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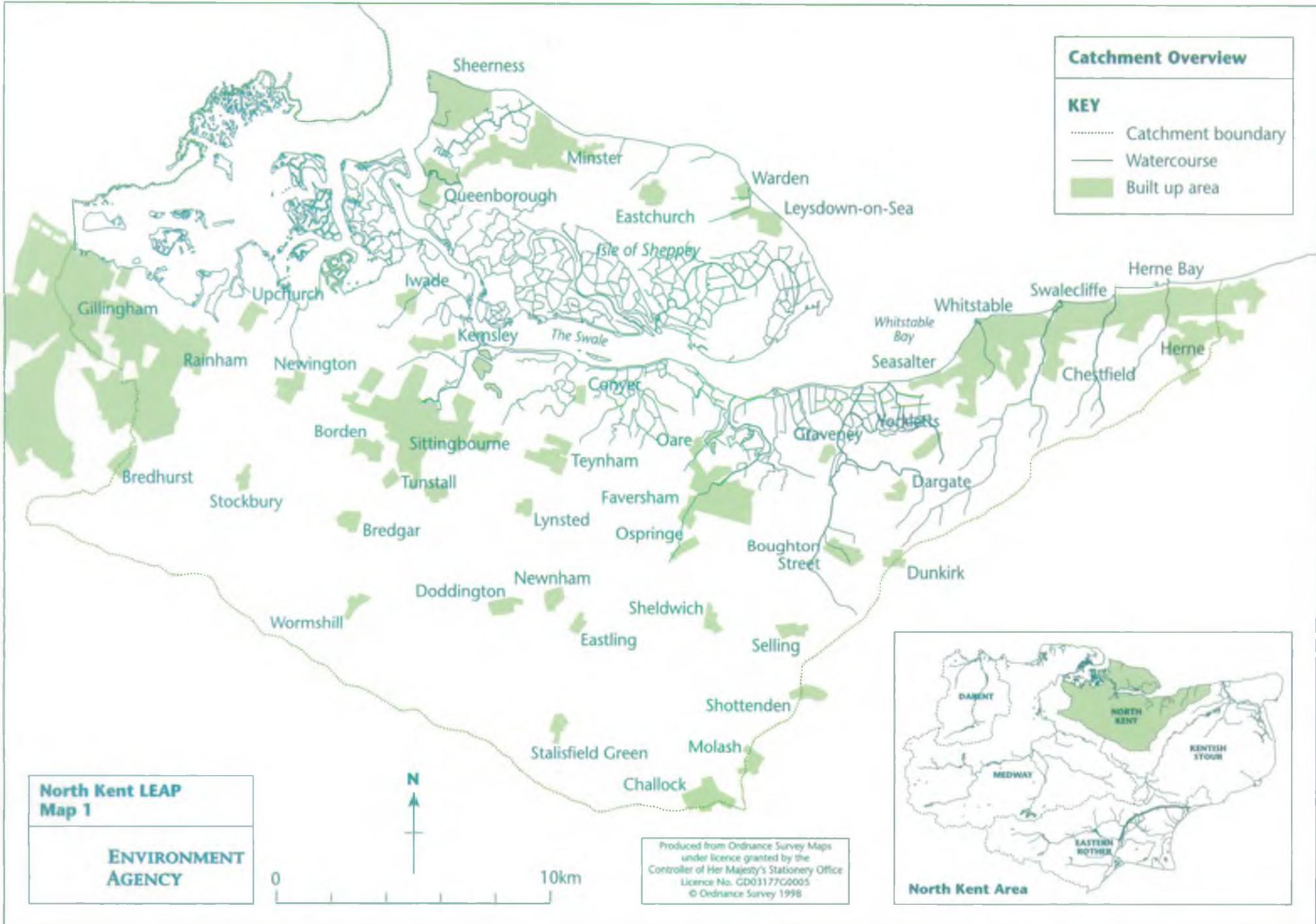
local environment agency plan

NORTH KENT **DECEMBER 1999**



ENVIRONMENT
AGENCY

Catchment Overview



FOREWORD

Welcome to the Local Environment Agency Plan (LEAP) for North Kent. This LEAP examines issues specific to the catchment in support of the more strategic and broader-based issues identified in the Kent Area LEAP.

One of the fundamental objectives of the LEAP process is to involve all interested parties in working with the Agency in planning for the future well-being of the local environment, ensuring decisions on the future management of the LEAP area are based on a range of views from interested parties. As a result, this document has been produced after public consultation following the launch of the Consultation Draft in March 1999. We are grateful to the many people who responded to the draft document. Their comments have enabled us to evaluate the issues raised in the original report and refine them into an action plan framework which sets out the work that the Agency intends to carry out in the Catchment in partnership with others over the next 5 years. Actions identified in the plan will be monitored and progress reviewed annually.

Many of the issues in this plan cannot be resolved by the Agency alone and are over and above the statutory duties of the Agency. This highlights the need for co-operation bringing together the complementary responsibilities, objectives and resources of different groups. The work of the Agency is increasingly being implemented through partnerships as it becomes recognised that we can achieve more by working together.

I hope you find the LEAP interesting and informative. I am convinced that the implementation of the actions in this LEAP will lead to improvements in the environment of North Kent as we move into the next millennium. If you have any comments or wish to become involved in addressing the issues raised, we would like to hear from you.

Thank you for your involvement in the LEAP process.

Binny Buckley
Kent Area Manager
December 1999



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1.0 INTRODUCTION

1.1 THE ENVIRONMENT AGENCY

The Environment Agency was established on 1 April 1996 as a result of the Environment Act 1995. The Agency was created by merging the expertise of Her Majesty's Inspectorate of Pollution, the Waste Regulation Authorities, the National Rivers Authority and several small units of the Department of the Environment. The Agency therefore provides a more comprehensive approach to the protection and management of the environment by integrating the regulation of air, land and water. The Agency's overall aim is to protect and enhance the whole environment and thus contribute to the goal of sustainable development.

1.2 THE ENVIRONMENT AGENCY'S VISION

The Agency's vision is to create: *A better environment for present and future generations.*

A better environment means different things to different people and the Agency has developed the following set of objectives to clearly focus its efforts on what it means by a better environment and what it is trying to achieve. They relate to the Agency's national objectives and to the powers and duties that it has been given by Government.

The Agency's aims are:

- to achieve major and continuous improvements in the quality of air, land and water
- to encourage the conservation of natural resources, animals and plants
- to make the most of pollution control and river-basin management
- to provide effective defence and warning systems to protect people and property against flooding from rivers and the sea
- to reduce the amount of waste generated by encouraging people to re-use and recycle their waste
- to improve standards of waste disposal
- to manage water resources to achieve the proper balance between the country's needs and the environment
- to work with other organisations to reclaim contaminated land
- to improve and develop salmon and freshwater fisheries
- to conserve and improve river navigation
- to tell people about environmental issues by educating and informing
- to set priorities and work out solutions that society can afford

Achieving sustainable development in the North Kent catchment requires long term planning, careful balancing of priorities and the commitment of everyone that uses or manages the environment. The North Kent LEAP will help contribute to the principle of sustainable development through integrated management and improvement.

2.0 THE LEAP PROCESS

2.1 LOCAL ENVIRONMENT AGENCY PLANS (LEAPs)

LEAPs take a long-term view of local environments and set out a five-year plan of action for solving local issues. They are non-statutory plans based on river catchments that help to fulfil the Agency's principal aim of contributing to sustainable development through integrated environmental management and improvement. LEAPs sit alongside existing statutory and non-statutory plans from other organisations and recognise that partnership working between the originators of such plans is the key to achieving their aims.

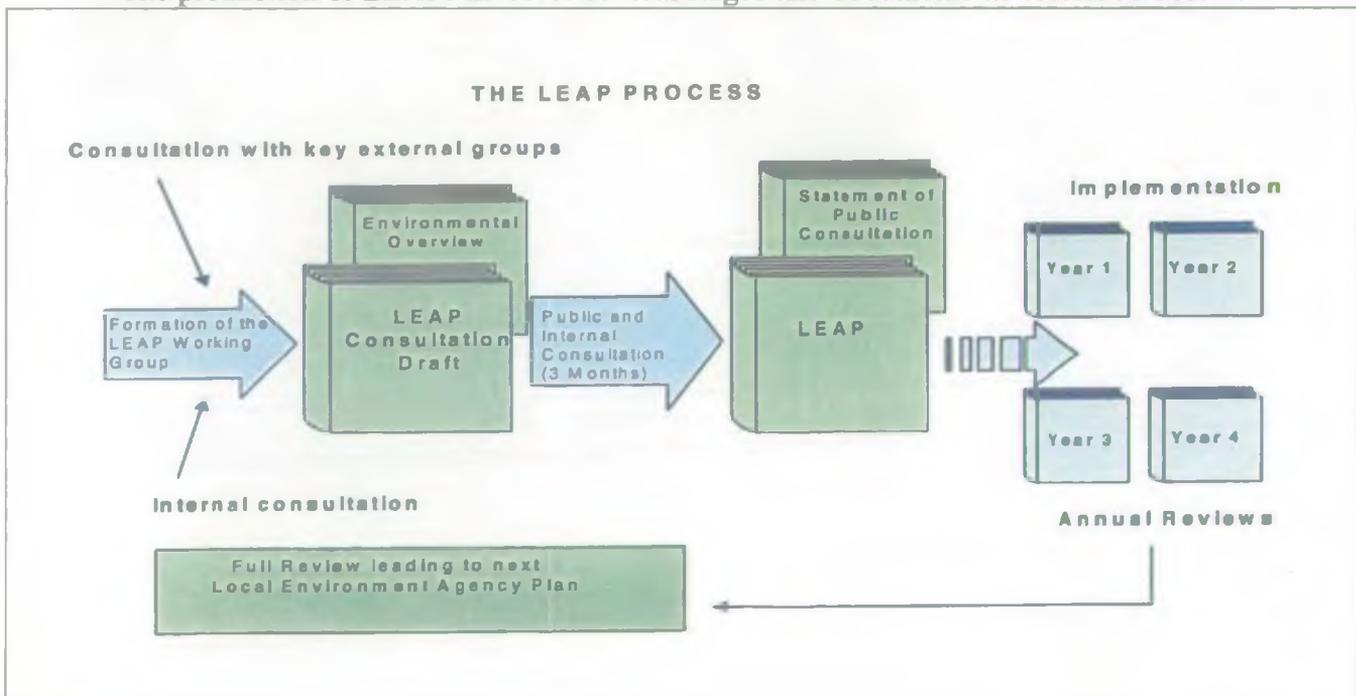
The LEAP is not designed to reflect the Agency's routine activities within the plan area. The Agency's everyday work commits substantial resources to managing the environment including extensive monitoring and survey operations. The Agency is not responsible for regulating every aspect of the environment and for certain issues, other organisations are primarily responsible.

The Agency is committed to a programme of LEAPs as they enable the Agency to identify, assess, prioritise and solve, local environmental issues, taking into account the views of local stakeholders. These will also allow the Agency to deploy its resources to best effect and optimise benefit for the local environment.

LEAPs replace the Catchment Management Plans that were produced by the former NRA and build on their success by covering all the Agency's functions. LEAPs also have role in:

- Promoting openness and accountability
- Developing closer links with public/community and other organisations
- Educating and informing the public on local environmental issues
- Realising the environmental potential of the area

The production of LEAPs involves several stages and documents as described below:



2.2 KENT AREA APPROACH

An over-arching Kent Area LEAP has been produced addressing significant strategic issues that are common across several catchments in the Area. Specific local issues are then dealt with in a series of catchment LEAPs as follows:

Darent Eastern Rother Kentish Stour Medway North Kent

Copies of the Kent Area and catchment LEAPs are available from the Kent Area Office.

2.3 THE NORTH KENT LEAP DOCUMENTS

This **North Kent LEAP** sets out a programme of action which the Agency and partner organisations intend to carry out over the next five years in order to protect and enhance the local environment of the catchment. As with all such programmes, funding for these actions will be subject to availability and to changes in priority, within the Agency and externally, both locally and nationally.

The LEAP has been developed from the Consultation Draft and is intended to be a stand-alone document but is best used in conjunction with the documents detailed below which support it and from which it has been developed. The LEAP transforms the proposals put forward in the Consultation Draft into agreed actions in the light of comments received during the consultation process. It will guide the Agency's activities in the Area for the next five years and will hopefully influence the activities of other key bodies. Where more background information or greater detail of an issue is required, reference should be made to the Environment Overview.

The Consultation Draft is the main focus for public consultation, concentrating on the prioritisation of environmental issues relevant to the Agency and the identification of possible options for action necessary to restore/improve the local environment.

The Environmental Overview is a factual description and analysis of the local environment, looking at the impact of stresses on its state. It provides the background to the identification of the environmental issues of importance in the Medway for public consultation.

The Statement of Public Consultation details the results of the consultation process and the influence it has had on the development of the final LEAP.

Regular monitoring and updating are an integral part of the LEAP process. Progress in implementing LEAP actions will be monitored and reported on in a published **Annual Review**. This will also identify any additional actions needed to maintain progress in light of any changes in the LEAP Area and also whether any actions need removing or amending where they are no longer appropriate.

After five years, or sooner if required, the Agency will carry out a major review of the progress that has been made. At this stage the Agency will produce a new LEAP Consultation Draft to reflect these changes to further improve the local environment.

3.0 REVIEW OF THE CONSULTATION PROCESS

3.1 LEAPS AND PUBLIC CONSULTATION

A fundamental objective of the LEAP process is to involve all interested parties in working with the Agency towards planning for the future well being of the local environment. The Agency is committed to the process of public consultation on all of its LEAPs. This section provides a brief overview of the three-month consultation period. A separate "Statement of Public Consultation" provides more specific details of the influence of the public consultation process on the development of the final document.

3.1.1 Initial Consultation

A number of organisations were consulted during the preparation of the Consultation Draft and several meetings were held with relevant organisations. The draft was put together using data and information supplied by Area and Regional staff and the Agency's National Centre for Environmental Data and Surveillance.

3.1.2 Launch Publicity

The LEAP was launched on 23rd March 1999 in the Alexandra Centre, Faversham. Over 300 invitations were sent out to key stakeholders and approximately 75 people attended. Press releases generated interest from a number of local newspapers and several reports on television and radio. Over 500 Consultation Drafts were sent out to individuals and a broad range of organisations. Leaflets explaining the public consultation process and copies of the Consultation Draft were sent to the main libraries in the LEAP Area. As the consultation period was drawing to a close, a "last chance to comment" press release was released and this again generated local media coverage.

3.1.3 The Kent Area Environment Group (AEG)

Members of the Kent AEG represent local authorities and the wide range of interests of the Agency's customers, including anglers, farmers and local businesses. The purpose of the AEG is to advise the Agency on local environmental issues and opportunities for partnerships, and to provide feedback on Agency initiatives, including LEAPs. To this extent, the AEG is a form of partnership with the public and its contribution is highly valued by the Agency. The AEG was kept informed of the progress of the plan and given the opportunity to comment and shape the document by providing advice and information at key stages.

3.2 SUMMARY OF RESPONSES

A total of 32 consultees responded to the Consultation Draft. All comments have been considered and where appropriate and practicable, incorporated into the Plan. A number of consultees expressed an interest in partnership working and they have been included in the actions tables.

Errors and omissions were also drawn to our attention. A number of issues picked up as omitted had already been dealt with as an issue in the over-arching Kent Area LEAP. It is hoped that the relationship between the two documents has been clarified in this document. A number of consultees also congratulated the Agency on producing a comprehensive document and welcomed the Agency's commitment to integrated environmental management.

4.0 THE NORTH KENT CATCHMENT

4.1 INTRODUCTION

The North Kent LEAP area is defined as the surface catchment of the Swale with the lower reaches of the Medway Estuary. It extends from Gillingham in the west to Herne Bay in the east, embracing the whole of the Medway Estuary, the Swale and Isle of Sheppey, and extends southwards to include the dip slope of the North Downs chalk outcrop. The main towns within the LEAP area are Gillingham, Sittingbourne, Faversham, Whitstable, Herne Bay, with Sheerness and Minster on the Isle of Sheppey.

By virtue of its location, geology and cultural heritage, North Kent has a great diversity of landscape, flora and fauna. The area's wildlife importance is acknowledged at national and international level through the system of nature conservation designations.

Whilst the distinctiveness and nature conservation value of the North Kent marshes area is widely recognised, its environment is not generally perceived as high quality. This negative perception, possibly attributable to the area's flat, open landscape, has been compounded by recent development. Power stations, major manufacturing industry, and lines of pylons detract from views across the marshes, and reduce their tranquillity and sense of remoteness.

The Environment Agency's vision is of an area:

- where the underlying environmental character and special qualities are recognised;
- whose population recognises the importance of the environment to economic and social well-being; and
- where there is a well-developed understanding of the concept of sustainable development and its application to key issues, such as economic development, water resource planning, waste management, tourism, and transport.

The issues that need to be addressed in order to realise this vision are set out in Section 6. The remainder of this section sets the broader context, by providing a summary of the Environmental Overview.

4.2 GEOLOGY, TOPOGRAPHY AND LAND DRAINAGE

The LEAP area is dominated by the area of the North Kent Chalk block, although other strata, such as the Thanet Beds and the Woolwich, Reading and Oldhaven Beds, overlie the Chalk in the north of the LEAP area. Topographical divisions largely follow the geology forming distinctive areas:

- the Medway and Swale marshes – low lying flat land;
- Sheppey - higher northern half of the island and the elevation of open hills and ridges;
- North Kent Fruitbelt – higher land forming a buffer area to the Marshes and highly influenced by the towns of Gillingham, Sittingbourne and Faversham;
- North Downs – highest land along the southern boundary of the LEAP area.

The LEAP area is unusual in that there are no significant fresh watercourses. Instead, a series of streams enter the Medway Estuary and Swale along their southern shores.

4.3 LAND USE AND LANDSCAPE

The area is predominantly agricultural, with extensive areas of high quality agricultural land. Although there is evidence of settlement from the Bronze Age, it is the Roman influence that is most visible, with the establishment of Watling Street which is partly followed by the route of the A2 today. Nucleated settlement began to reappear after the Norman Conquest, with Faversham becoming a sizeable medieval town. Reclamation of the marshland began in the 13th Century giving rise to the grazing marshes with their ditches and successive counter walls, which, along with the salt mounds, form distinctive elements in the landscape.

However, it is the more recent 20th Century developments that have had the greatest visible impact on the landscape. In addition to the main towns and numerous smaller settlements, the dramatic industrial centres at Kingsnorth, Sheerness and Queenborough and their associated infrastructure have had a profound influence on the landscape. Despite this, it is the openness and tranquillity of the Isle of Sheppey and the marshlands along the fringe of the mainland, which give the area its distinctive and special character. This natural beauty has been captured by notable figures such as Turner, who painted scenes in the Estuary.

4.4 WATER RESOURCES

The principal water resource in the LEAP area is the Chalk aquifer, which is heavily committed with respect to abstraction licences. Groundwater abstraction from Chalk currently constitutes over 90% of the total licensed abstraction. The licences are for a range of uses, including drinking water supply, industrial and agricultural uses. There are a number of large licensed abstractions which are held by the water companies (Southern Water plc and Mid Kent Water plc), several paper mills and breweries, and two large agricultural enterprises. The remaining groundwater abstractions are for smaller industrial and agricultural processes and a few domestic water supplies.

Water quality is susceptible to a range of stresses including domestic and industrial activities such as non-consented discharges and wastes from pollution incidents, backing up of storm waters from blocked consented storm overflows, leakage from septic tanks, potential contamination from landfill sites and from agricultural run-off.

4.5 AIR QUALITY

Industrial processes are divided into Part A processes, authorised by the Agency under the Integrated Pollution Control (IPC) regime, and Part B processes, authorised by local authorities under the Local Authority Air Pollution Control (LAAPC) regime. Part A processes are authorised to operate provided they prevent, minimise and render harmless potential emissions made to all environmental media.

Industrial activity, particularly around Sheerness and east Gillingham, and traffic emissions from the M2/A2 and built-up areas are the main causes for concern for potential air quality deterioration in the North Kent LEAP area. The results of the Kent Air Quality Model indicate that there are no areas in the LEAP area where ground concentrations of sulphur dioxide and nitrogen dioxide exceed limit levels or standards set by the Department of the Environment, Transport and the Regions.

4.6 NATURE CONSERVATION

The nature conservation interest of the LEAP area is centred on the Medway Estuary, the Swale, their tributary creeks and associated marshes. This area is enormously rich in nature conservation interest. Under the UK and Kent Biodiversity Action Plan (BAP), the Environment Agency is the lead agency for a number of species. Of these, water vole and shad have been recorded in the North Kent area. Virtually all of the Medway and the Swale are designated as a Site of Special Scientific Interest and much of it forms part of a Special Protection Area designated under the Wild Birds Directive and a Ramsar Site (a wetland of international importance).

Rising sea levels, in addition to impacts of artificial coastal defences and dredging to maintain a navigable channel are leading to a reduction in the area of intertidal habitats (saltmarsh and mudflats) in the estuary. Other stresses on nature conservation are resulting from recreational use of the estuary and the impacts of industrial and sewage discharges, groundwater abstractions and agricultural practices.

4.7 ADMINISTRATION

The North Kent LEAP area falls entirely within Kent. The majority of the area lies within the administrative boundaries of Swale Borough Council and Medway Council, although parts of Maidstone Borough Council, Ashford Borough Council and Canterbury City Council areas also lie within the LEAP area.

Thames Gateway Planning Framework

"Thames Gateway" embodies the vision for the future of the area previously known as the East Thames Corridor. At its origin the initiative was a collection of substantial and disparate development sites, some seen as difficult to bring into productive use. Thames Gateway aims to change that by setting the framework for a sustained and sustainable programme of economic, social and environmental regeneration. Some of these changes will entail additional residential developments at the fringes of urban areas, although much of it will comprise the re-development of "brownfield" sites in Chatham, Gillingham and on the Isle of Sheppey. It is likely to result in large-scale new housing developments at Iwade, and further commercial development to the North East of Sittingbourne, at Ridham and at the Port of Sheerness Docks.

5.0 A BETTER ENVIRONMENT THROUGH PARTNERSHIP

5.1 INTRODUCTION

Many of the issues addressed in this LEAP Consultation Draft relate closely to the principles of 'sustainable development'. In other words, they are concerned with the needs and aspirations of current and future generations of residents and visitors in the area. They aim to:

- address the causes of climate change and its likely effects, such as rising sea levels and the implications of this for the area's flood defences;
- secure positive management and protection of the area's landscape character and significant nature conservation resources, whilst respecting economic concerns;
- encourage more efficient use of water resources;
- achieve a better understanding of the causes and effects of environmental change, notably coastal processes and water quality improvements; and
- increase opportunities for people to enjoy the natural environment and to travel by means other than private cars.

The Agency alone cannot achieve these aims as it has neither the statutory powers, nor the resources or technical expertise. For this reason we will continue to work in partnership with local authorities and other organisations.

5.2 CURRENT PARTNERSHIPS AND PROJECTS IN THE LEAP AREA

There are a wide variety of current projects in the LEAP area involving partnership between the Agency and different organisations. A selection of these are summarised below.

5.2.1 North Kent Marshes Initiative (NKMI)

The NKMI was launched in 1995 to bring together organisations and interest groups with interests in, and responsibilities for, the estuary area to jointly consider and agree upon its future well-being. The purpose of the Initiative is to produce an Estuary Management Plan for the Medway Estuary and the Swale to demonstrate how conservation, development, commerce, industry, agriculture and recreation can co-exist in a way that will ensure the sustainable future of the estuary in both the long and short term. The Agency has been and remains an active partner in this initiative.

5.2.2 Kent Biodiversity Action Plan (BAP)

The UK Government's response to the 1992 Convention on Biological Diversity, 'Biodiversity: The UK Action Plan' was published in 1994 and sets out the broad strategy for conserving and enhancing wild species and wildlife habitats in the UK for the next 20 years. The overall goal of the UK Action Plan is 'to conserve and enhance biological diversity within the UK and to contribute to the conservation of global biodiversity through all appropriate mechanisms'. Along with a number of other organisations, the Agency has some responsibility for delivering the (BAP) and is the contact organisation for a number of habitats and species.

The Kent Biodiversity Action Steering Group produced the local BAP for Kent "Kent Biodiversity Action Plan – A Framework for the Future of Kent's Wildlife" in 1997. The Steering Group comprises government bodies (including the Agency), local government, independent wildlife organisations, landowners and managers. The plan identifies the Agency as the lead agency for river and streams habitats, and a number of species including the water vole and allis and twaite shads which are of particular relevance to North Kent.

5.2.3 Water Level Management Plans (WLMPs)

Water Level Management Plans are written agreements between Landowners, the Agency and English Nature by which the water level requirements for a range of activities in a particular area can be balanced and integrated, for example, agriculture, flood defence and conservation. The plans define the areas that require attention, outline procedures for maintenance, recording and monitoring and set the intervals at which the plan is reviewed.

Three WLMPs are to be produced which include parts of the North Kent LEAP area:

- Sheppey and Medway - to be produced by the Internal Drainage Board;
- Seasalter SSSI on the Isle of Sheppey - has been produced by the Agency; and
- Capel Fleet SSSI- has been produced by the Agency. This WLMP has been signed up to by local landowners, the Agency, EN, and RSPB. One of its recommendations is to build a permanent pumping station at Mocketts.

5.2.4 South East Region Group Plan – Long Term Water Resource Strategy (2021)

Following the 1997 Water Summit, relevant water companies, OFWAT and the Agency convened a group to formulate the "South East Region Group Plan – Long Term Water Resource Strategy (2021)". The production of the Plan in 1999 will coincide with the AMP3 Review and Kent County Council's 4th review of the County Structure Plan. Together they will provide the policy framework for the future planning of water resources.

5.2.5 Estuary Protection Plan

Medway Ports, English Nature, the Agency and the RSPB are producing an Estuary Protection Plan for the protection of the estuary from oil spills.

5.2.6 Saltmarsh Recharge Scheme

As part of the Agency's saltmarsh research and development programme, a small-scale trial was undertaken with English Nature and Medway Ports to look at the beneficial use of dredgings on saltmarsh in the estuary. The trial involved monitoring the movement of sediment to assess what proportion migrated towards the saltmarsh.

5.2.7 West Sheppey Pollution Liaison Committee

West Sheppey Pollution Liaison Committee comprises representatives of Swale Borough Council, the Agency, Southern Water and Medway Ports. The committee meets to discuss noise, dust and other environmental stresses and has resulted in great improvements to emissions to the environment.

5.2.8 Waste Management Initiatives

The Agency wishes to encourage local community and industrial waste management schemes that promote methods which are higher in the waste management hierarchy.

The Agency supported a major initiative, the Medway and Swale Waste Minimisation Demonstration Project, to help companies minimise waste at source. Managed by the Centre for the Exploitation of Science and Technology, the scheme was launched in the North Kent area, where there is a number of major waste generating activities. The scheme successfully reduced significant amounts of releases of effluent to rivers and estuaries, harmful gases to the air and the amount of waste to landfill. The Agency is currently supporting waste minimisation through the Sustainable Business Partnership.

5.3 FUTURE PARTNERSHIP PROCESS

To meet the challenge of achieving sustainable development in the North Kent area will require the Agency and partner organisations to develop an appropriate policy framework, together with a high level of public interest and support. The Agency's proposed contribution to this process is outlined below.

5.3.1 The LEAP Plan

This LEAP contains actions for the Agency to undertake in partnership with a range of organisations and in developing the actions, the comments and suggestions of consultees have been taken into account.

5.3.2 Local Agenda 21 Process

The Agency recognises that the Local Agenda 21 process, one of the main outcomes of the 1992 World Summit on the environment, should play a key role in defining and seeking to resolve local environmental issues of concern to the people of North Kent. We will therefore assist in developing the process in the area by providing information and support as appropriate.

5.3.3 Liaison with Local Planning Authorities

The Agency relies on the local authorities with respect to a number of key issues, such as the protection from development of areas liable to flood. To assist this, the Agency is consulted on development plan policies and proposals and certain planning applications. A successful partnership between the Agency and the local authorities is essential in developing integrated policies and initiatives that accord with the principles of sustainable development. Land use issues of particular concern in North Kent include development in areas liable to flood, conservation of water resources, protection of water quality, and remediation of contamination in association with development of brownfield land.

The Agency will therefore liaise regularly with the council officers and elected members with a view to developing rapport and mutual understanding of each others concerns. To inform future liaison, the Agency is undertaking a review of land use issues in Kent, and the scope and effectiveness of planning liaison to date.

6.0 ACTIONS FOR NORTH KENT

Implementation of the LEAP is based on the actions identified to address the 14 key environmental issues which are of particular significance to the catchment.

The intended actions are presented with proposed time scales, anticipated costs, Agency lead contact and the identification of potential partners. As far as possible, actions should be SMART (specific, measurable, agreed, realistic and time based). In most cases actions are over and above the statutory responsibilities of the Agency and are not matters that can be addressed by the Agency through its day to day work. As such, the plan represents the non-routine investment by the Agency and others in the catchment.

Where possible, costs have been outlined for the period covered by the plan. This does not necessarily reflect the total cost of the schemes to the Agency and is sometimes an estimate to be more accurately costed later. A number of the actions will require feasibility studies and an appraisal of options prior to work commencing. In some cases depending on the outcome of these studies further action may not be required. The document is produced in good faith recognising current priorities both within the Agency and in other organisations. The implementation of the actions will be subject to, amongst other things, availability of resources (financial and human).

6.1 ENVIRONMENT AGENCY BUSINESS PLANNING PROCESS

It is the Agency's intention to implement all actions but activities need to be prioritised in conjunction with the Agency's core duties via the annual Business Planning Cycle. In addition, the Agency is jointly responsible with other identified organisations and individuals for implementing the actions in this plan. A number of the actions rely on external funding and heavily on the changing priorities of partnership organisations. The Annual Review process enables the Agency to regularly assess progress and incorporate changing local and national priorities as necessary.

6.2 THE ACTIONS TABLES

Each Issue is accompanied by short explanatory text but please refer to the Environmental Overview for more background information. Many of the issues and actions are inter-related which reflects the need for integrated environmental management. Cross-referencing between issues and actions has been carried out where appropriate.

LEAPs translate the Agency's long term "Environmental Strategy for the Millennium and Beyond" into action on the ground. Each action is marked by symbol that represents which of the nine key themes in the Strategy the action addresses, as detailed below.



Addressing climate change



Improving air quality



Managing our water resources



Enhancing biodiversity



Managing our freshwater fisheries



Delivering integrated river-basin management



Conserving the land



Managing waste



Regulating major industries

6.3 RELATIONSHIP BETWEEN THE KENT AREA LEAP AND THE NORTH KENT LEAP

The Kent Area LEAP is the strategic over-arching action plan which deals with issues which are common to at least three catchments in the Area. Catchment LEAPs detail issues and actions which are specific to the catchment. There are three basic relationships between issues in the two layers of LEAPs as detailed below:

- A generic issue in the Kent Area LEAP where actions addressing the issue cover activity in North Kent. The issue does not appear again in the North Kent LEAP with the exception of Issues 1, 5, and 7 for which text is included to ensure comprehensive coverage of significant issues and Issues 10, 12, 13, the titles of which are included with relevant cross reference to actions else where in the document to avoid the confusion of re-numbering issues.
- A generic issue raised in the Kent Area with particular relevance to the North Kent catchment and therefore addressed with specific actions in this catchment LEAP.
- A local issue of relevance to less than three catchment LEAPs and therefore not in the Kent Area LEAP but addressed in the North Kent LEAP.

Area of Interest	KENT AREA LEAP	NORTH KENT LEAP
FLOOD MANAGEMENT	Issue 1: Standard of flood and coastal defences will not be adequate for predicted effects of climate change	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 20: Maintenance of existing flood defences	Actions in the Kent Area LEAP cover the North Kent catchment
MANAGING WATER RESOURCES	Issue 2: Sustainable water resources management and the effects of climate change	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 4: Deterioration in the balance of water resources	Issue 2: Historic development of groundwater has resulted in a general deterioration in the balance of water resources in the catchment as evidenced by the depletion of spring fed chalk streams and increased stress on wetland habitats
	Issue 5: Forecast demand – growth; impact on the overall balance of public supplies	Actions in the Kent Area LEAP cover the North Kent catchment
IMPROVING AIR QUALITY	Issue 3: Need for increased knowledge of impacts of Agency regulated industrial releases on air quality	Issue 1: Impacts on Air Quality Actions in the Kent Area LEAP cover the North Kent catchment
ENHANCING BIODIVERSITY	Issue 6: Protection and enhancement of biodiversity	Issue 6: Protection and enhancement of biodiversity
	Issue 8: Protection and enhancement of important wetlands	Issue 7: Implementation of the Agency’s responsibilities under the Habitats Directive and Regulations Issue 5: Conserving and enhancing water related habitats and landscapes Actions in the Kent Area LEAP cover the North Kent catchment.
	Issue 21: Development pressures on environmental resources	Issue 3: The area of intertidal habitat (saltmarsh and mudflats) in the Medway Estuary and the Swale is being reduced as a consequence of a number of stresses

MANAGING FRESHWATER FISHERIES	Issue 7: Illegal movement of freshwater fish through Kent	Actions in Kent Area LEAP cover North Kent catchment
		Issue 8: How the Agency implements its role in managing the fishery in the Medway Estuary
CONSERVING THE LAND	Issue 11: Deterioration in the condition of land drainage.	Actions in Kent Area LEAP cover North Kent catchment
	Issue 22: Contaminated land to be made suitable for development use	Actions in Kent Area LEAP cover North Kent catchment
	Issue 23: Environmental impact of the Channel Tunnel Rail Link	Not applicable to the North Kent catchment.
WATER QUALITY	Issue 12: Water Quality improvements	Actions in Kent Area LEAP cover North Kent catchment
	Issue 13: Improving bathing beaches	Actions in Kent Area LEAP cover North Kent catchment
	Issue 14: Coastal Oil Pollution	Actions in Kent Area LEAP cover North Kent catchment
	Issue 17: Pollution prevention	Actions in Kent Area LEAP cover North Kent catchment
	Issue 29: Danger of contamination of water for drinking water	Actions in Kent Area LEAP cover North Kent catchment
	Issue 10: Reduction in river baseflow producing a loss of dilution capacity	Actions in Kent Area LEAP cover North Kent catchment
		Issue 11 The requirement for additional sewerage capacity in the future is likely to highlight current problems with combined sewer overflows
	Issue 9: Impacts of water quality improvements and elevated water temperatures from industrial discharges on the productivity and nature conservation value of the Medway Estuary and Swale are unknown	
INTEGRATED RIVER-BASIN MANAGEMENT	Issue 9: Declining flows in Kent Area Rivers	Actions in Kent Area LEAP cover North Kent catchment
	Issue 15: Increased managed access to the water for recreation	Issue 4: How to promote water-related recreation in the catchment that is compatible with other interests
	Issue 16: Protection of Archaeological Heritage	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 19: Development pressures and sustainable surface water management	Actions in the Kent Area LEAP cover the North Kent catchment
ENVIRONMENTAL AWARENESS	Issue 18: Raising public awareness of environmental issues in Kent Area	Actions in the Kent Area LEAP cover the North Kent catchment
SUSTAINABLE WASTE MANAGEMENT	Issue 24: Sustainable Wastes Management	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 25: Waste management facilities	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 26: Sites claiming exemption from waste management licensing	Issue 14: The environmental impact of land application of sewage sludge
	Issue 27: Pollution from the metal recycling (scrap) industry	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 28: Land application of sewage sludge	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 30: Sustainable management of landfill gas	Actions in the Kent Area LEAP cover the North Kent catchment
	Issue 31: Risk of illegal waste disposal (fly-tipping)	Actions in the Kent Area LEAP cover the North Kent catchment

ISSUE 1: ADDITIONAL DATA IS REQUIRED TO ASSESS THE CUMULATIVE EFFECTS OF CERTAIN EMISSIONS FROM INDUSTRIAL PROCESSES AND OTHER SOURCES BOTH WITHIN AND OUTSIDE THE AREA

Actions addressing the issues of air quality and cumulative impacts of emissions are dealt with strategically in Issue 3 of the Kent Area LEAP. The Kent Area LEAP also provides information on the division of responsibilities for air quality between the Agency and the local authorities. The Issue is highlighted in the North Kent LEAP as Kent's main industrial activity is concentrated in North Kent, particularly around Sheerness and east Gillingham and this activity therefore has the potential to impact on the air quality of the both catchment, the county and adjacent counties. This concentration of industry, together with traffic emissions from the M2/A2 and built-up areas, are the main causes for concern for potential air quality deterioration in the North Kent area.

The Agency is also required to assess the effect of emissions from authorised IPC sites (major industrial processes) on conservation sites designated under the Habitats Directive (e.g. Special Protection Areas (SPAs)) – of which there are many in the North Kent area.

ISSUE 2: HISTORIC DEVELOPMENT OF GROUNDWATER HAS RESULTED IN GENERAL DETERIORATION IN THE BALANCE OF WATER RESOURCES AS EVIDENCED BY THE DEPLETION OF SPRING FED CHALK STREAMS AND INCREASED STRESS ON WETLAND HABITATS

A number of factors are putting increasing pressure on the balance of water resources, including the increasing demand on water supplies and the potential impacts of climate change. If the general trend established over the last 30-50 years continues, further deterioration with adverse consequences for the water environment is likely. The Agency is working in partnership with the water companies and OFWAT through the Water Resources in the South East Group to develop a water resources strategy for the South East for the next 30 years. The Kent Area LEAP identifies the need for a water resources management strategy for the Kent Area which recognises the particular stresses and strains for the Area from both climate change and proposed development. This will require close partnerships between the Agency, water companies, local authorities, industry, agriculture and conservation groups.

The principal water resource in the LEAP area is the Chalk aquifer, which is heavily committed with respect to abstraction licences. Groundwater abstraction from Chalk currently constitutes over 90% of the total licensed abstraction. The Kent Area of the Agency faces the task of restoring the balance of water resources for the most severely affected areas by implementing a policy aimed at reducing the current dependence on groundwater. This will in turn aid the process of low-flow improvement for the more important spring-fed chalk streams. An action plan will comprise the following elements:

- a water resource management strategy;
- an environmental enhancement programme;
- licensing guidelines; and
- drought contingency plans.

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
1. Carry out an assessment of the balance of water resources for the Chalk aquifer. Consequently, set targets for the improvement of low flows on spring fed streams and review the abstractions affecting the ecology of wetland areas designated under the EC Habitats Directive. • (Agency Lead: Area Water Resources Manager)	Achievement of target flows. Year 1 investigation & hydrometry. Year 2: habitat surveys, data analysis & interpretation & review of groundwater management options. Years 3-5: review abstractions & identify candidate sources for closure, relocation or reductions in abstraction rates.	Restoration of a sustainable equilibrium between water use and environmental objectives.	1999-2004	EN, water companies, other abstraction licence holders	Year 1: £27k. Following years to be determined.	

ISSUE 3: THE BALANCE IN AREA OF INTERTIDAL HABITATS SUCH AS SALTMARSH AND MUDFLATS IN THE MEDWAY ESTUARY AND THE SWALE IS CHANGING AS A CONSEQUENCE OF A NUMBER OF STRESSES

The intertidal habitats of the North Kent Catchment principally comprise saltmarshes and mudflats. These habitats are located to the seaward side of coastal defences in the Medway Estuary and Swale and have been identified as being of high nature conservation value. The extent of, and balance between, these habitats is constantly changing and current pressures causing these changes include encroachment, rising sea levels, coastal squeeze and some historical activities such as the extraction of the estuary mud for the cement and brick industries. (Action 6 Issue 6 specifically refers to intertidal habitats).

The Agency's actions to address these issues are found in the Kent Area LEAP in particular under Issues 8 and 20. As part of a national programme over the next three years, the Agency, in partnership with other organisations is preparing a long-term strategy for the defences of the estuary and a Coastal Habitat Management Plan (CHaMP).

Two important issues for the North Kent catchment centre around the sediment budget and encroachment into the estuary. With regards to encroachment, the Agency and other bodies will seek detailed information to accompany any development proposals and where development is considered appropriate to the location, this will need to be accompanied by a suitable habitat compensation package. (Issues relating to riverside development along the Medway in general are covered in Issue 10 of the Medway LEAP).

Current dredging practice in the estuary involves the deposition of sediment on land and results in a loss of sediment from the estuary sediment budget. A consortium of organisations has undertaken trials into saltmarsh regeneration at Bedlam's Bottom in the Medway Estuary. The trials involved deposition of dredgings on the mudflats to promote retention of sediment in the system without returning it to the main channel. Deposition of sediment is vital to the maintenance of the mudflats and saltmarsh habitats. Further investigations are proposed including larger scale trials of the project. However, due to sea level rise, this option is unlikely to completely halt the loss of intertidal habitats in the estuary.

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
1. Support Medway Ports in reaching environmental and economically accepted solution to the recycling or disposal of their estuary dredgings. • (Agency Lead: FER Manager)	Effective consensus. More effective use of resources.	Retaining sediments within the estuarine system.	2000-2003	MP, EN, RSPB, LAs, universities.	To be determined.	
2. Work with LAs towards reaching consensus over deciding what is appropriate development around the estuary. • (Agency Lead: Team Leader Planning Liaison)	Appropriate development that takes full account of Agency's interests.	Responsible development. Clear and consistent guidance. Improved communication with LAs.	2000-2005	LAs, EN, RSPB	£5k	
3. Encourage LAs to adopt best practise in river frontage development, using lessons learnt from experience in the Tidal Thames. • (Agency Lead: Team Leader Planning Liaison)	Protect valuable habitat. Sympathetic development.	Retains biodiversity and important intertidal habitat. Improved aesthetics. No detriment to flood defence.	2000-2005	LAs, developers, landowners, EN	£15k	

ISSUE 4: HOW TO PROMOTE WATER RELATED RECREATION THAT IS COMPATIBLE WITH OTHER INTERESTS

The Medway Estuary, the Swale, tributary creeks and associated marshes provide opportunities for a wide variety of recreational activities. In addition to water based activities (such as sailing, canoeing and water skiing) and land based activities (such as wildfowling), the area also provides opportunities for people to enjoy wildlife (in particular bird watching) and to appreciate the openness and tranquillity of the landscape through walking.

Although there are no officers dedicated solely to recreation within the Agency's Kent Area, the Agency has a general duty to promote water-related recreation where desirable. This is interpreted as meaning where compatible with our operational and environmental requirements and within the constraints within which we operate. The Agency takes an integrated and collaborative approach to promoting the recreational use of inland and coastal waters and associated lands consistent with our duties under the Environment Act 1995. The Kent Area approach is detailed under Issue 15 of the Kent Area LEAP and several actions are relevant to North Kent, including raising awareness about issues, supporting provision of new facilities and acting as a mediator on difficult issues. These are not repeated as actions here.

One of the main challenges is to agree and promote a level of recreation that can be sustained by the environment. Some recreational activities have the potential to interfere with flood defence operations, cause damage to flood banks or present risks to public safety. This is currently being addressed through the Agency's national research programme, with promotion of the findings detailed as an action under Issue 15 of the Kent Area LEAP. In North Kent in recent years, many individuals and organisations have done a considerable

amount of work on both this issue and in attempting to reach consensus, most notably through the production of the Medway Estuary and Swale Consultation Plan. The promotion of recreation by the Agency will complement and build on this work.

Since the Kent Area LEAP was produced, the Agency has initiated a national review as to how it should promote recreation and the resources this would require. As a result, it is only possible to give a commitment to existing programmes in this LEAP, as it is likely that there will be significant changes in later reviews of the LEAPs covering the Kent Area.

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
<p>1. Support production of the Medway Estuary and Swale Strategy through participation on the Steering Group and financial support subject to availability of resources and other priorities.</p> <p>• (Agency Lead: FER Manager)</p>	A strategy produced by 2000/2001 which the Agency and others can sign up to. Medway Swale Project Officer to achieve Agency targets.	Consensus approach to estuarine management. Promotion of Agency aims.	1999-2001	KCC, Medway Council, Swale Council, Medway Ports, MYA, EN, RSPB	£10k	
<p>2. Support appropriate partnership actions within the Medway Swale Estuary Strategy subject to successful bids for resources.</p> <p>• (Agency Lead: Team Leader Conservation and Recreation)</p>	Completion of 2 successful collaborative projects per year.	Achievement of Agency aims. Working in partnership.	2000-2003	Medway Swale Project Officer, Medway Council, KCC	To be determined.	
<p>3. Support production of a pamphlet promoting 366 Days of Activities during the Millennium year raising awareness about environmental recreation.</p> <p>• (Agency Lead: Team Leader Customer Contact)</p>	Successful year of events that raise awareness of environmental, recreational, historical and sporting events for the Millennium Year in the Medway and Swale Estuary. Events accessible for all.	Promotion of Agency aims. Partnership working. Increased awareness of issues among local communities.	1999-2001	Medway Swale Partnership Officer, Medway Council, Swale Council, Sport England	£2k	
<p>4. Promote green tourism and increase environmental appreciation through support for interpretation boards at key 'watchtower' estuarine locations.</p> <p>• (Agency Lead: Team Leader Customer Contact)</p>	10 interpretative boards at key locations around the estuary. Encourage a new audience to participate in green tourism initiatives.	Promotion of Agency aims. Partnership working. Increased community involvement in the surrounding environment.	1999-2002	Medway Swale Partnership Officer, KCC, EN, Swale Council	£2k	

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
5. Encourage the continued development and operation of Riverside Country Park in Gillingham. • (Agency Lead: Team Leader Conservation and Recreation)	Development of improved facilities. Increased visitor appreciation.	Working in partnership to achieve Agency aims. Development and operation of the Country Park compatible with Agency flood defence and other interests.	2001-2004	Medway Council	To be determined.	

ISSUE 5: CONSERVING AND ENHANCING WATER RELATED HABITATS AND LANDSCAPES

The Agency has a specific duty to further the conservation and enhancement of habitats and landscapes associated with the water environment where it undertakes flood defence and other operational activities. It also has responsibilities under the UK and Kent Biodiversity Action Plans (BAPs) for maintaining and enhancing key habitats and species.

Many of the water-dependent habitats within the North Kent area, in particular the intertidal mudflats, saltmarsh and grazing marsh, are under pressure (see Issue 3). Habitats and landscapes of this type are now rare within Kent and in a national context. It is proposed that the Agency will take a proactive role in conserving and enhancing these habitats and associated landscape in the North Kent area. Particular attention will be given to designated areas, BAP habitats and species and those affected by coastal squeeze. In addition, the Agency will take a proactive role in identifying opportunities for creating wetlands.

In response to consultee comments and further consideration, this issue has largely been superseded by actions taken forward in the Kent LEAP. As a result of the greater distinction now being made between the actions to help conserve wetlands and actions to promote water-related biodiversity, two outstanding actions have been taken forward to Issue 2 and Issue 6 of this LEAP.

ISSUE 6: PROTECTION AND ENHANCEMENT OF BIODIVERSITY

The national policies of the Agency and its significant commitments to Biodiversity are set out in the Kent LEAP. Although several are relevant to North Kent, (including production of a flood defence strategy and CHaMP for the Medway Estuary and Swale as well as supporting local biodiversity projects) they are not repeated here. Instead, whilst the Agency has a general commitment to conserve wildlife associated with the aquatic environment, emphasis is given to actions required under the UK BAP.

The actions in this LEAP also represent part of the Agency's commitment to implementing the Kent BAP. It has been decided not to repeat sections of this plan here or present the entire range of species and habitats relevant to the work of the Agency. Instead, the Actions detailed below are where we see most need over the next five years and intend to devote our resources as a priority. Consequently it is likely further actions will be added in later revisions, together with the Agency's commitment to fulfilling these as they are determined, though clearly actions will have to be balanced with the resources available. It should also be noted that several actions under other issues in this LEAP will also benefit biodiversity.

Action	Targets	Benefits	Timescale	Partners	Cost	Agency/Theme
<p>1. Continue to work with landowners, farmers, FRCA, MAFF and other over implementation and future of the North Kent Marshes Environmentally Sensitive Area Scheme.</p> <ul style="list-style-type: none"> (Agency Lead: Team Leader Conservation and Recreation) 	<p>Good attendance at annual liaison meetings. Implementation of North Kent Marshes ESA scheme.</p>	<p>Enhancement and restoration of traditional grazing marsh. Creation of buffer strips to ease flood defence access. Working in partnership.</p>	1999-2004	Landowners, farmers, FRCA, MAFF, EN, RSPB	£20k	
<p>2. Support the collation and provision of environmental information to farmers in an appropriate, easy to use format.</p> <ul style="list-style-type: none"> (Agency Lead: Team Leader Conservation and Recreation) 	<p>Production of CD ROM during 00/01. Dissemination to farmers during 00/01.</p>	<p>Working in partnership. Promotion of Agency aims.</p>	1999-2001	Medway Swale Project Officer, MAFF, FRCA, EN, RSPB, Medway Council, Swale Council	£2k	
<p>3. Work with the Lower Medway Internal Drainage Board, landowners, local authorities and others to complete a water vole survey of all marshland in the catchment.</p> <ul style="list-style-type: none"> (Agency Lead: Conservation and Recreation Officer) 	<p>Complete coverage by 02/03.</p>	<p>Up to date information. Improved ability to adapt a strategic approach. Working in partnership. Raising awareness.</p>	2000-2003	Lower Medway Internal Drainage Board, KWT, EN, RSPB, LAs, landowners	£20k	
<p>4. Encourage landowners, farmers, FRCA and others to support the concept of the Isle of Sheppey as a mink free refuge for water voles.</p> <ul style="list-style-type: none"> (Agency Lead: FER Manager) 	<p>Agreement of key individuals and organisations. Continued presence of a healthy water vole population.</p>	<p>Consensus approach to achieving Agency aims. Meeting BAP objectives.</p>	2000-2003	Landowners, farmers, FRCA, EN, RSPB, KWT	£3k	
<p>5. Complete a botanical survey of Agency maintained earth defences to help formulate sensitive maintenance regimes.</p> <ul style="list-style-type: none"> (Agency Lead: Conservation and Recreation Officer) 	<p>Survey complete by 02/03. Revised maintenance programme agreed by 03/04.</p>	<p>More sensitive maintenance. Potential cost savings. Compliance with Habitats Directive and BAP commitments.</p>	2001-2003	EN, KWT, landowners	£20k	

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
6. In collaboration with other partners, review of the extent of saltmarsh and eelgrass in the intertidal area of the estuary. • (Agency Lead: Team Leader Conservation and Recreation)	Completion of both surveys by 03/04.	Collation of up to date information. Partnership working. Achieving BAP objectives.	2001-2004	EN, MP, LAs	To be determined.	
7. Support the work of Groundwork Medway-Swale through financial contributions towards enhancement projects relevant to the aims of the Agency and subject to availability of resources. • (Agency Lead: FER Manager)	Achieve Agency aims by supporting up to 3 suitable projects.	Achievement and promotion of Agency aims. Partnership working.	1999-2004	LAs, industry	£25k	
8. Extend the network of Gauge boards across the catchment and implement procedures to monitor and record water information. • (Agency Lead: Team Leader Planning and Projects)	To develop an archive of water level records to facilitate the implementation of further actions identified within the WLMP.	Implementation of identified actions within the WLMP.	1999-2004	EN, landowners	£3k	

ISSUE 7: IMPLEMENTATION OF THE AGENCY'S RESPONSIBILITIES UNDER THE HABITATS DIRECTIVE AND HABITATS REGULATIONS

The actions proposed in the Consultation Draft are now covered in the Kent Area LEAP. The Issue is kept in the North Kent LEAP due to the important habitats in the LEAP area.

The 1994 Habitats Regulations, through the Habitats Regulations and Planning Policy Guidance Note 9, invests a number of responsibilities on the Agency as a 'Competent Authority' in all its capacities as an operator, regulator and influencer. In particular the Agency is required to carry out its activities in a manner which assists in maintaining the 'favourable conservation status' of sites afforded statutory protection under the Habitats Directive. This includes the review of current authorisations and assessment of new works (including Agency plans and projects) to evaluate impacts on European sites (Special Protection Area (SPAs) and Special Areas for Conservation (SACs)) afforded protection under the Directive.

There are three SPA sites partly or entirely within the LEAP area:- the Medway Estuary and Marshes SPA; part of the Swale Extensions SPA; part of the Thanet Coast and Sandwich Bay SPA. The first phase of identifying authorisations that may affect sites is complete. National guidance is being developed on how to proceed.

ISSUE 8 : HOW THE AGENCY IMPLEMENTS ITS ROLE IN MANAGING THE FISHERY IN THE MEDWAY ESTUARY

The Agency's fisheries responsibility in the North Kent area is largely restricted to freshwater salmon, trout and eels. The Agency has been given the powers of a Sea Fisheries Committee within the Medway Estuary. Improved water quality has laid the foundation for an expanding fishery and the production and enforcement of byelaws to regulate this fishing area will soon be required. In addition, the differing interpretation of the powers of the Agency resulting from the presence of historic fishing rights in part of the Medway Estuary and the requirement to enforce fisheries legislation will need to be resolved. There is ongoing liaison between the Thames and Kent areas of the Agency with regard to fisheries management and enforcement issues.

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
1. Investigate the Agency's responsibilities in relation to the Medway Estuary fishery and then produce an Estuary fishery management strategy. • (Agency Lead: Team Leader Fisheries Management and Enforcement)	Clarification of Agency responsibilities. Production of a management strategy.	Clarification of responsibilities. Identification of issues and cost/benefits of actions established.	2000-2003	KESFC, ROFFA, Medway Council, LAs	£5k in the first year. Subsequent years to be determined.	
2. Extend monitoring for allis and twaite shad in the tidal estuary. • (Agency Lead: Fisheries Scientist)	Finding evidence of juvenile allis/twaite shad in tideway surveys.	Potential to achieve protection through designation for shad spawning in the Medway estuary and greater control of commercial fishing operations. Protection of BAP species.	1999-2002	EN, KESFC, commercial anglers, CEFAS	£18k	

ISSUE 9: IMPACTS OF WATER QUALITY IMPROVEMENTS AND ELEVATED WATER TEMPERATURES FROM INDUSTRIAL DISCHARGES ON THE PRODUCTIVITY AND NATURE CONSERVATION VALUE OF THE MEDWAY ESTUARY AND SWALE ARE UNKNOWN

A principal concern of the Agency is to achieve a continuing and overall improvement in the quality of controlled waters through the prevention and control of pollution. The trend for improvements in the quality of sewage discharges into the Medway Estuary, the Swale and tributaries may result in lower nutrient loading and therefore lower productivity in the estuary. The impact of water quality improvements on productivity and on the nature conservation status of the estuarine habitats is unknown.

Discharges from power stations into the north of the Medway Estuary are resulting in elevated temperatures in localised areas of the estuary. The impacts of elevated temperatures on the estuarine flora and fauna are not fully known.

Actions addressing these issues are detailed in Issue 8 of the Kent Area LEAP which deals with the Agency's implementation of the Habitats Directive. Implementation includes reviewing all relevant authorisations (including temperature of discharges to water) which have the potential to affect sites of high nature conservation value such as the Estuary.

In addition, the Medway Estuary Project as detailed in Issue 12 of the Medway LEAP will be undertaking a review of hydrological and environmental quality data for the River Medway to increase understanding of the relationships between the principal factors influencing water quality and flows into the Estuary and the identification of management options.

ISSUE 10: THE PHYSICAL PROCESSES OPERATING IN AND AROUND THE MEDWAY ESTUARY AND THE SWALE ARE NOT FULLY UNDERSTOOD OR AGREED. THIS REDUCES THE AGENCY'S ABILITY TO CARRY OUT ITS FLOOD DEFENCE AND CONSERVATION DUTIES EFFECTIVELY

Actions addressing this issue can be found under Issue 1 and 20 of the Kent Area LEAP.

ISSUE 11: THE REQUIREMENT FOR ADDITIONAL SEWERAGE CAPACITY IN THE FUTURE IS LIKELY TO HIGHLIGHT CURRENT PROBLEMS WITH COMBINED SEWER OVERFLOWS

The present sewerage system in most parts of the Kent Area is not large enough to handle the volumes of water associated with storm events. As a result, overflows are connected to the sewerage system so that in storm events the excess water can overflow into the surface water system.

Some combined sewer overflows (CSOs) in the Gillingham, Rainham and Chatham areas have been fitted with telemetry and screens. Telemetry enables overflow spill frequencies to be determined so that the need for further improvements can be assessed and screens prevent sewage-related solids from being taken through with the overflowing water. There are plans to extend the fitting of these to other CSOs.

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
1. Support and encourage the inclusion of telemetry on CSOs improvements on potentially high impact or sensitive locations in the catchment. • (Agency Lead: Team Leader Tactical Planning & Team Leader Water Quality Consenting)	Identification of problem CSOs where telemetry may assist in the determination of reasons for water quality failures.	Assist in the identification of problem CSOs and associated sewers. Liaison with LAs over bathing waters may improve protection of public health.	1999-2004	SWS	£2k	

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
2. Liaise with SWS in order to prioritise the fitting of screens to problematic CSOs where funding from the AMP process has been agreed. • (Agency Lead: Team Leader Water Quality Consenting)	Reduce spill frequencies from problematic CSOs that affect water quality in the receiving watercourse (aesthetic and/or chemical).	Reduce pollution incidents and improve water quality.	1999-2004	SWS	£4k	

ISSUE 12: THERE IS CURRENTLY A LACK OF DATA ON THE LOCATION AND EXTENT OF CONTAMINATED LAND IN THE AREA

Actions addressing this issue can be found under Issue 22 of the Kent Area LEAP.

ISSUE 13: SUSTAINABLE WASTE MANAGEMENT

Actions addressing this issue can be found in the Kent Area LEAP.

ISSUE 14: THE ENVIRONMENTAL IMPACT OF LAND APPLICATION OF PAPER SLUDGE

The spreading of paper sludge on land is a major issue in North Kent. The spreading of paper sludge on agricultural land is exempt from waste management licensing because of the presumption that it is a soil conditioner, has agricultural benefit, and is considered not to have adverse effects on the environment. Despite this, the Agency and Swale Borough Council have received complaints from local residents adversely affected by the smell of paper sludge in storage, being spread on land, and in transit by lorry. A proposed waste to energy plant at Kemsley, which has been granted planning permission and IPC authorisation, may overcome the problem because most paper sludge could be incinerated there.

Action	Targets	Benefits	Timescale	Partners	Cost	Agency Theme
1. Work with operators to identify better working methods aimed at reducing problems of odour from stored and in-transit paper sludge. • (Agency Lead: Team Leader Scientific Support)	Reduced impact of operations to local communities. Improved Agency control over the operations.	Reduced complaints.	1999-2004	Parish councils, LAs, industry, local communities, operators	To be determined.	

7.0 FUTURE REVIEW AND MONITORING

Regular monitoring and updating of the Plan are an integral part of the LEAP process.

The Agency is jointly responsible with other identified organisations and individuals for implementing the actions in this plan. The Agency will monitor implementation of the LEAP and report on progress in a published Annual Review, which will coincide with the Business Planning Cycle.

The Annual Review will be disseminated to all the key partners and other interested parties and will identify any additional actions needed to maintain progress in light of any changes in the LEAP Area and also whether any actions need removing or amending where they are no longer appropriate.

The Annual Review will take the form of a short progress report and will:

- ◆ Examine the need to update the LEAP in the light of changes in the plan area;
- ◆ Compare actual progress with planned progress and explain the reason for any changes to the content or timing of individual actions;
- ◆ Report on other matters including any legislative and classification scheme changes affecting the LEAP; and
- ◆ Roll forward the detailed actions.

After five years, or sooner if required, the Agency will carry out a major review of the progress that has been made. At this stage the Agency will produce a new LEAP Consultation Draft to reflect these changes to further improve the local environment.

APPENDIX 1: DUTIES, POWERS AND INTERESTS OF THE ENVIRONMENT AGENCY

The Environment Agency has a wide range of interests in the areas of water management, waste management and pollution prevention and control. Whilst many of these interests are supported by statutory duties and powers, much of the Agency's work is advisory, with the relevant powers resting with other bodies such as local planning authorities. The following list identifies the Agency's principal interests (full details are given in Appendix 1 of the Kent Area LEAP):

- Water Resources
- Water Quality
- Radioactive Substances
- Contaminated Land
- Fisheries
- Navigation
- Flood Defence
- Air Quality
- Waste Management
- Conservation (incl. Landscape and archaeology)
- Recreation

APPENDIX 2: ORGANISATIONS/INDIVIDUALS WHO RESPONDED TO THE CONSULTATION DRAFT

Pardoe, T & P
 Housman, K.
 Reader, T J
 Giles, Peter
 Dolan, R.O.
 Abbott Laboratories
 Ashford Borough Council
 Clean Rivers Trust
 Country Landowners Association
 English Nature
 Faversham Road Residents Committee
 Faversham Town Council
 Government Office for the South East, Kent Area
 Hartlip Parish Council
 Inland Waterways Association
 Iwade Parish Council
 Kent County Council
 Kent Fisheries Consultative Association
 Lynstead Parish Council
 Medway Ports
 Medway Yachting Association
 Rainham Gillingham and Chatham Amenity Society
 Robert Brett & Sons Ltd
 Rochester Oyster and Floating Fisheries Association
 RSPB
 Southern Water, SWS Consents Team
 Sport England
 SUSTRANS
 The Faversham Angling Club/Stour Fishery Association
 The Hastings Fly Fishers Club Ltd
 The Shellfish Association of Great Britain
 Upchurch Parish Council

APPENDIX 3: GLOSSARY**Abstraction**

Removal of water from surface water or groundwater.

Abstraction Licence

Licence issued by the Agency under the Water Resources Act 1991 to permit water to be abstracted.

Aquifer

A layer of underground porous rock that contains water and allows water to flow through it.

Augmentation

The addition of water to a watercourse under artificial control. Usually to "top up" low flows in summer by either groundwater.

Authorisation

A legal licence issued by the Agency under the EPA '90 for industrial processes that use or produce potentially polluting substances in significant amounts.

Biodiversity

The variety of plant and animal life.

Catchment

The total area of land which contributes surface water to a specified watercourse or water body.

Combined sewer overflow

An overflow structure allowing discharge from a sewerage system to a watercourse during wet weather.

Consent to discharge

A licence granted by the Agency to discharge effluent of specified quality and volume.

Controlled waters

Defined by the Water Resources Act 1991. Includes groundwater, inland waters and estuaries.

Effective rainfall

Rain remaining as runoff after all losses by evaporation, interception and infiltration have been allowed for.

Environmentally Sensitive Area

Area defined by MAFF where grant aid is available for appropriate agricultural and water/land management.

Floodplain

Land adjacent to a watercourse over which water flows or would flow but for flood defences, in times of flood.

Flytipping

The unregulated and, hence, illegal, dumping of waste.

Groundwater

Water contained in underground rocks (aquifers).

Heritage Coast

Stretches of the most undeveloped coastline, designated by the Countryside Agency.

Internal Drainage Boards

Autonomous public bodies under the control of board members (including those elected by agricultural ratepayers and those nominated by local authorities), with responsibilities and powers for flood defence on ordinary watercourses (*non-Main Rivers*) under the Land Drainage Acts.

Part A Processes

Complex industrial processes with the potential to cause pollution regulated through Integrated Pollution Control by the Agency.

Part B Processes

Less complex processes where emission to air are regulated by local authorities.

Potable water

Water of suitable quality for drinking.

Ramsar sites

Internationally important wetland sites adopted from the Ramsar Convention on Wetlands of International Importance especially as waterfowl habitats (1971).

Sea defences

Natural or man-made features protecting land below 5m AOD contour.

Site of Special Scientific Interest

A site given statutory designation and protection by EN because it is particularly important, on account of its nature conservation value under the Wildlife and Countryside Act 1981 as amended.

Special Area for Conservation

Internationally important nature conservation site designated under the EEC Habitats Directive.

Special Protection Areas

Internationally important nature conservation sites designated under the EEC Wild Birds Directive. All SPAs are also SSSIs.

Sustainable development

'Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs' (from World Commission on Environment & Development, 1987. *Our Common Future - The Brundtland Report*).

APPENDIX 4: ABBREVIATIONS

AMP	Asset Management Plan	LA	Local Authority
AONB	Area of Outstanding Natural Beauty	LAAPC	Local Authority Air Pollution Control
BAP	Biodiversity Action Plan	LEAP	Local Environment Agency Plan
CA	Countryside Agency	LFDC	Local Flood Defence Committee
CEFAS	Centre for Environment, Fisheries and Aquaculture studies	LPA	Local Planning Authority
CHaMPs	Coastal Habitat Management Plans	MAFF	Ministry of Agriculture, Fisheries and Food
CLA	County Landowners Association	MCA	Maritime and Coastguard Agency
CMPs	Countryside Management Projects	MP	Medway Ports
DETR	Department of the Environment, Transport and the Regions	MRF	Minimum Residual Flows
EH	English Heritage	MRP	Medway River Project
EN	English Nature	MRUA	Medway River Users Association
EPA '90	Environmental Protection Act 1990	MYA	Medway Yachting Association
FER	The Agency's Fisheries, Ecology and Recreation function	NFU	National Farmers Union
FRCA	Farming & Rural Conservation Agency	NRA	National Rivers Authority (predecessor body to the Environment Agency)
FWAG	Farming & Wildlife Advisory Group	OFWAT	Office of Water Services
GOSE	Government Office of the South East	PIR	Process Industry Regulation (Agency department formerly known as IPC)
HMIP	Her Majesty's Inspectorate of Pollution (predecessor body to the Environment Agency)	ROFFA	Rochester Oyster & Floating Fisheries Association
IDB	Internal Drainage Boards	RQO	River Quality Objective
ILFA	Import of Live Fish Act 1980	RSPB	Royal Society for the Protection of Birds
IPC	Integrated Pollution Control	SAC	Special Area of Conservation
KCC	Kent County Council	SEORP	South East Otters and Rivers Project
KESFC	Kent & Essex Sea Fisheries Committee	SNCI	Site of Nature Conservation Interest
KOS	Kent Ornithological Society	SPA	Special Protection Area
KSBP	Kent Sustainable Business Partnership	SSSI	Site of Special Scientific Interest
KWT	Kent Wildlife Trust	SWS	Southern Water
		WLMP	Water Level Management Plan
		WTW	Waste Water Treatment Works

APPENDIX 5: FURTHER INFORMATION

A selection of relevant publications available from the Environment Agency is listed below. This list is only intended as a guide to the type of information available rather than as a complete list as new information is becoming available all the time. Please contact the Customer Contact Department at the Area Office for more information.

Corporate Publications:	<ul style="list-style-type: none"> • An Environmental Strategy for the Millennium and Beyond, Bristol. 1997. • A Better Environment For England and Wales, Bristol. 1998. • Environment Agency Corporate Plan 1999 -2000, Bristol. 1999 • An Introduction to the Southern Region, Worthing. 1998. • Regional Review and Forward Look: Southern Region. 1998.
Improving Air Quality	<ul style="list-style-type: none"> • The Environment Agency's Pollution Inventory, Bristol, 1999.
Managing Water Resources	<ul style="list-style-type: none"> • Policy and Practice for the Protection of Groundwater. Bristol. 1998 • Saving Water: Taking Action. Bristol. 1998. • Abstraction Licensing and Water Resources, Bristol. 1997. • Sustaining Our Resources. Southern Region, Worthing. 1997.
Enhancing Biodiversity	<ul style="list-style-type: none"> • Understanding Buffer Strips, Bristol. 1996. • Freshwater Crayfish in Britain and Ireland, Bristol. 1999. • Freshwater Fisheries and Wildlife Conservation – A Good Practice Guide, Bristol. 1997.
Managing Freshwater Fisheries	<ul style="list-style-type: none"> • Fishing in the South. Southern Region, Worthing. 1999. • Anglers and the Environment Agency 1999-2000, Bristol. 1999. • Catch and Release: A Guide to Careful Salmon Handling, Bristol. 1998. • Coarse Fish Biology and Management, Bristol. 1999.
Delivering Integrated River Basin Management	<ul style="list-style-type: none"> • The Quality of Rivers and Canals in England and Wales, 1995, Bristol. 1997. • The State of the Environment of England and Wales: Fresh Waters – A Summary Report, 1998. Bristol. 1998. • Water Related Recreation Strategy for the Southern Region – Consultation Draft, 1997, Worthing. 1998. • The Medway Navigation, Worthing. 1996. • Policy and Practice for the Protection of Floodplains. Bristol. 1997
Conserving the Land	<ul style="list-style-type: none"> • Action Plan for Land Quality, Bristol. 1998. • Action Plan for Flood Defence, Bristol. 1998. • East Kent Sea Defences, Worthing. 1997.
Managing Waste	<ul style="list-style-type: none"> • Money for Nothing – Your Waste Tips for Free, Bristol. 1998. • The Medway & Swale Waste Minimisation Project, Bristol. 1998. • Waste Minimisation and Waste Management, Bristol. 1997.
Regulating Major Industries	<ul style="list-style-type: none"> • Bringing in Integrated Pollution Prevention and Control, Bristol. 1998. • An Action Plan for Process Industries Regulation, Bristol. 1998 • Radioactive Substances Regulation, Bristol. 1999.

IN ADDITION, FURTHER INFORMATION CAN BE OBTAINED FROM THE AGENCY WEBSITE:

WWW.ENVIRONMENT-AGENCY.GOV.UK

MANAGEMENT AND CONTACTS:

The Environment Agency delivers a service to its customers, with the emphasis on authority and accountability at the most local level possible. It aims to be cost-effective and efficient and to offer the best service and value for money.

Head Office is responsible for overall policy and relationships with national bodies including Government.

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For general enquiries please call your local Environment Agency office. If you are unsure who to contact, or which is your local office, please call our general enquiry line.

ENVIRONMENT AGENCY GENERAL ENQUIRY LINE

0645 333 111

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water.

ENVIRONMENT AGENCY EMERGENCY HOTLINE

0800 80 70 60



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