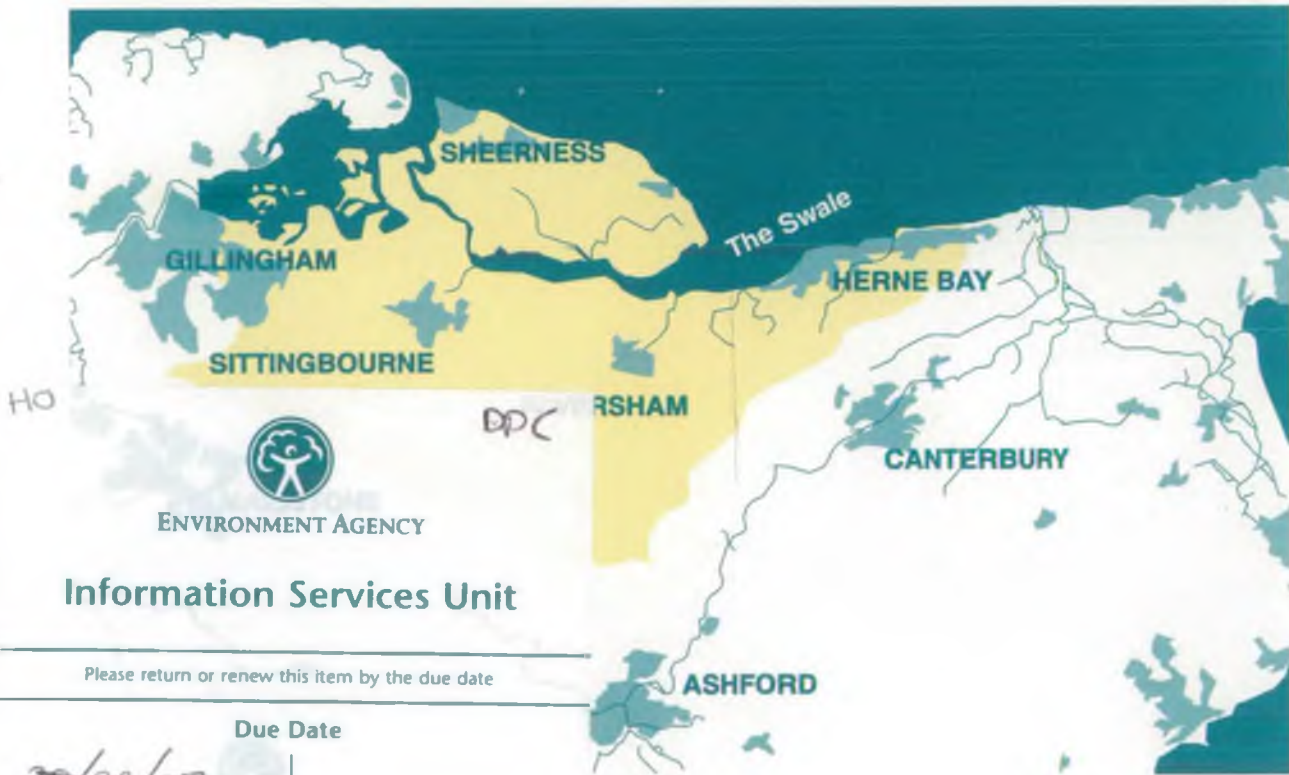




local environment agency plan

NORTH KENT LEAP **CONSULTATION DRAFT** **MARCH 1999**



Please return or renew this item by the due date

Due Date

20/02/02



ENVIRONMENT
AGENCY

YOUR VIEWS

The North Kent Draft Local Environment Agency Plan (LEAP) is the Agency's initial analysis of the status of the environment in the North Kent Catchment and the environmental issues that we believe need to be addressed. It looks at issues that are local to the catchment in support of the Environment Agency's Kent Area LEAP which is focussing on cross boundary issues.

We would like to hear your views on:

- Have we identified all the major issues?
- Have we identified realistic options for action?
- Do you have any comments to make regarding the plan in general?

During the consultation period for this report the Agency would be pleased to receive any comments in writing to:

The LEAP's Officer (Kent), Environment Agency, Orchard House, Endeavour Park, London Road, Addington, West Malling, Kent ME19 5SH

ALL COMMENTS MUST BE RECEIVED BY 30th JUNE 1999

All comments received on the Consultation Draft will be considered in preparing the next phase - the LEAP. The LEAP will focus on updating the Consultation Draft by turning the options for action into firm actions that will make a difference.

Note: Whilst every effort has been made to ensure the accuracy of information in this report there may be errors which we will be pleased to note

Published Documents

Two documents have been produced by the Agency in the LEAP process:

Consultation Draft

This is the Consultation Draft which concentrates on the environmental issues relevant to the Agency and the identification of possible options for action to address those issues.

Environment Overview

The Environment Overview is a separate document which is available on request. It analyses the state of the local environment looking at the impact of particular pressures, generating a list of issues that are discussed in this report.

Privacy Note

Response to this consultation is purely voluntary. The content of all responses will be used by the Agency to assist it in carrying out its statutory duties and the general details will be made public (this includes informing the applicant). Unless you specifically request otherwise or indicate that your response is confidential, we will also make public (and provide to the applicant) your name and address and a general summary of your comments in response to this consultation. If you have no objection to or would prefer the full content of your response being made public and copied freely please indicate this in your response.

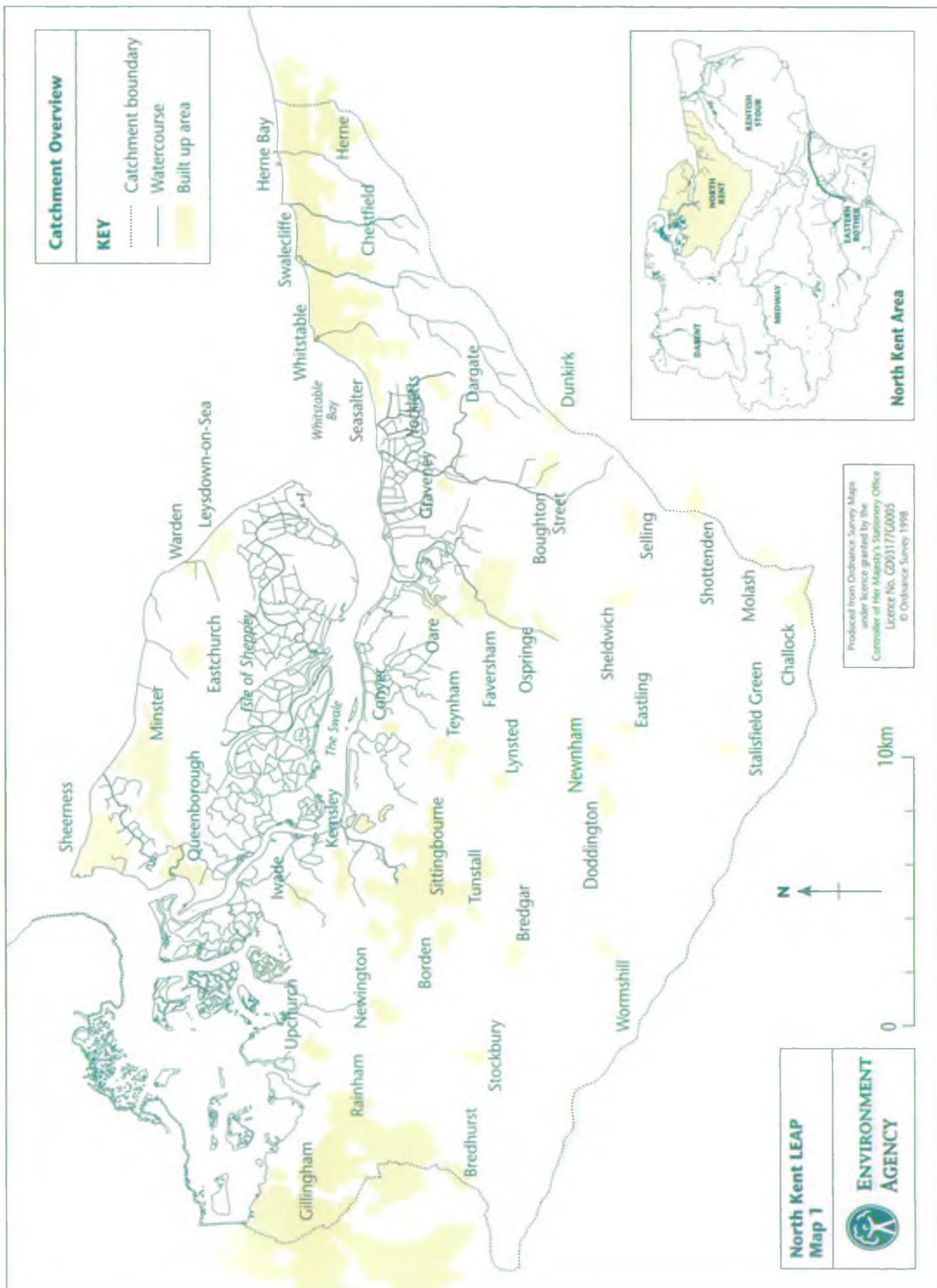
Your right of access to the information held and right to apply for rectification of the information are as prescribed in current data protection legislation.

ENVIRONMENT AGENCY



029838

Catchment Overview



North Kent Area Key Details

General

Area (sq km) 530.05

Administrative Details

Councils and % of the
Kent Area they Administer

Kent CC	96
Medway C	4

Population

Year	Population
1991	226 000
2001 (Estimate)	234 000

Water Resources

Rainfall (mm/yr)	
Average	665
Drought Conditions	523

Number of licensed abstractions

Surface Water	41
Groundwater	99
Impoundments	0

Flood Defence

	Length (km)
Coastline including main tidal waters	198
Main River including tidal lengths	56
Sea Defences Agency Responsibility	20
Tidal Banks Agency Responsibility	72

Conservation

Sites of Special Scientific Interest	12
Water Dependant SSSIs	11
National Nature Reserves	3
Ramsar or Special Protection Areas	6
Environmentally Sensitive Area: North Kent Marshes	

Fisheries

Length of EC Designated Fisheries (km):

	Freshwater	Tidal
Cyprinid	0	0
Salmonid	0	0

Water Quality

River ecosystem classification as % of the
North Kent catchment between 1995-1997

Class	%
RE1	0
RE2	1
RE3	0
RE4	57
RE5	42

Chemical GQA as % of sites in each class for
the North Kent catchment rivers in 1995

Class	%
A	0
B	0
C	1
D	44
E	54

Pollution Prevention & Control

Licensed Waste Sites
18

Process Industry Regulations
15(Plus 1 planned)

Radioactive Substance Regulations
Authorised sites to accumulate and dispose of
radioactive waste 1.

memo



ENVIRONMENT
AGENCY

To	LIG		
From	Kate Trenam	Our ref	LEAP/03/Biii)
Ext. Number	2164	Date	16 March 1999

NORTH KENT LEAP - CONSULTATION DRAFT AND ENVIRONMENTAL OVERVIEW

Please find enclosed a copy of the above reports, which have been published recently. The deadline for all comments on the Consultation Draft is 30th June and if all goes well we expect the LEAP to be published around October this year.

This is the first LEAP to be produced on the new Environment Agency coated paper. This 100% recycled paper has been developed for the Agency at half the cost of cyclus but has many advantages, a part from the obvious increased savings. As you will see the paper is pure white as opposed to cyclus which quite often looks as though your breakfast has been smeared all over it and yet it utilises a higher percentage of lower grade paper in the recycling process. The colour on the maps is also sharper and more vibrant and we have found that it feeds through photocopiers more smoothly.

If you would like to find out more about the paper and how you can obtain it please contact Graham Heath (Southern Region Senior Procurement Officer Tel no. 7-23-2298).

Kate Trenam

KATE TRENAM
Regional LEAP Co-ordinator

Direct dial 7-23-2164
Direct fax 01903 832248

Distribution List: John Thompson, Simon Slater, John Ellis, Michelle Doyle, Cath Beaver, Pete Grigorey, Prosper Paul, Roger Valance.

cc. Graham Heath

FOREWORD

The Environment Agency is one of the most powerful environmental regulators in the world. By combining the regulation of air, land and water, we have a unique opportunity to look at our environment in an integrated way and further the objective of sustainable development.

Local Environment Agency Plans (LEAPs) aim to provide a means for setting priorities, solving problems and protecting and improving the environment in a co-ordinated way. The North Kent LEAP Consultation Draft gives everyone interested in the environment of the area an opportunity of active involvement in making a difference to its future.

This LEAP examines local issues supporting the more strategic and broader ones identified in the Kent Area LEAP. It highlights the conservation value of the North Kent marshes and the distinctive character of the open landscape around the estuaries which are not always universally appreciated. It provides a focus for all participants to undertake and achieve environmental enhancement in a sustainable manner and includes the identification of partnership opportunities.

This plan represents a shared vision for the future and will play a vital role in the protection of our environment, whilst recognising the ever competing pressures on the environment and the need to balance cost and benefit.

I would like to thank you for your time spent studying this plan and welcome any comments you wish to make about it. Your responses to this consultation exercise will be considered and where appropriate, incorporated into the final Action Plan identifying how the Agency will enhance the environment of North Kent during the next five years.



Dr Binny Buckley
Kent Area Manager

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1.0 THE ENVIRONMENT AGENCY

The Agency's vision is:

- *A better environment in England and Wales for present and future generations.*

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 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

The Agency will do this by:

- being open and consulting others about our work
- basing our decisions around sound science and research
- valuing and developing our employees
- being efficient and businesslike in all we do

The Environment Agency has a wide range of duties and powers relating to different aspects of environmental management (Appendix 1). The Agency is required and guided by Government to use these duties and powers in order to help achieve the objective of sustainable development. The Brundtland Commission defined sustainable development "*as development that meets the needs of the present without compromising the ability of future generations to meet their own needs*".

At the heart of sustainable development is the integration of human needs and the environment within which we live. Indeed the creation of the Agency itself was in part a recognition of the need to take a more integrated and longer-term view of environmental management at a national level. We therefore have to reflect this in the way we work and in the decisions we make.

Taking a long-term perspective will require the Agency to anticipate risks and encourage precaution, particularly where impacts on the environment may have long-term effects, or when the effects are not reversible. The Agency must also develop its role to educate and inform society as a whole, as well as carrying out its prevention and enforcement activities, in order to ensure continuing protection and enhancement of the environment.

One of the key outcomes of the United Nations "Earth Summit" held in Rio de Janeiro in 1992 was agreement by governments that, in order to solve global environmental problems, local action is crucial: we must all therefore think globally but act locally.

Against this background the Agency has drawn up an Environmental Strategy to deal with the major problems by an integrated approach to the management of the whole environment. This approach has led to the identification of nine environmental concerns which will be used for the Agency's planning processes:

- 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

1.1 Local Environment Agency Plans

The Agency is committed to a programme of Local Environment Agency Plans (LEAPs) in order to produce a local agenda of integrated action for environmental improvement. These will also allow the Agency to deploy its resources to best effect and optimise benefit for the local environment.

LEAPs help the Agency to identify and assess, prioritise and solve local environmental issues grouped around the nine environmental concerns, taking into account the views of local stakeholders. The outcome of the process is a local programme of integrated action for environmental improvement.

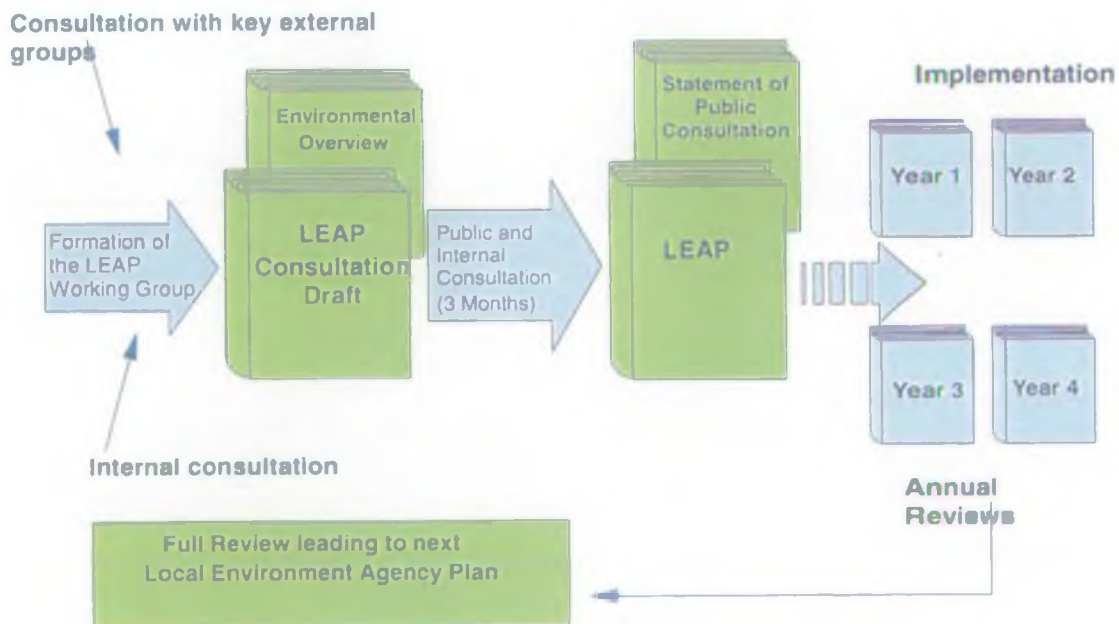
LEAPs replace the Catchment Management Plans which were produced by the former National Rivers Authority and build on their success by covering all the Agency's functions.

1.2 The LEAP Process

Each LEAP will take a long term view of local environments and set out a five year plan of action for solving local issues. Published Draft Consultation Reports will cover all parts of England and Wales, including the Southern Region of the Environment Agency, by the end of 1999. This is only the first milestone in what will be an ongoing national programme of LEAPs, which will be regularly updated, developed and improved.

Figure 1

THE LEAP PROCESS



1.2.1 LEAP Consultation Draft

The North Kent LEAP Consultation Draft concentrates on the prioritisation of environmental issues relevant to the Environment Agency and the identification of possible options for action necessary to restore/improve the local environment. This document is the main focus for public consultation. The issues and options for action put forward to address those issues have been structured around the Agency's nine environmental themes, which aim to protect and enhance the environment in an integrated way and contribute towards the goal of sustainable development.

- 1.2.2** An Environmental Overview is produced as a separate document and is a factual description and analysis of the local environment, looking at the impact of stresses on its state, and generating a list of issues for consideration by the Agency and others. The North Kent Environmental Overview supports this Consultation Draft and provides the background to the issues.

The publication of this Consultation Draft marks the start of a three month period of formal consultation enabling external organisations and the general public to work with us in planning the future of the local environment.

This is the first output of the process and is not the final plan.

It gives you an opportunity to:

- highlight any issue/actions not already identified within the area.
- work towards establishing and implementing a five year action plan.

Please send your response in writing to the LEAP Officer at the address given on the cover of this report by 30 June 1999.

At the end of the consultation period a Statement on Public Consultation will be produced which will give the results of the process.

1.2.3 LEAP Plan

The final LEAP Plan will take into account the results of consultation and will be produced by the end of 1999. It will contain a list of actions that take account of costs and benefits, identifying timescales and partner organisations. Agreed actions will be incorporated into the Agency's annual business plans.

1.2.4 Annual Review

The Agency will monitor implementation of the LEAP and report on progress in a published Annual Review. The Annual Review will also identify any additional actions needed to maintain progress in the 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.

1.3 Kent Area Approach

In the Kent Area of the Agency an Area-wide LEAP has been prepared addressing strategic and significant issues. Local issues of particular relevance to the North Kent catchment are addressed in this document (other catchment LEAPs for the Darent, Eastern Rother, Kentish Stour and Medway are being produced separately. If you would like a copy of any of these LEAPs, as they become available, please send a request to the Agency at the address on the cover).

2.0 THE NORTH KENT CATCHMENT

2.1. 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 acknowledged at the 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;
- where there is a well-developed understanding of 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 3. The remainder of this section sets the broader context, by providing a summary of the Environmental Overview.

2.2. 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 into the Medway Estuary and Swale along their southern shores.

2.3. 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 survive, along with salt mounds, to 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. Their natural beauty has been captured by notable figures such as Turner, who painted scenes in the Medway Estuary.

2.4. Water Resources

The principal water resource in the LEAP area is the chalk aquifer, which is heavily committed with respect to abstraction licences. Indeed, groundwater abstraction from chalk currently constitutes over 90% of the total licensed abstraction. The licences are for a range of uses, including potable water supply, industry and agriculture 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 stresses from domestic and industrial activity and other sources including 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.

2.5. 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.

2.6. 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.

2.7. 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.

3.0 ENVIRONMENTAL ISSUES AND OPTIONS FOR ACTION

3.1. Introduction

This section of the LEAP details the environmental issues that the Agency considers need to be addressed within the Agency's future Action Plan for the Area. This initial list of issues has been identified from an Agency review of the environment together with the Area Environment Group (AEG), whose members represent a wide range of interests in the Kent Area. The Agency has also considered the concerns and aspirations of organisations with particular interests and responsibilities in the area.

Discussion meetings were held with the AEG and various departments of Swale and Medway Councils, as well as English Nature. The Agency invited comment by correspondence with other organisations interested in the area and Appendix 2 lists organisations contacted during this preliminary consultation. Comments and ideas have been incorporated wherever possible and the Agency is grateful for the contribution of the time and effort of respondents and consultees.

This Consultation Draft is intended to encourage debate and to seek your views on the environmental issues that face the North Kent area. Many of the issues are inter-related and this reflects the need for integrated environmental management. The issues are presented in a summary and cross-referenced to our nine principal concerns, as detailed in the Agency's *Environmental Strategy for the Millennium and Beyond*.

3.2. Proposed Actions

The following section gives a background to each issue and suggests potential options for action. Further information is detailed in the Environmental Overview, which can be obtained from the Agency if required.

Costing of actions has not been attempted for this Draft but have been accorded High (H - above £250,000) Medium (M - £50,000 - £250,000) and Low (L - below £50,000). It has to be remembered that these are Agency costs. It can be assumed throughout that the "Do Nothing" option incurs no costs at present, which could be considered as an "advantage". However it has to be remembered that this is a short term situation only since the environmental issue is not addressed in many cases, and may only delay costs until a later date when it will have to be resolved.

ISSUES SUMMARY

Environment Agency Concern*	Issue
Addressing Climate Change	<i>No local issues defined; the Kent Area LEAP identifies the need for the sustainable management of landfill gas, and the need to review the standard of flood defences to address the predicted effects of climate change</i>
Improving Air Quality	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
Managing Water Resources	2 Historic development of groundwater has resulted in a general deterioration in the balance of water resources, as evidenced by depletion of spring-fed chalk streams and increased stress on wetland habitats
Enhancing Biodiversity	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
	4 How to promote water related recreation that is compatible with other interests
	5 Conserving and enhancing water related habitats and landscapes
	6 How to achieve the Agency's biodiversity objectives in the North Kent area
	7 Implementation of the Agency's responsibilities under the Habitats Directive and Habitats Regulations
Managing Freshwater Fisheries	8 How the Agency implements its role in managing the fishery in the Medway estuary
	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 the Swale are unknown.

Environment Agency Concern*	Issue
Delivering Integrated River-Basin Management	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.
	11 The requirement for additional sewerage capacity in the future is likely to highlight current problems with combined sewer storm overflows
Conserving the Land	12 There is currently a lack of data on the location and extent of contaminated land in the area
Managing Waste	13 Sustainable waste management cannot be achieved in the area in the long term with the current levels of waste generation combined with the existing waste management infrastructure
	14 The environmental impact of land application of paper sludge
Regulating Major Industries	<i>No issues identified which are not already being addressed as part of normal regulatory duties.</i>

*From: An Environmental Strategy for the Millennium and Beyond (Environment Agency 1997)

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

Air pollution can damage flora and fauna, buildings and have significant effects on soils and water. A key aim of the Environment Agency is to achieve a major and continuous improvement in the quality of air.

Industrial activity, particularly around Sheerness and east Gillingham, 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 Environment Agency is 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. Whilst the nature and extent of emissions from individual sites are known, the cumulative impacts have yet to be fully understood.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Promotion of Monitoring	Firm evidence of actual combined impacts and need for further controls on emissions	Cannot monitor everywhere. Unclear as to source of high concentrations (may be outside the area)	H	Local Authorities Industry
Modelling	Indication of combined impacts and need for further controls on emissions	Models are only indicative of a problem	M	Local Authorities Industry
Do nothing	-	Uncertainty as to need to regulate further emissions	Nil	-

Issue 2: Historic development of groundwater has resulted in a general deterioration in the balance of water resources, as evidenced by depletion of spring-fed chalk streams and increased stress on wetland habitats

Further development for public supply could exacerbate the situation and if the general trend established over the last 30 to 50 years continues, we can expect to see a further deterioration in the balance of resources with adverse consequences for the water environment (including a further reduction in flows in rivers). The continuation of the climate change process is likely to be marked by further drought episodes of comparable, if not greater, duration and intensity than those experienced in the last 10 years. In this event the Agency will have an increasingly demanding role in exercising its Drought Order powers to reduce environmental stress and protect against low

flows. Water companies will continue to seek our support for relaxation of Minimum Residual Flows (MRFs) and other controls on abstraction. Drought experience shows that even under winter flow conditions there are important environmental constraints limiting the extent to which MRFs can be reduced.

The Agency is working in partnership with the water companies and OFWAT through the South East Water Forum to develop a water resources strategy for the south east for the next 30 years. The Kent LEAP (Consultation Draft) 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. Such a strategy would promote implementation of the South East Strategy; review and update the Kent policy; promote implementation of protection and enhancement of the water environment; and periodically review the balance of water resources.

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 dependence on groundwater and 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

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Implement Action Plan	Restoration of catchment resource balance. Conservation of low flow streams and wetlands.	None identified	M	Local Authorities Water companies
Do nothing	None	Progressive depletion of resources and degradation of wetland and spring-fed streams	Nil	

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

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. They have been identified as high nature conservation value (of national and international importance) for wintering and migrating bird species, plant assemblages and invertebrates. Large areas have been designated as SSSI and are included within SPA and Ramsar sites. The extent of saltmarsh and mudflats has significantly reduced within the catchment. Large areas of saltmarsh and mudflats in the Medway Estuary and the Swale are designated as SPA under the Wild Birds Directive 79/409/EEC.

A number of potential causes of habitat loss are identified below. The extent to which each of these stresses results in loss of intertidal habitats is not fully understood.

- **coastal squeeze:** with rising sea level, intertidal habitats would naturally migrate inland. Where this process is prevented by "hard" sea defences (such as sea walls), saltmarsh and mudflats are squeezed and ultimately disappear;
- **inundation of islands in the estuary:** there are numerous small islands within the Medway Estuary and the Swale. As a consequence of natural forces including sinking land, rise in sea levels and/or erosion of material from the islands, the smaller islands are becoming inundated by the estuary;
- **dredging to maintain a navigable channel:** the Medway Estuary and the Swale are dredged to maintain a navigable channel. At present, the material is disposed of on land on Hoo Island in the Medway Estuary and Rushenden in the Swale. Removal of sediment from the estuary sediment budget can have an effect on the maintenance of saltmarsh and mudflats habitats, by reducing the deposition of material in the intertidal zone;
- **artificial sea defences:** development of artificial sea defences has resulted in alteration of the natural coastal processes and has reduced deposition of material on saltmarshes, thus contributing to loss of saltmarsh habitat.

The Habitats Regulations invest a number of responsibilities in the Agency as a "Competent Authority" to assist in maintaining the "favourable conservation status" of sites afforded statutory protection under the Habitats Directive and Wild Birds Directive. This includes the review of current Agency authorisations and assessment of new Agency authorisations and the Agency's own works to evaluate their environmental impacts on these sites.

Under the UK Biodiversity Action Plan the Agency is the lead contact for coastal saltmarsh. Its responsibilities include to stimulate achieve targets, set standards for monitoring and reporting and agree the overall work programme. A draft habitat

national action plan for coastal saltmarsh is being prepared and action plans for both saltmarsh and intertidal mud and sand flats are included in the Kent Biodiversity Action Plan (BAP).

Actions to address the decline of intertidal habitats in the catchment are listed below. Partnerships are being established under the Medway and Swale Estuary Management Plan and the Kent BAP, which bring together the key organisations for protection of these habitats. Actions by the Agency will therefore be undertaken in the context of these initiatives.

One of the options for addressing the loss of intertidal habitats is 'managed retreat'. Managed retreat involves setting back the line of actively maintained defence to a new line inland of the original. This option provides opportunities for the creation of new intertidal habitats further inland of the current sea defences. However, the land on the landward side of the sea defences is primarily grazing marsh habitat, together with areas of agricultural land and urban areas. Grazing marsh is a nationally and internationally important habitat which has suffered significant losses over the last 60 years. Under a managed retreat scenario, large areas of grazing marsh would be lost, unless replacement areas are provided. This is an issue of considerable debate nationally at present.

The identification of potential locations for managed retreat in North Kent is problematic, since both saltmarsh (on the seaward side of managed defences) and grazing marsh (which forms the majority of land use on the landward side of defences) are internationally designated habitats, and are therefore considered to be of equal importance. One option for identifying potential managed retreat locations is to utilise a different way of assessing the value of these coastal habitats. Kent County Council has been undertaking work on the use of the Environmental Capital approach in Kent, although not specifically in relation to nature conservation value. A proposed action for the Environment Agency, in collaboration with Kent County Council and English Nature is to investigate whether this approach could be useful in identifying managed retreat locations.

An alternative option involves changes to the sediment budget of the estuary. Current dredging practice involves the deposition of sediment on land, resulting in a loss of sediment from the estuary sediment budget. A consortium of organisations is currently undertaking trials into saltmarsh regeneration at Bedlams bottom in the Medway Estuary. The trials involve 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. It is proposed that larger scale trials of this project and the deposition of dredgings within the estuary system, rather than on land, are investigated. However, due to sea level rise, this option is unlikely to completely halt the loss of intertidal habitats in the estuary.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Investigate managed retreat options	Opportunity to create intertidal habitats	Loss of grazing marsh – may need to identify compensatory habitat	M/H	Medway Estuary and Swale Management Plan and BAP partners, in particular EN Landowners NFU CLA
Investigate the application of Environmental Capital approach	Attribute value to habitats to aid identification of managed retreat opportunities	None	L	EN KCC
Promotion of saltmarsh regeneration schemes and alteration of current dredging policy	Opportunity to contribute to halting the current decline in habitat area	Due to sea level rise, unlikely to completely halt decline in habitat	L	Medway Estuary and Swale Management Plan and BAP partners, in particular MAFF and EN
Do nothing	Maintenance of grazing marsh behind flood defence barrier	Loss of intertidal habitats continues, may need to identify compensatory habitat	Nil	-

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.

The area is enormously rich in nature conservation interest. Virtually all of the Medway Estuary and the Swale is designated as a Site of Special Scientific Interest (SSSI) and much of it forms part of a SPA under the Wild Birds Directive and a Ramsar Site (a wetland of international importance). Noisy recreational activities

such as jet skis have the potential to result in disturbance to wildlife (particularly birds). These activities are of particular concern when they are used outside permitted areas. Use of unauthorised landing and access points for watercraft may also have the potential to result in damage to saltmarsh and mudflats habitats within the area.

In addition, there is the potential for conflicts between different recreational users of the area, in particular between noisy activities such as powerboats and jet skis and the quiet enjoyment of the environment.

Sea defence walls provide useful access routes and many form part of the public rights of way network. The Saxon Shore Way, an historic public right of way, extends along the coastline of the entire North Kent Area. This presents conflicts and an opportunity for the Agency. Conflicts arise where the integrity of flood defence structures is threatened by intensive or irresponsible recreational use, or where people's safety is put at risk – for example where walkers and cyclists share a narrow path on the top of a sea wall. The proposed Sustrans route along parts of the coast has the potential to bring these existing conflicts to a head.

The Agency does not have direct involvement or control over recreational activities undertaken in the LEAP area (except those undertaken on Agency owned land). However, it has a duty to promote recreation where it considers desirable and in North Kent with particular responsibilities to contribute to maintaining the "favourable status" of sites protected under European directives. The Agency can contribute to influencing recreational use of the area via a number of initiatives, including through the Medway Estuary and Swale Management Plan.

A proposed action for the Agency is to promote the informal enjoyment of the environment of the Medway Estuary and the Swale and to help to resolve conflicts with other users of the area, including other recreational users. It is proposed that the Agency works with partner organisations in the Medway Estuary and Swale Management Plan (which has brought together organisations and interest groups with responsibilities for the estuary area) to achieve this aim.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Actively influence recreational use of the estuary via the Medway Estuary and Swale Management Plan	Reduction in adverse impacts of recreation on nature conservation	May not be perceived as a role that should be undertaken by the Environment Agency	L	Partners in the Medway Estuary and Swale Management Plan
Promote the informal enjoyment of the environment in the Medway Estuary and the Swale.	Resolution of conflicts between recreational users in the Medway Estuary and the Swale area and improvement in people's enjoyment of the environment	May not be perceived as a role that should be undertaken by the Environment Agency	L	Partners in the Medway Estuary and Swale Management Plan Local recreation interests
Support provision of facilities where appropriate for the quiet enjoyment of the environment	Improvement in people's enjoyment of the environment	None	M/H	Partners in the Medway Estuary and Swale Management Plan Landowners Local interest groups
Support the convening of a workshop on consensus building	Resolution of conflicts between recreational users and reduction in adverse impacts of recreation on nature conservation	None	L	Partners in the Medway Estuary and Swale Management Plan Landowners Local interest groups Parish Councils
Develop and implement a strategy and liaison procedure for Agency owned / maintained flood defences which seeks to maximise opportunities, whilst minimising potential conflicts	Potential to reduce conflict	None		KCC Countryside Commission SUSTRANS Local Authorities Landowners
Do nothing	None	Continued adverse impacts of recreation on nature conservation	Nil	-

Issue 5: Conserving and enhancing water related habitats and landscapes

The Agency has a specific duty to further the conservation and enhancement of landscapes and habitats associated with the water environment where it undertakes flood defence and other operational activities. The Agency also has a general duty to promote the conservation of natural beauty and amenity and wildlife dependant on the water environment with particular responsibilities for managing its own land holdings for conservation compatible with other interests. It also has responsibilities under the UK and Kent 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 and saltmarsh and grazing marsh are under pressure.

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.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Retain appropriate water flows and levels to sustain wetland habitats in North Kent.	Protection of important wetlands	None	H	Water companies EN Local Authorities Landowners
Undertake a botanical survey of Agency maintained defences; review and modify maintenance	Improve management of defences for nature conservation	None	L	EN/KWT
Continue River Corridor and River Habitat Survey Programmes of marshland watercourses.	Provide information on which to base decisions	None	L	EN
Identify and promote wetland creation and enhancement opportunities including reed beds on the Isle of Sheppy.	Contribute to enhancement of biodiversity in the North Kent area	None	L	EN KCC FRCA KWT RSPB
Implement actions for Water Level Management Plans for Seasalter and Capel Fleet	Contribute to enhancement of biodiversity in the North Kent area	None	M	EN FRCA Landowners RSPB
Collaborate on initiatives to encourage the conservation, enhancement and restoration of traditional grazing marsh	Would help to secure the landscape and conservation value of the marshes	Adjustment to the abstraction regime of the North Kent chalk block	M	MAFF (through the ESA scheme), Countryside Commission (Countryside Stewardship scheme), Landowners Farmers
Do nothing	-	Opportunities for enhancement are likely to be missed	Nil	-

Issue 6: How to achieve the Agency's biodiversity objectives in the North Kent area

The Agency has responsibilities for a number of species and habitats under both the National and Kent BAPs. The Agency is the lead for three Biodiversity Action Plan species known to be found within North Kent - water vole, allis and twaite shad. The proposed action for the Agency is to prepare an action plan for BAP species relevant to the Agency in the North Kent area.

Water vole (a legally protected and BAP target species) is present in the LEAP area and has a stronghold on the Isle of Sheppey (considered to be of regional and national importance for water vole). The Agency is the lead agency for water vole in both the UK and Kent BAPs. Due to the existing stronghold on Sheppey, it is proposed that action is undertaken to maintain and if possible increase populations of water vole on the island and within the LEAP area.

It is proposed to develop and implement an action plan for water vole to collate and assess existing information and incorporate some or all of the following actions as appropriate:

- initiate further baseline survey work as appropriate;
- liaison with FRCA over water level management in the North Kent Marshes ESA to ensure ESA tier 1b schemes take water vole into account and modify or object to proposals where necessary;
- promotion of appropriate channel and bankside management throughout the LEAP area;
- consider options for protecting water vole from predation;
- establish the Isle of Sheppey as a water vole refuge;
- promote partnership opportunities for habitat creation and management;
- implement a monitoring programme over the next 5 years;
- undertake annual reviews of progress towards BAP targets.

Allis and twaite shad are protected species included on the priority list for the UK and Kent BAPs. The Environment Agency is identified as the lead agency for these species in the Kent BAP. Smelt is also a protected species.

All of the species have been recorded in the North Kent area, but data on populations and distribution have not been collected. The potential impacts of fishing on these protected species are also unknown. The proposed actions for the Agency are to:

- continue existing methodology for surveying;
- continue collaborative data collection on population, distribution and catches;
- continue to implement present action plan.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Prepare a North Kent Action Plan for BAP species relevant to the Agency	The Agency contributes to implementation of the UK and Kent BAP	None	M	FRCA EN KWT SEORP
Raise awareness and improve liaison with landowners, farmers, local authorities, statutory undertakers and developers over BAP issues	Integrated approach	Time and resources	M	All concerned
Develop a partnership approach to implementing the North Kent BAP Action Plan	Consensus, value for money, local ownership	Time and resources	M	All concerned
Review and update Action Plan	Maintain a living document	None	L	All concerned
Do nothing	None	The Agency does not meet its obligations under the BAP	Nil	

Issue 7: Implementation of the Agency's responsibilities under the Habitats Directive and Habitats Regulations

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 Habitat Directive. This includes the review of current authorisations and assessment of new works (including Agency plans and projects) to evaluate impacts on European sites (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 and 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. In particular further information is required from English Nature on environmental criteria against which to assess authorisations.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Train Agency staff and work with English Nature to establish a framework with environmental criteria to carry out responsibilities under the Habitats Directive	Fulfilment of role as competent authority, in accordance with the Habitats Directive	Resource implications	L/M	KCC EN
Adopt assessment procedures for all Agency works within the SPAs of North Kent	Compliance with legislation. Demonstration of best practice	Resource implications	M/H	EN
Implement phased approach to the review of potentially damaging existing authorisations by all functions, notably prescribed industry, water abstractions and effluent discharges around the Medway Estuary and Swale	Compliance with legislation. Demonstration of best practice	Resource implications	M/H	EN
Ensure all new Agency regulated activities are accompanied by an appropriate environmental assessment to protect the interest of the SPAs in North Kent	Compliance with legislation. Demonstration of best practice	Resource implications	M/H	EN Developers Industry Water companies
Do nothing	None	Non-compliance with Habitats Directive	Nil	-

Issue 8: How the Agency implements its role in managing the fishery in the Medway estuary

The fisheries responsibility of the Agency in the North Kent area is largely restricted to freshwater fish, 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. The need to produce and enforce of byelaws to regulate this fishing area will soon be required.

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.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Produce a strategy for Agency role in managing the Estuary fishery	Clarifies roles and identifies issues	Resource implications	L	Kent and Essex Sea Fisheries Committee Agency Thames Region Fishing interests
Implement the strategy	Establishes the agency's presence in the Estuary	Resource implications	H	Kent and Essex Sea Fisheries Committee Agency Thames region Fishing interests
Do nothing	Minimum resource requirements Status quo remains	Defers the resolution of issues	Nil	-

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 the 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.

The proposed response of the Agency is to undertake research to determine the impacts of water quality improvements and elevated water temperatures on the estuary.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Undertake research to determine the impacts of water quality improvements on the estuary	Assess impacts on the estuary and take appropriate action	Resource implications	M	Partners in the Medway Estuary and Swale Management Plan EN
Do nothing	None	Potential adverse impacts on the estuary	Nil	-

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

The Medway Estuary and the Swale are dynamic natural systems, which have and continue to be, influenced by human activity such as the imposition of sea defences, reclamation of land (e.g. at Lappel Bank), and dredging of sediment. Rising sea levels and the increased frequency of storm events, due to climate change, will inevitably change the dynamics of coastal processes. They will have effects on commercial interests, nature conservation habitats (see Issue 3), the coastal heritage resource, and land available for development.

The Agency's ability to maintain adequate standards of service for flood defence in North Kent, whilst having regard to its duties and responsibilities with respect to the protection of important habitats and species, clearly depends on a better understanding of coastal processes.

The Agency considers options for coastal flood defence under three headings: do nothing, 'managed retreat' (involving setting back the line of actively maintained defence to a new line inland of the original) and maintenance of the line of existing defences. In order to receive grants from MAFF, the Agency must use cost-benefit analysis (CBA) on all flood defence projects. There are no areas in North Kent to date where CBA has shown the benefits to outweigh the costs for the 'do-nothing' and 'managed retreat' options, and therefore existing defences have continued to be maintained.

Areas protected by these defences, particularly along the North Kent coast, are often important conservation sites, including SPAs, SACs or SSSIs and used extensively for farming. The nature conservation special interest and farming interests would be significantly affected by any decision to abandon or reduce the level of sea defences. However, on a financial basis it may be difficult to justify continued maintenance of sea defences that only protect grazing marsh, since the economic value is limited.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Develop a comprehensive knowledge base covering coastal physical processes within the Medway and the Swale	Would help to inform the Agency's long term strategy for coastal flood defence, including managed retreat	Possible delay of major flood defence works until study completed	M	Local authorities, English Nature, Major industries
Do nothing	None	Lack of understanding of coastal processes to inform coastal flood defence strategy.	Nil	-

Issue 11: The requirement for additional sewerage capacity in the future is likely to highlight current problems with combined sewer storm overflows

The present sewerage system in most areas of the county is not large enough to take the volumes of water associated with storm events. Overflows are connected to the sewerage system so that in storm events they overflow into the surface water system. On several occasions the overflows have been blocked by debris and backing up of storm waters has caused flooding and pollution incidents.

Some combined sewer storm overflows (CSOs) in the Gillingham/Rainham area have been fitted with screens and telemetry and there are plans to extend this to other CSOs. Telemetry will enable spill frequencies to be determined so that the need for further improvements can be assessed.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Extend the use of telemetry on CSOs	Enable monitoring and assessment of further improvements needed	Telemetry can only indicate problems and resources are not being directly directed to preventing flooding and pollution incidents	M	Southern Water
Fit more CSOs with screens	Prevent blocking of overflows with debris and reduce flooding and pollution incidents	Resource implications	L	Southern Water
Do nothing	-	Risk of further flooding and pollution incidents	Nil	

Issue 12: There is currently a lack of data on the location and extent of contaminated land in the area

The implementation of Section 57 of the Environment Act 1995 by the Contaminated Land Regulations will give the Agency the following responsibilities for dealing with contaminated land from mid 1999:

- to provide advice to local authorities on the remediation of contaminated land;
- to ensure remediation of special sites;
- to maintain a register of special sites remediation; and
- to report to government on contaminated land.

Local authorities are required to inspect their areas to identify contaminated land following the statutory guidance issued under Section 57, to ensure remediation of land identified as contaminated, and to transfer regulatory responsibility for 'special sites' to the Agency and to maintain a remediation register.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Strategy to be prepared in conjunction with partners to identify and remediate contaminated land	Improved knowledge of risks of pollution to the environment. Provide an impetus to encourage sustainable development of brownfield sites	Amount of contaminated land is likely to be large and will therefore take some time to compile	H	English Partnerships Local Authorities Industry Government
Do nothing	None	Non compliance with the Contaminated Land Regulations	Nil	

Issue 13: Sustainable waste management cannot be achieved in the area in the long term with the current levels of waste generation combined with the existing waste management infrastructure

The solid waste produced from quarrying, construction and demolition, agriculture, other industry and commerce, and households, presents a significant stress on the area's environment. Landfill capacity is limited and greater effort will be required to achieve sustainable waste management.

The Agency has been given a key role in implementing the Government's White Paper 'Making Waste Work', which is based on three key objectives:

- to reduce the amount of waste that society produces;
- to make the best use of the waste produced;
- to choose waste management practices which minimise the risks of immediate and future environmental pollution and harm to human health.

The potential for increasing the amount of municipal waste recycled or composted will depend on a number of factors including finding suitable sites for collection banks, instigating kerb-side recycling schemes, and increasing public participation.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Promote waste minimisation through education of the public and industry	Helps to meet Agency objectives	Waste minimisation alone cannot solve the problem	L	Local Authorities
Promote improvement of recycling facilities at household waste sites and kerbside collection of recyclable waste	Helps to meet Agency objectives	Land use planning requirements	L	Local Authorities
Do nothing	-	Increased pressure on existing resources and need for landfill sites in sensitive areas	Nil	

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. Some 18,500 tonnes of paper sludge was stockpiled and spread on land in the area in 1997, with the majority coming from Kemsley Mill at Sittingbourne.

Spreading of paper on agricultural land is exempt from waste management licensing because it is used as 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.

The proposed waste to energy plant at Kemsley, which has been granted planning permission and IPC authorisation, will overcome the problem because most paper sludge will be incinerated there. Until it is completed in 2002, however, there will remain a public perception issue.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Investigate methods of preventing smell from stored paper sludge and from paper sludge in transit (e.g. alter route lorries take)	Short term remedy to overcome problem until 2002	Resource implications for short-term remedy	L	Paper Mills Local authorities
Do nothing	None	Continued complaints	Nil	

4.0 A BETTER ENVIRONMENT THROUGH PARTNERSHIP

4.1. 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 future generations of residents and visitors in the area, as well as our own. They aim to:

- address the causes of climate change, such as landfill gas emissions, 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;
- reduce the amount of waste generated in the area, and encourage an integrated approach to waste management;
- 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; we have neither the statutory powers, nor the resources and technical expertise. For this reason we will continue to work in partnership with local authorities and other agencies.

4.2. 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. These are summarised below.

4.2.1. North Kent Marshes Initiative

The North Kent Marshes initiative was launched in May 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. This will 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.

Topic papers were produced to provide technical information to feed into the draft Estuary Management Plan, which was published in 1997. Consultation

on the draft was undertaken but it has yet to be finalised. The initiative is currently being relaunched and the final plan will be produced shortly. The Agency has been and remains an active partner in this initiative.

4.2.2. Kent Biodiversity Action Plan

The Convention on Biological Diversity, which originated in the Earth Summit in 1992, requires national programmes for the conservation of biological diversity to be developed. The UK Government's response to the biodiversity convention, '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'. The Biodiversity Steering Group, set up in response to the Convention on Biodiversity, allocates some responsibility to the Agency for delivering the Biodiversity Action Plan (BAP). The Agency 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 Environment Agency), local government, independent wildlife organisations, landowners and managers. The plan identifies the Environment Agency as the lead agency for river and streams habitats, and the following species: water vole, otter, allis and twaite shad and white-clawed crayfish. Only the water vole and shad species are specifically relevant to North Kent.

4.2.3. Water Level Management Plans (WLMPs)

Water Level Management Plans are written agreements between Landowners, the Environment Agency and English Nature by which the water level requirements for a range of activities in a particular area, including agriculture, flood defence and conservation, can be balanced and integrated. The plan defines the areas that require attention, outlines procedure for maintenance and recording/monitoring and sets the interval 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 Lower Medway Internal Drainage Board
- Seasalter SSSI on the Isle of Sheppey - has been produced by the Environment Agency
- Capel Fleet SSSI - has been produced by the Environment Agency. The WLMP has been signed up to by local landowners, the Agency, EN, and RSPB, and one of the recommendations of the Capel Fleet WLMP is to build a permanent pumping station at Mocketts.

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

Following the Water Summit in 1997 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 with respect to the future planning of water resources.

4.2.5. Agricultural Incentive Schemes

MAFF designated the coastal marshland fringe of the North Kent Marshes as an Environmentally Sensitive Area (ESA) in 1993. It aims to protect and enhance the wildlife, landscape and historic value of the marshes by encouraging traditional grazing agriculture on which this value depends. An environmental monitoring programme (MAFF, 1997, Environmentally Sensitive Areas Scheme - Environmental Monitoring in the North Kent Marshes ESA 1993-1996, ADAS report to MAFF, MAFF publications, London) suggests that the ESA scheme is leading to the landscape, wildlife and historic value of the area being maintained on land under ESA agreements. However there is only limited evidence of enhancement. Water levels are being raised locally in some areas, but there has been a decline in the condition of ditches for rare plants and invertebrates, perhaps due to drier climatic conditions over the survey period (1993-1996).

For land outside ESAs, MAFF’s main agri-environment scheme is the Countryside Stewardship scheme. Voluntary ten-year agreements are available to farmers and other land managers covering a wide range of measures each of which has a standard payment and which are targeted at certain English landscapes. The scheme aims to enhance the landscape, wildlife and historic features of the target landscape, including watersides and wetlands. It also provides payments for allowing permissive access where this is appropriate.

4.2.6. Estuary Protection Plan

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

4.2.7. 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 try and assess what proportion migrated towards the saltmarsh.

4.2.8. West Sheppey Pollution Liaison Committee

West Sheppey Pollution Liaison Committee comprises representatives of Swale Borough Council, the Environment 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.

4.2.9. 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. Current examples include tomato green waste composting and local composting at Hernehill (further information to be provided).

The Agency supports 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 (CEST), the scheme aims to reduce significantly the release of effluent to rivers and estuaries, harmful gases to the air and the amount of waste to landfill. The scheme was launched in the North Kent area, where there is a number of major waste generating activities. The Agency is currently supporting waste minimisation through the Sustainable Business Partnership.

4.2.10. Kent Air Quality Partnership

EA95 Part IV places responsibility for local air quality management on the local authorities. They are required to carry out a three stage review and assessment of air quality within their boundaries, taking into account factors from neighbouring areas. The Agency is a consultee to this process. The review must assess whether it is likely that air quality objectives laid down in the air Quality Regulations (SI 1997 No 3043) will be complied with by the 31 December 2005. If it is likely that one or more of the objectives will be breached, the Local Authority is required to designate that area where the breach is likely to occur as an air quality management area. An action plan must be prepared which sets out the measures required to achieve these objectives.

The Agency's role is one of liaison, support, technical consultation and provision of data relating to part A IPC processes. Part B IPC processes (those lower potential to pollute) are already regulated by Local Authorities under the Local Authority Air Pollution Control (LAAPC) provisions of EPAO Part 1.

The Kent Air Quality Partnership is an existing forum which promotes cooperation and coordinated action on air quality issues. It is the custodian of an emissions inventory and air quality and air quality model which is now being used to facilitate member Local Authority Air Quality Reviews. The Agency is a full member of the partnership and KCC provides secretarial facilities.

The air quality model is also used by KCC to assist with planning decisions by evaluating the impact of proposed developments.

4.3. 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 high a level of public interest and support. The Agency's proposed contribution to this process is outlined below.

4.3.1. The LEAP Plan

The final LEAP Plan will take account of the results of consultation and will be produced by the end of 1999. It will contain a list of actions for the Agency to take in partnership with a range of organisations. Section 3 of this Consultation Draft LEAP already identifies potential partners.

4.3.2. 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 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.

4.3.3. 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 other's 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.

4.3.4. Area Environment Group (AEG)

The AEG comprises representatives of a wide range of interests in Kent, including local authorities, landowners, farmers, industrialists, and voluntary organisations. The Group meets on a quarterly basis at different locations in the County. Its purpose is to advise the Agency on local environmental issues and opportunities for partnerships, and to provide feedback on Environment Agency initiatives, including the LEAP. To this extent, the AEG is a form of partnership with the public. Its contribution is highly valued by the Agency.

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 authorities. The following list identifies the Agency's principal interests (full details are given in the Kent Area LEAP):

- Water Resources
- Flood Defence
- Water Quality
- Air Quality
- Radioactive Substances
- Waste Management
- Contaminated Land
- Conservation, including landscape and archaeology
- Fisheries
- Navigation
- Recreation
- Regulation of Major Industries.

APPENDIX 2 : CONSULTATIONS

The following organisations were consulted during the preparation of this Consultation Draft.

- Ashford Borough Council
- Canterbury City Council
- Council for the Protection of Rural England
- Country Landowners Association
- Countryside Commission
- Countryside Project Centre
- English Heritage
- Farming and Rural Conservation Agency
- Government Office for the South East
- Kent and Essex Sea Fisheries Committee
- Kent Anglers Fisheries Consultative Committee
- Kent County Council
- Kent Wildlife Trust
- MAFF
- Medway Ports
- Mid Kent Water
- National Farmers Union
- National Trust
- Royal Society for the Protection of Birds
- Royal Yacht Association
- Salmon and Trout Association
- Sheerness Docks
- Southern Water
- Upper and Lower Medway Internal Drainage Boards

Supported by data and information supplied by Area and Regional staff and the National Centre for Environmental Data and Surveillance.

Meetings were held with the following organisations:

- Swale Borough Council
- Medway Council
- English Nature

APPENDIX 3 : GLOSSARY

Abstraction	Removal of water from surface water or groundwater, usually by pumping.
Abstraction Licence	Licence issued by the Environment Agency under Section 38 of the Water Resources Act 1991 to permit water to be abstracted.
Aquifer	A layer of underground porous rock which contains water and allows water to flow through it.
Catchment	The total area of land which contributes surface water to a specified watercourse or water body.
Combined sewer overflow	An overflow structure which allows discharge from the sewerage system to a watercourse during wet weather conditions.
Controlled waters	Defined by the Water Resources Act 1991 Section 104. They included groundwaters, inland waters and estuaries.
Environmentally Sensitive Area	An area defined by MAFF for which grant aid is available for appropriate agricultural and water/land management.
Groundwater	Water which is contained in underground rocks (aquifers).
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.
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) and ratified by the UK government in 1976.

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 English Nature 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' (definition from World Commission on Environment and Development, 1987. Our Common Future - The Brundtland Report).

APPENDIX 4 : ABBREVIATIONS

AMP	Asset Management Plan
AOD	Above Ordnance Datum
BAP	Biodiversity Action Plan
DETR	Department of the Environment, Transport and Regions
FRCA	Farming and Rural Conservation Agency
IPC	Integrated Pollution Control
LEAP	Local Environment Agency Plan
MAFF	Ministry of Agriculture, Fisheries and Food
MRF	Minimum Residual Flows
NRA	National Rivers Authority - a predecessor body to the Environment Agency
OFWAT	Office of Water Services
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SEORP	South-East Otters and Rivers Project
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest

APPENDIX 5 : FURTHER INFORMATION

Further information may be obtained from the following publications which have been produced by the Environment Agency:

Sustaining Our Resources. Southern Region, Worthing. 1997

An Environmental Strategy for the Millennium and Beyond. Bristol. 1997

Policy and Practice for the Protection of Floodplains. Bristol. 1997

Viewpoints on the Environment. Bristol. 1997

Waste Minimisation and Waste Management. Bristol. 1997

The Agency's Contribution to Sustainable Development. Bristol. 1997

Water Related Recreation Strategy for the Southern Region. Consultation Draft. Southern Region/English Sports Council, Worthing. 1997

Environment Agency Corporate Plan 1998-99. Bristol. 1998

Saving Water: Taking Action. Bristol. 1998

Saving Water: On the Right Track. Bristol. 1998

Fishing in the South. Southern Region, Worthing.

Policy and Practice for the Protection of Groundwater. Bristol. 1998

Guidance for the Control of Invasive Plants near Watercourses. Bristol. 1996

Action Plan for Land Quality, Bristol. 1998

An Action Plan for Recreation, Bristol. 1998

Money for nothing - your waste tips for free, Bristol. 1998

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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