues identified in the Nene LEAP. A list of the LEAP issues is given in Appendix 1.

2.4 Relationship to Other Strategies

- 2.4.1 The NWPI is also an integral part of the Northamptonshire Nene Strategy, an umbrella strategy developed by Northamptonshire County Council and administered by the Nene Valley Officer Working Party (NVOWP). The relationship of the NWPI to these parent strategies is illustrated in Figure 1.
- 2.4.2 There are a wide range of groups, organisations and individuals that are influencing and shaping the future of the Nene Valley as we move into the 21st century. These are shown diagrammatically on Figure 1 and include:-
- 2.4.3 The Nene Valley Project - a project set up by the local authorities in 1990 to activate and facilitate local projects along the river corridor through community action.
- 2.4.4 The Nene Valley User Group - a group set up to represent the various user interests along the river; it includes representatives from local communities, landowners, farmers, navigation, recreation, conservation and amenity groups, as well as mineral companies.
- 2.4.5 Local Authorities - are partners or potential partners on a number of projects, these include Northamptonshire County Council, Peterborough City Council and other principal local planning authorities bordering the main River Nene.
- 2.4.6 Other parties e.g conservation groups, landowners, and private enterprises keen to fund local environmental improvements.

2.5 The Study Area

- 2.5.1 The River Nene rises in Northamptonshire, and passes through Northampton, Peterborough, Wisbech and Sutton Bridge before discharging into the Wash. The total catchment area is about 2340 km².



- 2.5.2 The study area is shown on Maps 1 and 2 at the back of this document. It is defined by the limits of the non-tidal navigation between the junction with the Grand Union Canal arm at Northampton and the tidal limit at Dog-in-a-Doublet, about 7 km downstream of Peterborough, a total length of some 105km. The study area comprises the flood plain and immediate environs of the main river but excludes the three major tributaries, River Ise, Harpers Brook and Willow Brook.
- 2.5.3 The river is controlled throughout the study length by a series of 38 navigation locks with associated weirs and sluices (the "river structures"), which maintain water levels along the river in a series of pounds. The river structures date back to the 17th and early 18th century when the river was first controlled for milling and later for navigation. The river navigation was opened in 1761.
- 2.5.4 The Nene Valley is recognised to be of high landscape, ecological and heritage value. Outside the main conurbations the character of the valley varies from a relatively rural landscape upstream of Northampton, through an area heavily influenced by existing and former gravel extraction between Northampton and Irthlingborough to a more open agricultural setting as the river flows downstream to the county border. Beyond Peterborough the river enters the fen margins and is retained within a channel behind raised earth embankments.
- 2.5.5 Within the study area, the river passes through significant urban areas, notably Northampton, Wellingborough and Peterborough, as well as smaller towns such as Thrapston and Oundle.

Main Issues & Opportunities

3.1 General

- 3.1.1 This section summarises the main issues which the Agency considers should be addressed within the NWPI, sub-divided between the Agency's main functional responsibilities. Key opportunities presented by the NWPI to take action on these issues are summarised at the end of each section.
- 3.1.2 A detailed presentation of the issues to be addressed within the River Nene catchment as a whole, is to be found within the Environment Agency's LEAP document.



3.2 Flood Defence

- 3.2.1 The Environment Agency exercises general supervision over all matters relating to flood defence and aims to protect people and their property from flooding.
- 3.2.2 Following the unprecedented flooding of Easter 1998, which saw over 3,000 properties flooded, the Agency is currently reviewing the existing flood defences and investigating improvements to flood forecasting and flood warning dissemination systems.
- 3.2.3 The NWPI includes a number of project opportunities which may contribute to flood alleviation along the valley. These include the potential restoration and enhancement of wet grassland schemes which could be tailored to store larger volumes of water during a major flood, as well as urban waterfront corridors where amenity development can be designed to minimise flood risk. Such opportunities include:

- Considering channel improvements and removal of restrictions through Northampton;
- Continuing to influence development in the flood plain;
- Consideration of strategic flood storage in low lying floodplain meadow upstream of areas at risk.

3.3 Water Resources

- 3.3.1 The Environment Agency aims to manage water resources to achieve the right balance between the needs of the environment and the needs to abstract water for agriculture, industry, and public water supplies.
- 3.3.2 The main water resource problem on the Nene occurs downstream of Wansford, where demand for water can exceed available river flow in dry years due to a number of competing requirements. The Agency currently operates a Summer Operating Manual to achieve the best balance of resources at the downstream end of the non-tidal Nene. Measures currently being examined to conserve resources and optimise resource use include the following.

- Possible return of the Flag Fen treated effluent from Peterborough City (which currently discharges downstream of Dog-in-a-Doublet) to the non-tidal river upstream;
- Possible seasonal adjustments in residual flow below the Anglian Water abstraction at Wansford;
- Potential storage of excess winter water for summer use (e.g. in off-line reservoirs).

3.4 Water Quality

3.4.1 The aim of the Environment Agency is to achieve significant and continuous improvements in water quality.

3.4.2 Existing water quality is variable and some stretches do not meet the Agency's River Quality Objectives (RQO's) for the river. Under low flow conditions, treated effluent comprises a substantial percentage of total flow. This, combined with additional nutrients from agricultural run-off and urban run-off, results in nutrient enrichment (resulting in excessive weedgrowth algal blooms) which is a problem on and every stretch of the river.

3.4.3 Formal designation of the non-tidal Nene as a Sensitive Area (Eutrophic) under the Urban Waste Water Directive will result in a phased introduction by Anglian Water of schemes to strip nutrients from all significant Sewage Treatment Works (STW) to the non-tidal Nene.

3.4.4 Partnership opportunities to improve water quality under NWPI include;

- Initiating pilot schemes for reedbeds to potentially improve stormwater discharges from sewage treatment works;
- Introducing vegetation buffer zones along watercourses affected by agricultural run-off;
- Use of existing or future gravel pits or silt lagoons to treat urban run-off.



3.5 Fisheries

3.5.1 The Environment Agency looks to maintain, improve and develop fisheries in inland waters. Fish populations along the Nene are typical of a lowland river, with angling for bream, roach, dace, chub, eels and pike common throughout the Nene Valley.

3.5.2 There are opportunities for improving the fisheries on the Nene, although no concerns have been expressed by anglers apart from in the stretch downstream of Billing STW which serves Northampton. There are a range of issues to be addressed including low flows (causing reduced dilution of effluents), poor water quality in some reaches, the presence of oestrogenic chemicals in the treated effluent from the outfalls of some sewage treatment works, lack of habitat in some areas and limitations on fish movement caused by lock and weir structures.

3.5.3 Opportunities for improving fisheries under NWPI include:

- Improving water quality as discussed under Section 3.4 above;
- Connection of gravel pits to the river where circumstances are appropriate (to provide refuges and habitat);
- Improvement of side-channel and off-line habitats;
- Provision of more fish passes to facilitate fish movement;
- Habitat improvements near structures and in backwater channels.

3.6 Conservation

3.6.1 The Environment Agency wishes to promote the conservation, enhancement and sustainability of natural beauty, flora, fauna, features, buildings, sites or geological features of special interest.

3.6.2 The Nene Valley contains large areas of nationally and internationally important bird and other wildlife habitat, for example the Wadenhoe and Achurch Meadow SSSI and the Nene Washes SPA, as well as Special Landscape Areas, and important archaeological and heritage sites.

3.6.3 Past use of the valley for quarrying and urban development, coupled with changes in agricultural practice, has led to the loss of much of the former wet meadows and grasslands, and associated fauna and flora. Similarly, the creation of the navigation itself led to loss of original river features.

3.6.4 The Agency is already seeking to maintain and enhance existing wetland through Water Level Management Plans. Partnership opportunities include:

- Increasing areas of wet grassland for birds, reversal of arable to grassland in appropriate cases;
- Recreating original river features on remnant natural channels alongside the navigation;
- Increasing reedbed habitats e.g in existing or proposed gravel pits;
- Providing faster moving water and habitat improvements in back channels;
- Increasing suitable habitat for aquatic wildlife including otters.

3.7 Recreation

3.7.1 The Environment Agency wishes to promote recreation on inland waters.

3.7.2 Water sports, including boating, rowing and other recreational interests including angling, walking, horse-riding, cycling, camping, and birdwatching, are all associated with the Nene. The waterway is used along its length for boating and fishing, and many areas are accessible by public footpath. In addition, flooded former gravel workings between Northampton and Thrapston and at Ferry Meadows, Peterborough provide additional facilities for water skiing, sailing, sailboarding and model yachts, as well as conservation interest.

3.7.3 Intensifying recreation pressures are being placed on the valley due to expanding urban populations increasingly seeking the quiet of the countryside. As a key component of the Northamptonshire Nene Strategy, the NWPI seeks to maximise opportunities for recreation in partnership with User Groups. This includes:



- Encouraging greater use of the river by providing better boating facilities, linked to improved access, interpretation and waterside pubs;
- Reconciling recreation and conservation by appropriate zoning and restrictions on some recreational activities (e.g. noisier water sports);
- Providing increased public access in appropriate locations, with due regard to landowner and conservation interests;
- Improve angling by creating more suitable habitats and addressing water quality problems;
- Providing simple safe access for canoeists and incorporating upgraded facilities for canoeists when altering or refurbishing structures;
- Recognising the need for additional built leisure facilities in appropriate locations.

3.8 Navigation

3.8.1 The Nene from Wisbech up to Northampton is a "Recreational Waterway" as defined in the Anglian Water Act 1977. As the responsible Navigation Authority, the Environment Agency has a duty to maintain the navigation in this section of the river. Water levels downstream of Northampton are maintained by 38 lock structures and associated weirs and sluices.

3.8.2 The navigation is now largely used for recreation. In 1994 the Environment Agency carried out a comprehensive Customer Survey to identify what facilities the boat users wanted along the navigation. The survey identified a number of areas where facilities for pleasure cruising could be improved upon, including lock electrification, review of headroom and provision of additional facilities along the river.

3.8.3 Additional opportunities provided by the NWPI include:

- Increased marina provision;
- Providing moorings with better access and signing to other nature conservation and historical interest;
- Providing safe refuges for boats at times of flood e.g. in off-line lagoons;
- Providing additional links between off-line flooded gravel workings to allow alternative boating routes (as in a "broad");
- Providing additional facilities (pump-outs for toilets, rubbish disposal points, drinking water points, overnight moorings);
- Increasing the visual attraction of the river corridor through conservation schemes.



3.9 River Structures

3.9.1 At the heart of the study area are the river structures (locks, weirs and sluices) which maintain water levels along the length of the river. Many of the structures are reaching the end of their useful life and a decision has to be made on their future. Although primarily intended to have a navigation and associated drainage function, the structures also influence groundwater levels, water quality and provide a number of recreational and ecological benefits to the valley at large.

3.9.2 While the Agency has a basic duty to maintain water levels in the navigation, decisions on the future of each set of structures need to be taken in the light of the future strategy for the river.

Project Opportunities

4.1 Introduction

- 4.1.1 The Environment Agency and its partners are committed to the principle of sustainable development. Beyond carrying out its basic duties, the Environment Agency is committed to look, with its partners, at delivering the best environmental option in terms of cost and benefit to the community.
- 4.1.2 A large number of project opportunities have been identified during initial consultation which fulfil the project objectives and address the key issues defined in Section 3. These include some projects that are already underway, some that are still at conceptual stage, and others where ideas are still waiting to be developed.

4.2 Project Opportunity Categories

- 4.2.1 Projects have been broadly categorised under one or more of the following categories:

1. making more varied use of gravel pits to benefit the river
2. softening of bypass and backwater channels around river structures
3. extending or enhancing areas of wet grassland for bird habitat
4. conserving scarce water resources and improving river quality
5. regenerating urban or semi-urban river frontage
6. improving facilities for water-based recreation (including recreational boating)
7. improving access and extension of country parks along the river
8. providing strategically placed flood storage areas

- 4.2.2 Some opportunities may require alteration to the existing structures, or an adjustment to the existing water levels. Others rely on retaining raised water levels as they are at present. In these cases the environmental improvement provided by the project can provide additional economic justification for maintaining the structure.

- 4.2.3 The following sections develop ideas relating to each category.

4.3 Use of Gravel Pits

- 4.3.1 The landscape of the river valley between Northampton and Irthlingborough is dominated by flooded, disused gravel pits which appear as substantial bodies of water alongside the river. There are also still a number of zones designated in the Northamptonshire Minerals Plan which have yet to be exploited (and depend on planning permission being granted). Many existing gravel pits are already used for a number of recreational uses but mostly in isolation from the river. The connection of gravel pits to the river can provide a number of additional benefits, providing that other potential dis-benefits (such as algal blooms) are designed out. These include:

Gravel Pit Opportunities	Potential Uses
Use of shallow pits for reedbed development	<ul style="list-style-type: none"> ● Buffer zone to treat localised poor quality urban drainage before it reaches the river ● Additional "polishing" of treated STW effluent ● Additional bird habitats
Single Interconnection at same level	<ul style="list-style-type: none"> ● Off-line habitat for fish populations ● Safe refuges for boats ● Additional flood storage
Double Interconnection at same level, or by lock	<ul style="list-style-type: none"> ● Through route to moorings/ marinas ● Develop larger pits as "broads"

4.4 Bypass Channels and Backwater Channels

- 4.4.1 Downstream of some river structures there are opportunities to add conservation interest at bypass channels and backwater channels by introducing pool and riffle features, increasing flow down side channels and replacing some weirs by more “natural” alternatives to the traditional engineering structures. This can be combined in several cases with the more frequent inundation of land between the channels (making use of the level difference from the upper pound), or as part of a project to restore remnants of the original natural channel.

Bypass Channels/Backwater Channels

Weir adjustments and re-direction of flow, introduction of channel features.
Increase incidence of bank overtopping under moderate flows.

- Increased flow in back channels leading to more diverse flora and fauna
- Benefit wet grassland and restore remnant channels

4.5 Wet Grassland

- 4.5.1 Downstream to Irthlingborough the landscape takes on a more rural character and there are a number of relatively large areas of relatively low grade agricultural land which are ideal for restoring lowland wet grassland. This will improve the biodiversity of the catchment and have particular benefits for breeding waders. Such conservation projects are currently being looked at by the RSPB and their partners. Some of these projects also have the potential to assist in flood alleviation by the storage of large volumes of water during a flood event.

Wet Grassland Projects

Increase incidence of standing water in winter by adjustments to weirs and levels
Provision of increased flood storage.

- Provides ideal habitat for breeding waders and duck
- May assist flood alleviation at some locations on the lower Nene

4.6 Other Areas

4.6.1 Improving Water Resources and Water Quality

A number of measures are already being looked at to conserve resources and optimise resource use, particularly at the downstream end of the river length under consideration. These include the possibility of storing excess winter water in small reservoirs away from the river, although suitable sites have yet to be found.

There are a number of sites where surface drainage water from Northampton is contributing to poor water quality in the river. Project opportunities have been identified downstream of Northampton to purify poor quality urban drainage by developing natural reedbeds, either by making use of existing shallow gravel pits, or by developing new reedbeds. Such projects also provide more habitat for wildlife such as birds.

The concept of reserving a vegetated strip of land to act as a buffer zone to prevent agricultural run-off entering the river has also been discussed in general terms with representatives of NFU and CLA. Such buffer zones would apply particularly to tributary streams adjoining arable land where fertilizers and herbicides are applied.

4.6.2 Regeneration of River Frontage

There are a number of continuing initiatives to regenerate river frontage, particularly through the major conurbations and small towns. There include bankside developments e.g. along embankments such as in Wellingborough and Peterborough, and larger country parks where increased access is to be provided for all (e.g. upstream of Northampton). In most cases there are opportunities for increased boat moorings and links between the waterway and other attractions nearby. Other developments include commercial and retail, as well as leisure developments.

4.6.3 Water Based Recreation

Recreational opportunities within the strategy cover the whole range of water-based recreational activities and can be found within the tables. These include, for example, canoe slaloms, facilities for pleasure boating and new sports leisure facilities. Many existing gravel pits are already used for a range of pursuits such as angling, sailing and water skiing. The key principles are appropriate zoning and balancing the needs of conservation, landowners and recreation.

4.6.4 Improved Access

There is a general commitment within the the NWPI, as in its parent strategies, to encourage improved access to the riverside and adjoining corridor, in appropriate circumstances. This includes cycling and horse-riding as well as opportunities for walking, bird-watching and enjoying the quiet of the countryside. Included within this category are the development of country parks, together with appropriate recreational use, as well as other areas where appropriate access is to be considered as part of the project.

Each opportunity needs to be considered on its own merits in discussion with landowners to establish the appropriate access requirement. Relationships to strategic proposals for long distance cycleways and footpaths such as the Nene Way, also need to be considered.

4.6.5 Flood Alleviation

Flood protection issues are, and will be, a key consideration in any Environment Agency-led project, or when considering project opportunities put forward by others. This will include considering the opportunities for additional flood alleviation benefit provided by the particular opportunity under consideration.

Some of the opportunities within the tables may have potential for assisting in flood alleviation. These include the embryonic wet grassland projects discussed in Section 4.5 above.

4.7 Project Opportunity Table

4.7.1 Project opportunities have been listed in Table 1, sub-divided into river reaches. The table gives the project opportunity reference, name and a basic description.

4.7.2 The river reaches and opportunity locations are shown on Figures 2 and 3 at the back of this document.

4.7.3 Other relevant information relating to the opportunities is given in Appendix 3.

Table 1 NWPI-Project Opportunities*Reach 1 - Upstream of Northampton*

Reach / Project No.	Name	Description	Lead Body
1/1	Upper Nene Country Park	Development of a major new recreational area to include Stortons Pits; Duston Sand and Gravel Pits; and Kislingbury Gravel Pits as a potential nature recreation area, with associated public access. Environment Agency to look at options that may include extension of flood storage areas to protect Northampton. Could also include boat moorings and cycleways, linked to Duston Mill flood alleviation reservoir and the Northampton Arm of the Grand Union Canal, which passes through the proposed Country Park area, in close proximity with the river corridor.	NBC
1/2	Junction with Grand Union Canal	The NWPI here ties into the Northamptonshire Canal Partnership strategy to regenerate the Northampton Arm of the Grand Union Canal. The site at the junction with the River Nene (Cotton End) is planned for regeneration under the Single Regeneration Budget (SRB) programme.	NBC

Reach 2 - Northampton to Billing

Reach / Project No.	Name	Description	Lead Body
2/1	SRB Bid Area	Regeneration of waterway frontage, with links to town centre and moorings.	NBC
2/2	Beckets Park / Midsummer Meadow	Environmental project to enhance water frontage. Opportunities for boat moorings, walkways and green space.	NBC
2/3	Barnes Meadow	Localised lowering of flood banks to allow more frequent inundation in candidate Local Nature Reserve.	NVP
2/4	Peaches Meadow	Canoe slalom (to be managed by Nene Whitewater Trust).	NCC
2/5	Northampton Washlands	Area of public access in private ownership, necessary for flood storage. Has considerable conservation value for birds. Zoning currently under consideration to manage access, shooting and conservation interests. Opportunity to increase wet grassland by extension of ditches and localised land lowering.	Agency
2/6	Weston Favell Mill	Opportunity for demonstration reedbed project alongside river. Reedbed to be used to purify urban run-off before it enters the river, also provide conservation interest.	Agency
2/7	Clifford Hill - Gravel Pits, Castle Mound and Silt Lagoon	Area currently being restored for general amenity development around former gravel pits. Opportunity to link angling, birdwatching and historic site interpretation of Castle Mound. Old silt lagoon could be converted to reedbed to purify urban surface drainage from Hardingstone Dyke before it reaches the River Nene.	Agency

KEY TO ABBREVIATIONS

NCC	Northamptonshire County Council
NBC	Northampton Borough Council
SNC	South Northants District Council
WBC	Wellingborough Borough Council
ENC	East Northants District Council
CCC	Cambridgeshire County Council
PCC	Peterborough City Council
FDC	Fenland District Council

NVP	Nene Valley Project
Agency	Environment Agency
RSPB	Royal Society for Protection of Birds
EN	English Nature
NWT	Northants Wildlife Trust
CWT	Cambs Wildlife Trust
NPT	Nene Park Trust
AW	Anglian Water
BW	British Waterways
FRCA	Farming and Rural Conservation Agency

Reach / Project No.	Name	Description	Lead Body
3/1	Cogenhoe Meadows	Excellent opportunity to create sustainable wet grassland and a variety of water and wetland features including enhancing the remnant feature and wet woodland with a series of small-scale excavations. Water could be provided from the Nene by small sluices or weirs (the river is "perched" above the land level which is locked between two channels). Water could be controlled by simple bunding and dam-boards	Agency
3/2	Billing STW land Reclamation	Potential pilot project to reinstate reedbed to treat storm overflows from the sewage treatment works. Possibility of more extensive reedbed creation following restoration of future minerals working, with associated conservation benefits. Land is currently used for sludge spreading.	AW
3/3	Whiston Broad	Proposal to review the options for appropriate after use and development of the area to the south of the river, following possible future mineral extraction. Opportunities under consideration include the formation of a "broad" for boating by linking to the river.	Agency
3/4	Earls Barton - Plant Site	Currently site for Pioneer processing plant. Potential site for waterside pub.	Pioneer
3/5	Earls Barton - Heronry/ Reed bed	Heronry conservation and reedbed development. Potential area for wetland management/restoration.	NVP
3/6	Earls Barton Mill	Wet grassland/river channel restoration in a small area near the mill. Could include level alterations to benefit flood relief channel, and the introduction of small scrapes to create valuable wetlands.	Agency
3/7	Earls Barton Broad	Possibility of linking existing lakes to the river as a "broad" or safe refuge for boating. Requires study to evaluate feasibility, including review of relative levels of lakes and river.	Agency
3/8	Wollaston Water Park	Restoration of mineral zones as water-based Country Park including the creation of Summer Leys Local Nature Reserve as first phase. Could perhaps include moorings on river frontage, with links to Wellingborough Marina.	NVP/ NCC
3/9	Wollaston, Swallow and Grendon Brooks	Backwater channel improvements on a number of brooks affected by mineral workings in Grendon/Wollaston area. Agency input to include minor in-channel improvements and to the amendments maintenance/management regime.	Agency
3/10	Wellingborough Marina	New boat moorings and marina for leisure craft, cycleways, footpaths, sailing and fishing. Could link across to Wollaston Water Park.	Whitworth

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Reach 4 - A509 (Wellingborough) to A6 (Irthlingborough)

Reach / Project No.	Name	Description	Lead Body
4/1	Wellingborough Embankment	Development area which includes restoration/ amenity work on river frontage.	WBC
4/2	Victoria Mills	Proposed regeneration project including a flood relief channel and an (existing) restored lake alongside river to be gifted to WBC as public park and amenity area.	Whitworth
4/3	R. Ise Diversion	Diversion of River Ise through wetland to provide compensation flood storage for Reddens Land Development. Will form part of an extensive river-side amenity area.	Developer
4/4	Irchester Heritage Park	Creation of an archaeological and natural heritage centre with surrounding lands, including interpretation, footpaths, cycleways and boat mooring facilities. Possible site for additional moorings.	NCC
4/5	Ditchford Gravel Pits	Proposed scheme on restored gravel pits to include a variety of water sports (water skiing, canoeing, boating, sailing) with associated club house.	ARC
4/6	Chettles Factory Relocation	Proposal to relocation existing incineration plant and re-development of the site as waterside hotel.	Chettles
4/7	Ditchford Lakes and Meadows	Local Nature Reserve and budding Country Park.	ENC
4/8	Skew Bridge Leisure & Recreation	Former water- ski club with potential for commercial leisure development.	Private
4/9	Broadholme Sewage Treatment Works	Potential use of existing wetland and further wetland creation as an option for treatment of stormwater overflows from Broadholme STW. This would also provide conservation benefits through increased habitat.	AW
4/10	Irthlingborough - New Mineral Extraction	Restoration of future mineral extraction areas to include a Pocket Park with local public access, and general amenity. Potential to establish wet grassland in part of the area.	ARC

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Reach 5 - A6 (Irthlingborough) to A14 (Thrapston)

Reach / Project No.	Name	Description	Lead Body
5/1	Stanwick Gravel Pits	Opportunities for environmental enhancement, including informal recreation and education.	Agency/ ENC/ NWT
5/2	Woodford/ Denford Meadows	There are potential sites in this area for restoring large areas of wet grassland primarily as improved habitat for birds (e.g. breeding waders). It may also be possible to adapt the sites to store larger volumes of water during a major flood to assist flood alleviation in the valley. Sites yet to be identified.	RSPB/ Agency
5/3	Thrapston - Marina	Proposed Marina and waterfront development.	Private
5/4	Thrapston - Former ARC Plant Area	Planning permission for housing with possibility for waterfront regeneration.	Private

Reach 6 - A14 (Thrapston) to Wansford

Reach / Project No.	Name	Description	Lead Body
6/1	Achurch marsh & Wadenhoe	Potential Flagship Project for similar wetland sites at Woodford and Eaglethorpe. Excellent opportunities in this general area for wet grassland restoration, primarily as improved bird habitat, but could also include recreation of remnant river channel meanders, would assist in preserving the existing Site of Special Scientific Interest (SSSI). Sites yet to be identified.	RSPB/ Agency
6/2	Oundle Backwater Channel	Improvement of in-channel and bankside habitats along one of the longest back channels on the Nene, including refurbishment of weir structure.	Agency
6/3	Oundle Marina	Development of recreation and tourism facilities including footpath and cycle links, in association with Oundle Marina.	Private
6/4	Oundle - North Meadows	Wetland enhancement-project on meadow land immediately downstream of Oundle. This project is now largely completed.	NVP
6/5	Eaglethorpe Meadows (Warmington to Fotheringhay)	Further area with opportunities for wetland and wet grassland creation. Any projects would involve localised alterations to existing drainage dykes to retain water. There is also an opportunity to restore a remnant historic meandering channel between the navigation channel and the mill channel. Sites yet to be identified.	RSPB/ Agency

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Reach 7 - Wansford to Dog-in-a-Doublet

Reach / Project No.	Name	Description	Lead Body
7/1	Wansford Marina	Proposed boat moorings on the north bank of river.	Private
7/2	Castor Mills and Flood Meadows SSSI	Options to improve water level management in this area. These include improving the 'Back Dyke' by increasing flow down the channel and in-channel restoration. Also to establish wetland areas by some land reprofiling and more frequent wetting of the land. A further option exists to raise water levels through Castor SSSI if shown to be consistent with SSSI aims and objectives.	Agency
7/3	Ferry Meadows Country Park	Riverside water-based Country Park with opportunities to improve linkages with the river, along with recreation and moorings.	NPT
7/4	Peterborough Yacht Club	Riverbank restoration, environmental enhancements, and provision of additional boat moorings.	PYC
7/5	Orton Canoe Slalom	Provision of new canoeing facility at Orton Sluices.	Agency
7/6	Former British Sugar Site	Development of a housing neighbourhood with nature conservation area alongside river.	PCC
7/7	The Boardwalks LNR	Bankside improvements and nature conservation area. Shallow ponds.	PCC/CWT
7/8	Railworld Wildlife Reserve	Rail Museum on south bank, nature reserve being developed on north bank, linked to possible extension of Nene Valley Railway to join Main Line. Possible boat moorings.	Railworld
7/9	Peterborough South Bank Development	Riverside location for high quality mixed use development. Scope for a complementary range of uses incorporating office, leisure, cultural and housing development and associated waterfront improvements. Potential Agency involvement along river frontage and with new moorings.	PCC
7/10	Embankment End Marsh	Restoration of old sewage works site at Fen Gate, preservation of remnant fen habitat and open meadow land on north bank of river.	PCC
7/11	Stanground Washes	Enhancement of wet grassland area by increasing water level control. Proposed measures include the installation of sluices from Mortons Leam, to hold back flood waters, some land lowering, dyke restoration and scrub removal.	CWT/EN
7/12	Flag Fen STW	Possible scheme under consideration to discharge highly-treated effluent to the freshwater Nene upstream of the Dog-in-a-Doublet as a potential means of overcoming limited water resources. Agency to consider the overall sustainability of the scheme in comparison with current discharge arrangements.	AW
7/13	High Wash	EN has management agreements in place on part of this land. Proposal to install some internal sluices on dykes to maintain independence of water levels from Mortons Leam and provide higher water levels in spring.	EN
7/14	Peterborough urban run-off	Storm water / urban run-off storage and treatment. Development of wetland areas. Sites yet to be identified.	Agency

General Opportunities (non-reach specific)

Reach / Project No.	Name	Description	Lead Body
G1	Boating facilities	Provision of new moorings and navigation facilities along the watercourse including toilet pump-outs, rubbish disposal points, drinking water points and signage to local historical features. Could promote theme of the "History of the Nene Waterway".	Agency
G2	Vegetated Buffer Zones	Promotion of the idea of vegetated "buffer zones" along selected watercourses adjacent to arable land as a means of alleviating the impact of agricultural drainage or pesticide/herbicide sprays on water quality in the river. Potential to activate through Countryside Stewardship, in particular the 'field margins' option which also benefits wildlife and game.	Agency
G3	Wildlife Commitments	Wildlife commitments within the strategy for the protection of barn owls, bats, otters and other protected species.	NWT/CWT
G4	Canoeing Facilities	Improved canoeing facilities, in particular access at river structures. Needs of canoeists to be taken into account when refurbishing old weirs and sluices.	Agency
G5	Public Access	General commitment to consider improved public access for walking, horse-riding, and cycling where appropriate and with controls where necessary. Access to be negotiated in discussion with landowners.	NCC

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Management & Funding

5.1 Introduction

- 5.1.1 This section considers strategic issues related to the long-term management and funding of the NWPI.
- 5.1.2 The NWPI is an integrated Agency-led partnership initiative aimed at delivering a series of high-quality environmental and recreational improvements for all groups which use the river and draw benefit from it. The long term plan is for a continuing programme over the next 20 to 50 years.
- 5.1.3 Funding the identified programme of projects is the fundamental long-term issue. At present projects are funded on a piecemeal basis, through a variety of organisations and applications to funding agencies. By strategically aligning such projects under the framework of the NWPI, funding opportunities can be maximised. A number of strategic issues need to be addressed.

5.2 Strategic Funding Issues

- 5.2.1 It is recommended that there should be some form of central co-ordination for funding bids. Options that might be considered for group status include charitable trust, limited company with charitable status or other forum. Eventually this could lead to the setting up of some form of countryside park central organisation.
- 5.2.2 The name and membership of the co-ordinating group is also critical. For example, perhaps local voluntary and community groups should be well-represented as this would enable the group to maximise external funding opportunities. The contribution of the User Group could be particularly important here.
- 5.2.3 Responsibilities for day-to-day management would need to be defined, as would the extent of Environment Agency and other partners involvement.
- 5.2.4 The market for external funding is highly competitive and will become more so. The NWPI needs to position itself in the best position to sell its concept to a wide and varied audience. This will require a flexible approach, depending on which funding organisations are to be approached. There is scope to package project opportunities together as well as singularly, or to promote the idea of the linear countryside park as a whole. There is room for a variety of approaches.

5.3 Partnership Funding

- 5.3.1 Decisions will need to be taken on extent of contributions to matched funding from participating bodies. The Environment Agency is obliged to meet minimum statutory obligations but, through the NWPI, there are opportunities to achieve substantially more than this, and achieve lasting benefits for the valley. For example, by combining funding, the objectives of the other participating organisations can also be satisfied.
- 5.3.2 As part of this, the relevant stakeholders and beneficiaries need to be identified and expenditure justified by demonstrating the environmental benefits and value-for-money of the project, or groups of projects, under consideration.
- 5.3.3 By partnering, many more avenues of funding are opened, and opportunities for sustainable projects increase.

5.4 Sources of Grant Funding

- 5.4.1 A number of sources of grant funding exist, several of which have already been accessed, or are the subject of current bids, for existing proposals in the study area.
- 5.4.2 Potential sources of funding are suggested against each project in Appendix 1. For some projects this has already been secured. Availability of funds varies both in timing and amount, and decisions on the best strategy will need to be taken. One proposal for consideration is that a funding officer could be appointed from one of the partnering organisations as part of the central co-ordinating team.

The Way Forward

6.1 Consultation Period

6.1.1 There will now be a period of consultation to allow people to give their views on the proposals put forward in this document. The document is being widely circulated, so that as many people and organisations as possible have an opportunity to give their views.

6.1.2 The consultation period will run between 27 November 1998 and 12 March 1999.

6.1.3 You can comment in one of four ways:

- **By letter to:**

Ian Russell - Project Manager
The Environment Agency
Waterside House, Waterside North
Lincoln LN2 5HA

- **By using the form provided with this document**

- **By telephone:**

01522 513100

- **In person by appointment**

6.1.4 In particular we would welcome your views on the issues raised and project opportunities put forward, and the ideas put forward for the future management of the NWPI e.g the name and status of any managing group, and methods of coordinating funding bids.

6.2 Further Information

6.2.1 If you need further information, a Supporting Document is available on request from the Environment Agency, and will be available two weeks after the launch date. This will include details of the consultations to date, issues raised, further details of project opportunities summarised in this report, and other information relating to the study.

6.2.2 A Strategic Environmental Statement is also available. This contains a strategic overview of key environmental issues relating to the project opportunities put forward.

6.3 Further Involvement

6.3.1 The Environment Agency is keen to encourage more organisations and individuals to come forward and become part of the Nene Waterways Partnership Initiative. In particular, the Agency wishes to encourage other organisations to put forward ideas for potential partnership projects and funding proposals.

6.3.2 The Agency would also like to encourage the active participation of individuals and organisations in the future management and co-ordination of the NWPI, in whatever form it finally takes.

6.3.3 Whether you live in, work in, or visit the river valley, there may be a role for you to play within the NWPI. For example, landowners or developers may have ideas for other project opportunities along the river, farmers or landowners may wish to improve the biodiversity of their farm adjacent to the watercourse; local community groups may have ideas for projects but need guidance in taking it forward; others may have specific expertise or skills they can offer to the NWPI e.g. expertise in management or in the preparation of funding bids.

6.3.4 In all these cases, the Environment Agency would like to hear from you.

6.4 Post-Consultation

6.4.1 Following the period of consultation the Agency will be collating responses and looking to provide a final strategy document by summer 1999 in time to take us forward into the Millennium.

Appendices

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Appendix 1

NENE LEAP ISSUES

Managing Our WATER RESOURCES

- 1a Competing demands for water from the Nene during periods of low flow threaten the ecological needs of dependent and wetland systems.
- 1b There is insufficient water available in summer to meet the needs of any future growth in demand for spray irrigation from the area of the North Level IDB that is fed from the Nene via the slacker at the Dog-in-a-Doublet.
- 1c There is insufficient knowledge of the impact, during drought periods, of abstraction for public water supply on the Nene, Nene Washes and Nene Estuary.

Enhancing BIODIVERSITY

- 2a There has been a significant reduction in the area of, and species associated with, wetland habitat.
- 2b The introduction of invasive alien plants threaten the ecological diversity of our natural environment.

Managing Our FRESHWATER FISHERIES

- 3a The upstream and downstream free passage of fish is restricted on the Nene.
- 3b Fish biomass levels are low between Earls Barton and Thrapston.
- 3c The grayling population on the River Ise is in decline.
- 3d There is growing concern regarding the apparent decline in the eel population in the Nene.
- 3e The condition of the fishery on the tidal Nene is unknown.

Delivering INTEGRATED RIVER-BASIN MANAGEMENT

- 4a The condition of river control structures on the Nene threatens the integrity of the Nene Navigation.
- 4b Amenity services, for navigation users on the Nene are low.
- 4c Members of the public, place themselves in danger by swimming in the catchment's watercourse.
- 4d Routine biological and chemical monitoring indicates poor water quality at a number of sites/stretches in the area.
- 4e Nutrient enrichment of water bodies in the area impacts on water quality and affects flora and fauna and other uses of water, such as navigation, amenity and fishing. River Ecosystem quality targets can be compromised.
- 4f Chemical monitoring has revealed failures against the EC Dangerous Substances Directive at two sites within the Nene catchment.
- 4g The possible presence and effect of persistent substances in waters discharging to the Wash is of concern.
- 4h Salinity in the South Holland Main Drain adversely affects fishery and spray irrigation uses.
- 4i Opportunities exist to enhance recreation in the Nene Valley.
- 4j Water quality in the Nene is being impacted upon by oestrogenic compounds.
- 4k Surface water run-off from urban/industrial areas frequently caused localised biological deterioration, particularly in smaller streams and brooks.

Conserving the LAND

- 5a The strategic and operational delivery of flood warning and flood forecasting.
- 5b Standards of flood protection within the river catchment.
- 5c Siltation along the tidal length of the River Nene has restricted the capability of the channel to discharge fluvial floods.

Managing WASTE

- 6a Gas migration at the Princewood Road Landfill Site, Corby poses a potential risk to adjacent development.
- 6b The illegal disposal of waste poses a risk to health and safety.

Ongoing actions of the Agency relating to regulating major industries, improving air quality and addressing climate change are also detailed.

Appendix 2

CONSULTATION

During the course of the study the following groups have been consulted

Local Authorities
Parish Councils
Conservation/Heritage Groups
Landowners/Boatyards/Marinas
Angling Associations
Recreation and Sports Clubs
Nene Valley Officers Working Party
Members of Area Environmental Group
Members of Local Flood Defence Committee
Anglian Water
British Waterways
Navigation Authorities

The Environment Agency would like to acknowledge the contribution of **all** these groups and any others which may have inadvertently been omitted from the above list. In particular the Agency would like to recognise the contribution of the **Nene Valley User Group**, which contains representatives from a number of the above organisations.

Further details of the consultation are to be found in the Supporting Document.



Appendix 3

OTHER RELEVANT INFORMATION

The project opportunities are divided into eight broad categories (see Section 4.4), and which Agency function it benefits. The tables indicate the Agency functions of benefit and list whether the opportunity also appears in Northamptonshire Nene Strategy (NNS) document, and whether it is an existing proposal or opportunity site.

The "Rivers Structures" column indicates where there is a particular link to the downstream structures, either because the project will require some adjustment to existing structures, or where a project is particularly dependent on the maintenance of downstream water levels.

The lead body is given, together with potential partners, main landowners and potential sources of external funding. An indication of timescale is given where known. "Early Priority" indicates that the opportunity stands a good chance of being initiated earlier rather than later. Finally the relevant local authority is given.

NENE WATERWAYS PARTNERSHIP INITIATIVE PROJECT OPPORTUNITIES

Reach 1 - Upstream of Northampton

Reach / Project No.	Project Categories (see Notes below)	Benefit Category	Name	NNS	Existing or Opportunity	River Structures	Lead Body	Potential Partners	Land Ownership	Potential External Funding Sources	Early Priority P	Timescale (years)	Local Council
1/1	6,7,8	Fld, C, R	Upper Nene Country Park	Y	E		NBC	Agency, BW Dvelopers	CNT NBC Private	Swan Valley, Lottery, Millenium		5 to 10	NBC
1/2	5,6	R	Junction with Grand Union Canal	Y	O		NBC	Agency, BW	BW/ Railtrack	SRB			NBC

Reach 2 - Northampton to Billing

Reach / Project No.	Project Categories (see Notes below)	Benefit Category	Name	NNS	Existing or Opportunity	River Structures	Lead Body	Potential Partners	Land Ownership	Potential External Funding Sources	Early Priority P	Timescale (years)	Local Council
2/1	5,6	R	SRB Bid Area				NBC	Agency, BW	Pioneer Railtrack	SRB			NBC
2/2	5	R	Beckets Park / Midsummer Meadow	Y	E		NBC	Agency NBC Private					NBC
2/3	3,8	Fld, C	Barnes Meadow		O		NVP	NWT, Agency	NCC	Landfill Tax	P	1 to 2	NBC
2/4	6	R	Peaches Meadow	Y	E	Y	NCC	NBC, Agency		Sports Lottery		1 to 2	NBC
2/5	3	C,R	Northampton Washlands	Y	O	Y	Agency	NVP/ NWT/ RSPB/ NBC	C. Davidge		P	1 to 2	NBC SNC
2/6	4	Q	Weston Favell Mill		O		Agency	NCC	NCC	Landfill Tax Private	P	1 to 2	NBC
2/7	1,4,7	Q	Clifford Hill - Gravel Pits, Castle Mound and Silt Lagoon	Y	O	Y	Agency	NVP, SNC, RSPB Landowner	C. Davidge	Millenium Heritage Lottery		1 to 2 2 to 5	SNC

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CATEGORIES

1	Gravel Pit restoration
2	Bypass & backwater channel improvements
3	Wet grassland projects
4	Water resource/treatment
5	Urban/Semi-urban Waterfront Regeneration
6	Water Recreation (inc navigation)
7	Improved access/amenity
8	Flood storage

IMPROVEMENTS BY AGENCY FUNCTION

Fld	Flood Alleviation
W	Water Resources
Q	Water Quality
F	Fisheries
C	Conservation
R	Recreation/Amenity
N	Navigation

Reach 3 - To Billing to A509 (Wellingborough)

Reach / Project No.	Project Categories (see Notes below)	Benefit Category	Name	NNS	Existing or Opportunity	River Structures	Lead Body	Potential Partners	Land Ownership	Potential External Funding Sources	Early Priority P	Timescale (years)	Local Council
3/1	2,3	C	Cogenhoe Meadows		O	Y	Agency		Ecton Estates	EU LIFE		1 to 2	SNC,
3/2	1,4	Q	Billing STW Land Reclamation		O		AW	Agency, Pioneer, RSPB	Anglian Water	Landfill Tax	P (Pilot)	1 to 2 (pilot) >10 (main)	SNC WBC
3/3	1,6	C,R,N	Whiston Broad		O	Y	Agency	Pioneer	Compton Estates Ecton Estates Other Private	Landfill Tax		>10	SNC WBC
3/4	5	R	Earls Barton - Plant Site	Y	O		Pioneer	Private Sector	Pioneer			>10	WBC
3/5	1,7	C	Earls Barton - Heronry/ Reed bed				NVP	NWT, Agency, Pioneer	Pioneer			2 to 5	WBC
3/6	2,3	C	Earls Barton Mill		O	Y	Agency		Pioneer	Landfill Tax		2 to 5	WBC
3/7	1,7	R	Earls Barton Broad		O	Y	Agency		Pioneer	Landfill Tax Lottery		>10	WBC
3/8	6,7	C, R	Wollaston Water Park	Y	E	Y	NVP/ NCC	Pioneer, WBC	Pioneer	Sports Lottery, Heritage Lottery, Landfill Tax	P	2 to 5	WBC
3/9	2	N	Wollaston, Swallow & Grendon Brooks		O		Agency	Angling Club	Pioneer			1 to 2	WBC
3/10	5,6	R	Wellingborough Marina		E	Y	Whitworth	Private Sector	Whitworth		P		WBC

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IMPROVEMENTS BY AGENCY FUNCTION

Fid	Flood Alleviation
W	Water Resources
Q	Water Quality
F	Fisheries
C	Conservation
R	Recreation/Amenity
N	Navigation

CATEGORIES

1	Gravel Pit restoration
2	Bypass & backwater channel improvements
3	Wet grassland projects
4	Water resource/treatment
5	Urban/Semi-urban Waterfront Regeneration
6	Water Recreation (inc navigation)
7	Improved access/amenity
8	Flood storage

Reach 4 - A509 (Wellingborough) to A6 (Irthlingborough)

Reach / Project No.	Project Categories (see Notes below)	Benefit Category	Name	NNS	Existing or Opportunity	River Structures	Lead Body	Potential Partners	Land Ownership	Potential External Funding Sources	Early Priority P	Timescale (years)	Local Council
4/1	5	S	Wellingborough Embankment		E	Y	WBC	Agency, NCC, NVP	WBC, Whitworth, Other				WBC
4/2	5,8	R	Victoria Mills		E		Whitworth		Whitworth				
4/3	4,5,8	Fid, Q, C	R. Ise Diversion		E	Y	Developer	Agency, WBC	Agency, ARC			1 to 2	WBC
4/4	7	R	Irchester Heritage Park	Y	E	Y	NCC	WBC, Gardens Trust, Agency	Whitworth (Transfer to NCC)	Heritage Lottery, Millenium	P	2 to 5	WBC
4/5	6	R	Ditchford Gravel Pits	Y	O		ARC	Private Sector	ARC	Sports Lottery		1 to 2 2 to 5	WBC
4/6	5	R	Chettles Factory Relocation		O		Chettles	Private Sector	Chettles				WBC
4/7	7	R	Ditchford Lakes and Meadows	Y	E		ENC	NWT, NVP	ENC	CSS		opens 1999	ENC
4/8	6,7	R	Skew Bridge Leisure & Recreation	Y	O		Private	Private Sector	ARC				ENC
4/9	1,4	R, Q	Broadholme STW Reedbeds		O		AW	Agency, ARC	ARC	EU LIFE		5 to 10	ENC
4/10	3,7	R, C	Irthlingborough - New Mineral Extraction (AS7)	Y	O	Y	ARC	NVP, NWT, Irthlingboro TC	ARC, Duchy of Lancaster	Landfill Tax		5 to 10	ENC

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W	Water Resources
Q	Water Quality
F	Fisheries
C	Conservation
R	Recreation/Amenity
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1	Gravel Pit restoration
2	Bypass & backwater channel improvements
3	Wet grassland projects
4	Water resource/treatment
5	Urban/Semi-urban Waterfront Regeneration
6	Water Recreation (inc navigation)
7	Improved access/amenity
8	Flood storage

Reach 5 - A6 (Irthlingborough) to A14 (Thrapston)

Reach / Project No.	Project Categories (see Notes below)	Benefit Category	Name	NNS	Existing or Opportunity	River Structures	Lead Body	Potential Partners	Land Ownership	Potential External Funding Sources	Early Priority P	Timescale (years)	Local Council
S/1	7	R	Stanwick Gravel Pits	Y	O		Agency/ ENC/ NWT	NVP	Private	Landfill Tax, Heritage Lottery	P	1 to 2 2 to 5	ENC
S/2	3,8	Fld, C	Woodford & Denford Meadows		O	Y	RSPB / Agency	Agency /NVP/ ENC	Private			1 to 2	ENC
S/3	5,6	R	Thrapston - Marina		O	Y	Drayton Estate	Private					ENC
S/4	2,5	R	Thrapston - Former ARC Plant Area	Y	O	Y	Private		ARC				ENC

Reach 6 - A14 (Thrapston) to Wansford

Reach / Project No.	Project Categories (see Notes below)	Benefit Category	Name	NNS	Existing or Opportunity	River Structures	Lead Body	Potential Partners	Land Ownership	Potential External Funding Sources	Early Priority P	Timescale (years)	Local Council
6/1	3,8	C	Achurch marsh & Wadenhoe	z	O	Y	RSPB/ Agency	NVP, Agency, RSPB	Private	EU LIFE Heritage Lottery	P	1 to 2 2 to 5	ENC
6/2	2	C	Oundle Backwater Channel		O	Y	Agency		Private	EU LIFE		1 to 2 2 to 5	
6/3	6,7	R	Oundle Marina	Y	O	Y	Private	Agency	Fairline Boats				ENC
6/4	3,6	C	Oundle - North Meadows		E		NVP	NWT, Agency, FRCA, Oundle TC, Private		CSS	P	1 to 2	ENC
6/5	3,8	C	Eaglethorpe (Warmingston to Fotheringhay)		O	Y	RSPB/ Agency	Agency/ NVP	Private			1 to 2 2 to 5	ENC

KEY TO ABBREVIATIONS

NCC	Northamptonshire County Council
NBC	Northampton Borough Council
SNC	South Northants District Council
WBC	Wellingborough Borough Council
ENC	East Northants District Council
CCC	Cambridgeshire County Council
PCC	Peterborough City Council
FDC	Fenland District Council
NVP	Nene Valley Project
Agency	Environment Agency
RSPB	Royal Society for Protection of Birds
EN	English Nature
NWT	Northants Wildlife Trust
CWT	Cambs Wildlife Trust
NPT	Nene Park Trust
AW	Anglian Water
BW	British Waterways
FRCA	Farming and Rural Conservation Agency

IMPROVEMENTS BY AGENCY FUNCTION

Fld	Flood Alleviation
W	Water Resources
Q	Water Quality
F	Fisheries
C	Conservation
R	Recreation/Amenity
N	Navigation

CATEGORIES

1	Gravel Pit restoration
2	Bypass & backwater channel improvements
3	Wet grassland projects
4	Water resource/treatment
5	Urban/Semi-urban Waterfront Regeneration
6	Water Recreation (inc navigation)
7	Improved access/amenity
8	Flood storage

Reach / Project No.	Project Categories (see Notes below)	Benefit Category	Name	NMS	Existing or Opportunity	River Structures	Lead Body	Potential Partners	Land Ownership	Potential External Funding Sources	Early Priority P	Timescale (years)	Local Council
7/1	6	R	Wansford Marina		E	Y	Private	Agency					PCC
7/2	2,3,8	C	Castor Flood Meadows		O	Y	Agency	PCC/CWT		EAF			PCC
7/3	7	R	Ferry Meadows Country Park		E		NPT	Agency					PCC
7/4	6	R	Peterborough Yacht Club		O	Y	PYC	Agency	PYC, Private	Sports Lottery		2 to 5	PCC
7/5	6	R	Orton Canoe Slalom		E	Y	Agency				P	1 to 2	PCC
7/6	5,7	C	Former British Sugar Site		O		PCC	CWT, Agency		Developers	P	1 to 2	PCC
7/7	5,7	C	The Boardwalks LNR		E		PCC CWT	Agency		EAF			PCC
7/8	5,7	R, C	Railworld Wildlife Reserve		E		Railworld	Agency	Railworld	EAF		1 to 2	PCC
7/9	5,6	R	Peterborough South Bank Development		O	Y	PCC	Agency		Developers, English Partnership, European	P	1 to 2 2 to 5	PCC
7/10	5,7	R, C	Embankment End Marsh		O		PCC	AW/CWT	PCC	EAF			PCC
7/11	3	C	Stanground Washes		E	Y	CWT/EN	PCC, Agency	CWT Private	Landfill		1 to 2	PCC FDC
7/12	4	W,Q	Flag Fen STW		O	Y	AW	Agency	AW			2 to 5	
7/13	3	C	High Wash		E		EN	Agency	Private				FDC
7/14	4	R, Q, C	Peterborough Urban Runoff		O		Agency						

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Appendix 4

GLOSSARY

Abstraction Licence	A statutory document issued by the Environment Agency to permit removal of water from a source of supply. It can limit the quantity of water taken daily etc.
Agro-chemicals	Chemical substances used in agricultural production including fertilisers, herbicides, fungicides and insecticides.
Algae	Microscopic (sometimes larger) plants, which may be floating or attached. Algae occur in still and flowing water.
Ammonia	A chemical compound found in water often as a result of pollution by sewage effluents. It is widely used to determine water quality. Ammonia detrimentally affects fish.
Base Flow	That part of the flow in a watercourse made up of groundwater and discharges. It sustains the watercourse in dry weather.
Biochemical Oxygen Demand	A standard test which measures over 5 days the amount of oxygen taken up by (BOD) aerobic bacteria to oxidise organic (and some inorganic) matter.
Biomass	Total quantity or weight of organisms in a given area or volume - e.g. fish biomass is measured as grammes/square metre (gm^{-2}).
Buffer Zone (strip)	Strip of land 10-100m wide, alongside rivers which is removed from intensive agricultural use and managed to provide appropriate habitat types.
Consent (Discharge)	A statutory document issued by the Environment Agency. It can authorise entry and indicate any limits and conditions on the discharge of an effluent to a Controlled Water. A land drainage consent is an approval for specified structural works in areas under Agency control.
Countryside Stewardship Scheme	Scheme set up by the Countryside Commission in which land-owners are granted aid to manage their land in an environmentally sensitive manner.
Demand Management	Activities to manage the amount of water required from a source of supply; includes measures to control waste and/or to discourage use.
Diffuse Pollution	Pollution from widespread activities with no one discrete source. eg. acid rain, pesticides, urban run-off etc.
Ecosystem	A functioning, interacting system composed of one or more living organisms and their effective environment, in biological, chemical and physical sense.
Effluent	Liquid waste from industry, agriculture or sewage treatment plants.
Environmental Assessment	The process of evaluating the environmental pros and cons of proposals (often for civil engineering works). Formal Environmental Assessment is carried out and advertised under Statutory Instrument 1217.
Environmental Quality Standard (EQS)	The concentration of a substance which must not be exceeded if a specific use of the aquatic environment is to be maintained.
Eutrophic	A description of water which is rich in nutrients. At worst, such waters are sometimes beset with unsightly growths of algae.
Eutrophication	The enrichment of water by nutrients, especially nitrogen and/or phosphorous, which cause: accelerated growth of algae and high plant life: changes in the ecological balance and deterioration in water quality.
Fish Biomass	A measure of the quality of a fishery as found in terms of surveys, weight by area ie g/m^2 .
Flood Storage Reservoir	An area of land whose prime purpose is to receive and store flood flows usually to prevent flooding of adjacent or valuable land.
Flood Plain	This includes all land adjacent to a watercourse over which water flows or would flow but for flood defences in times of flood.

Groundwater	May refer to all subsurface water as distinct from surface water. Generally groundwater is considered to be that water which is below the zone of saturation and contained within porous soil or rock stratum (aquifer).
Hydrogeology	The study of the occurrence and movement of groundwater and the interaction with geology.
Hydrometric	The measurement of water.
Impermeable	Used to describe materials, natural or synthetic, which have the ability to resist the passage of fluid through them
Internal Drainage Boards (IDBs)	Authorities responsible for dealing with land drainage within a district. They are primarily concerned with agricultural land drainage but also may be involved with water supply to their district for agricultural purposes.
Integrated Pollution Control	A system of pollution control, administered by Her Majesty's Inspectorate of Pollution, that applies to the most potentially polluting or technologically complex industrial and other processes in UK. IPC deals with releases of all media (air, land and water) and uses the principles of BATNEEC and BPEO.
Landfill	The engineered deposit of waste into or onto land in such a way that pollution or harm to the environment is minimized or prevented and, through restoration, to provide land which may be used for another purpose.
Leachate	Liquor formed by the act of leaching.
Nutrient	Substance providing nourishment for plants and animals eg nitrogen, phosphorus.
Outfall	The point at which a river discharges to a downstream source eg estuary, sea; it may also include an outfall structure to prevent sea waters backing up the system.
Riparian Owner	Owner of riverbank and/or land adjacent to a river. Normally owns riverbed and rights to midline of channel.
River Corridor	The continuous area of river, river banks and immediately adjacent land alongside a river and its tributaries.
Saline Intrusion	Salt water is heavier than freshwater and will therefore tend to sink to the bottom of a watercourse. Once salt water has entered a watercourse it is difficult to remove other than by flushing with high flows during floods. It can have profound effects on the ecology of a river.
Site of Special Scientific	A site given a statutory designation by English Nature or the Countryside Interest (SSSI) Council for Wales because it is particularly important, on account of its nature conservation value.
Special Protection Area (SPA)	Statutory protected habitats for wild birds under EC Regulations.
Statutory Water Quality Objectives (SWQO)	Methods of classifying waters and targets for individual waters that have been given statutory force through the issue of Regulations by the Secretary of State under the Water Resources Act 1991.
Urban run-off	Rainfall from towns and cities that is carried off by streams and rivers.
Washlands	Extensive semi-natural area of flood plain adjacent to a river, where water is stored in time of flood. Structures can be added to control the amount of water stored in the washland and time its release to alleviate peak flood flows in areas downstream.
Water Quality Objectives (WQO)	Water quality targets to secure specific formal minimum quality standards for specific stretches of water by given dates. A new component of these is introduced by "The Surface Waters (River Ecosystem Classification) Regulations 1994"; a classification scheme to be applied by the Environment Agency to the rivers and watercourses of England and Wales. Other existing standards operate already to give effect to various EC Directives for water quality.
Water Resource	The naturally replenished flow of recharge of water in rivers or aquifers.
Wetland	An area of low lying land where the water table is at or near the surface for most of the time, leading to characteristic habitats.

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