

Box 2



ENVIRONMENT AGENCY

House

Successors to the National Rivers Authority/
Her Majesty's Inspectorate of Pollution/Waste
Regulation Authorities.

local environment agency plan

EASTERN ROTHER LEAP

CONSULTATION DRAFT

DECEMBER 1999



The English Channel



ENVIRONMENT
AGENCY

YOUR VIEWS

The Eastern Rother Draft Local Environment Agency Plan (LEAP) describes the issues within our remit that we consider are important for the Eastern Rother Catchment in support of the Kent Area LEAP. It also includes a range of options for tackling these issues and potential partners. Your responses to this draft will be considered and where appropriate and practicable will be incorporated in the Final Plan which identifies our 5 year environmental enhancement programme.

We welcome your views, which you can submit by:

- 1) completing and returning the questionnaire issued with this document;
- 2) sending a written statement (separately or with the questionnaire).

Unfortunately we are unable to respond individually to your comments but the overall results of the process will be summarised in a Statement on Public Consultation that will be automatically sent to everyone who makes a response.

COMMENTS ARE REQUIRED BY 1 MARCH 2000

All responses should be sent to the LEAPs Officer (Kent) at this address:

The Environment Agency
Orchard House
Endeavour Park
London Road
Addington
West Malling
Kent
ME19 5SH

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.

Please tick the appropriate box:

I wish my comments to remain confidential

☐

I have no objection to my comments being made public

☐

Catchment Overview

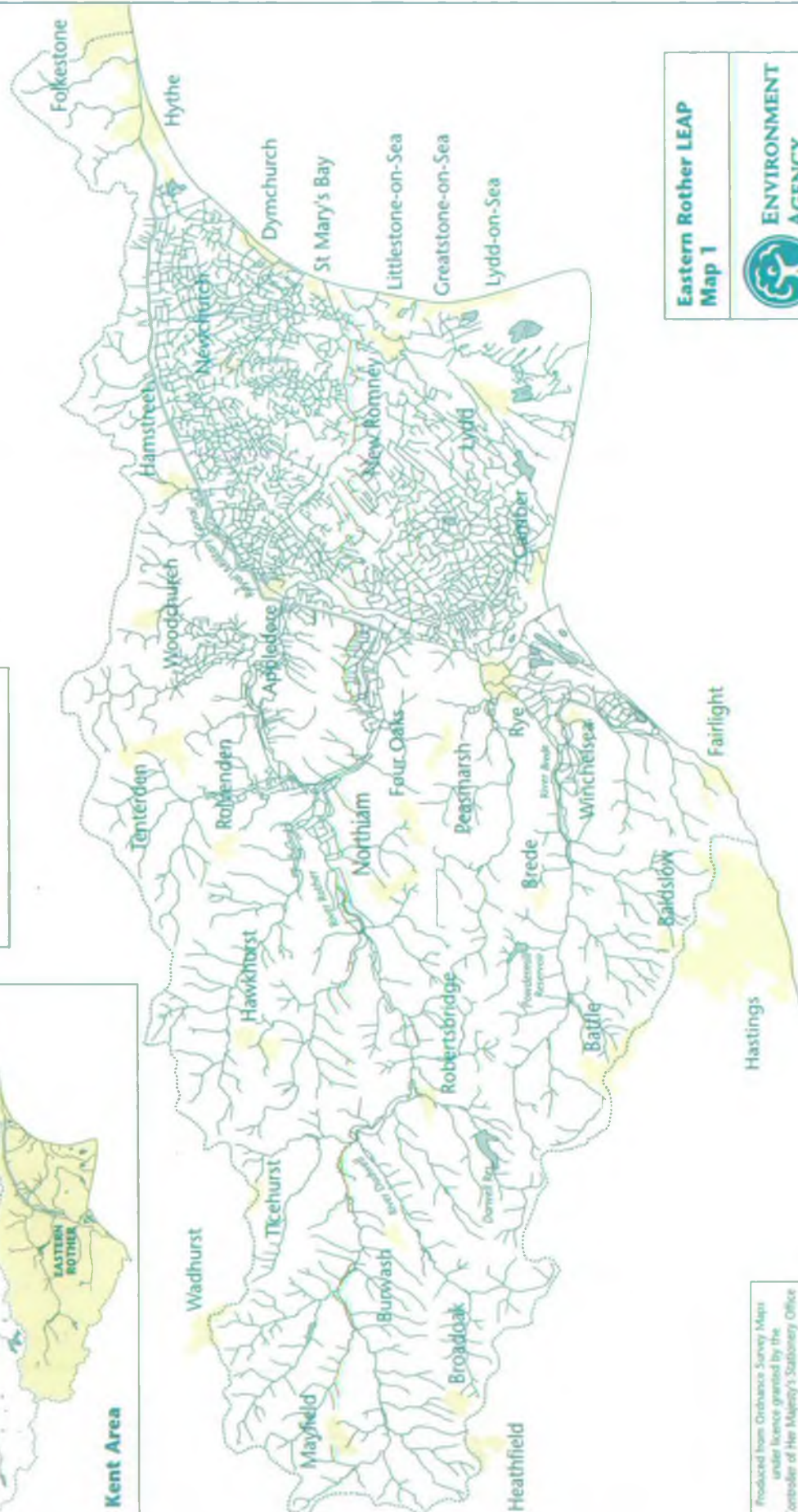
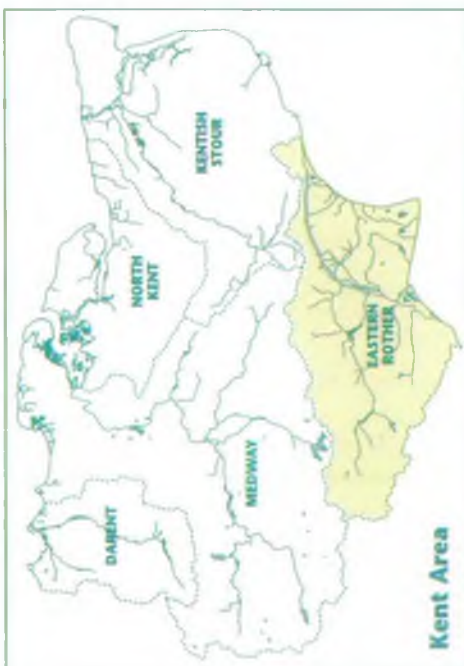
Eastern Rother LEAP
Map 1



Catchment Overview

KEY

- Catchment boundary
- Watercourse
- Canal
- Built up area



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Eastern Rother Area Key Details

General

Area 971 km²

Administrative Details

Councils and the % of the Eastern Rother Catchment they administer

Kent CC	49.6%
Ashford BC	19.6%
Shepway DC	23.0%
Tunbridge Wells BC	7.0%
East Sussex CC	50.4%
Hastings BC	0.5%
Rother DC	41.8%
Wealden DC	8.0%

Population

Year	Population
1991	170,000
2001 (Estimate)	188,000

Water Resources

Rainfall (mm/yr)

	Actual	Effective
Average	757	303
Drought (1989-1992)	648	248
Number of licensed abstractions		
Surface Water		116
Groundwater		97
Combined / Impoundments		31

Flood Defence

	Length (km)
Coastline including main tidal waters	324.0
Main River including tidal lengths	55.2
Sea Defences (Agency responsibility)	40.0
Tidal banks (Agency responsibility)	10.8

Conservation

Water dependent SSSIs	10
NNRs	2
Ramsar sites	1
SPAs	1
SACs	2

Fisheries

Length of EC Designated Fisheries (km):

	Freshwater	Tidal
Cyprinid	27.9	10.0
Salmonid	3.5	0

Water Quality

Chemical GQA of lengths in each class for the Eastern Rother catchment (1995 - 1997)

Class	%
A	1
B	12
C	17
D	9
E	3
F	42

Number of EC Designated Bathing Waters (1998)

Meeting guideline standards	1
Meeting mandatory standards	5
Failing to comply	0

Pollution Prevention & Control

Number of sites holding licences

Licensed Waste Sites	22
Process Industry Regulations	1
Radioactive Substance Regulations (Nuclear Power Stations)	2

FOREWORD

The Environment Agency has a unique opportunity to enhance our environment and quality of life in an integrated way whilst furthering the objective of sustainable development. In this work it is able to build on its strong position as one of the most powerful environmental regulators in the world combining the regulation of air, land and water.

Local Environment Agency Plans (LEAPs) aim to identify how this environmental enhancement can be achieved in a co-ordinated way for the next five years. This LEAP Consultation Draft for the Eastern Rother identifies local issues for this area where many of the characteristics considered to make up the traditional English landscape are still retained. It supports the broader, more strategic Kent Area LEAP, in setting priorities and solving problems.

The Consultation Draft gives everyone interested in the environment of the Eastern Rother an opportunity to be actively involved in making a difference to its future. It also includes identification of partnership opportunities for further environmental improvement in a sustainable manner. It provides a shared vision for the future recognising the competing pressures on the environment and the need to balance costs and benefits in its improvement.

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 LEAP identifying the actions the Agency will take to enhance the environment of the Eastern Rother catchment during the next five years.



Dr Binny Buckley
Kent Area Manager



ENVIRONMENT AGENCY

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1. 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; and
- 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. (These duties, together with the areas where the Agency has an interest, but no powers, are described in more detail in the Environmental Overview). 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 Environment 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 within the catchment. These will also allow the Agency to deploy its resources to best effect and optimise benefit for the local environment.

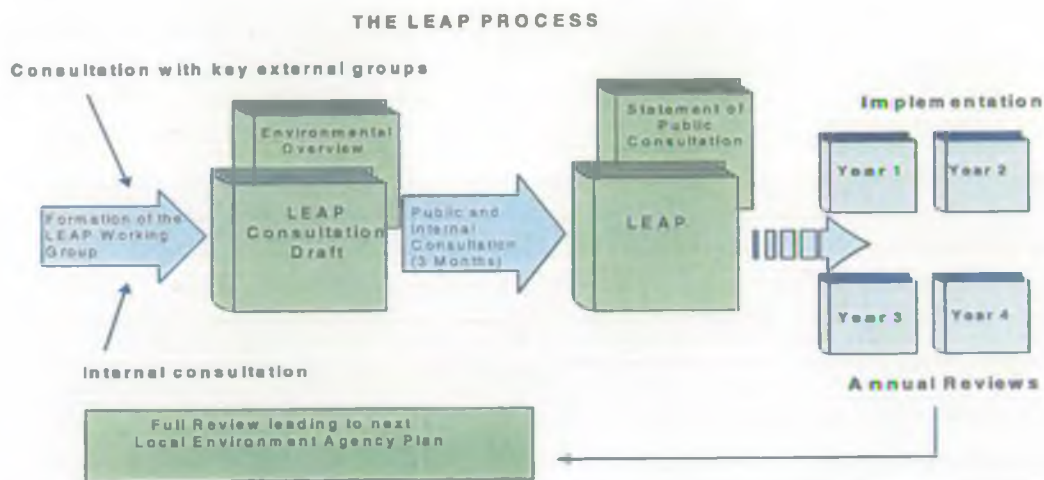
LEAPs help the Agency to identify local environmental issues grouped around the nine environmental concerns and assess, prioritise and solve them, taking into account the views of local stakeholders. The outcome of the process is a local programme of integrated action for environmental improvement in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

LEAPs replace the Catchment Management Plans that 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, but this is only the first milestone in what will be an ongoing national programme of LEAPs, which will be regularly updated, developed and improved.

LEAP Diagram



1.3 LEAP Consultation Draft

The Eastern Rother LEAP Consultation Draft concentrates 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. 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 concerns, which aim to protect and enhance the environment in an integrated way and contribute towards the goal of sustainable development.

The publication of the Consultation Draft is the first output in the LEAP process and marks the start of a three month period of formal consultation. The consultation programme is intended to enable external organisations and the general public to work with the Agency in planning the future of the local environment. It gives you an opportunity to:

- highlight any issue/actions not already identified for the Eastern Rother catchment
- 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 1 March 2000.

At the end of the consultation period a Statement on Public Consultation will be produced which will provide feedback on the results of the consultation programme.

1.4 Environmental Overview

An Environmental Overview has been produced as 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 Environmental Overview supports the Consultation Draft and provides the background to the issues.

1.5 LEAP Plan

The final LEAP Plan will take into account the results of consultation and will be produced by summer 2000. 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.

1.6 Annual Review

The Agency will monitor implementation of the LEAP and report on progress in an Annual Review. The Annual Review 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.

1.7 Relationship with the Kent LEAP and other Environment Agency Plans

In the Kent Area of the Agency an Area-wide LEAP has been prepared addressing strategic and significant environmental issues. LEAP documents for the other catchments in the Kent area - the Darent, Kentish Stour, Medway and North Kent have been produced separately.

Within the Eastern Rother LEAP Area the Agency also manages and is the harbour authority for the Harbour of Rye. The Harbour of Rye Management Plan addresses specific issues related to the Agency's role there. Other local issues of particular relevance to the Eastern Rother catchment are addressed in this document.

If you would like a copy of any of these plans please send a request to the agency at the address on the cover.

2. THE EASTERN ROTHER CATCHMENT

*And east till doubling Rother crawls
To find the fickle tide,
By dry and sea-forgotten walls,
Our ports of stranded pride.*

(from Sussex, Rudyard Kipling 1902)

Administratively the Eastern Rother catchment is divided almost equally between Kent and East Sussex. It lies in the south west corner of the Agency's Kent Area and is the third largest catchment in the area, with a land area of 970km². The catchment has the lowest population density in the Kent Area (approximately 175/km²). This is due to its rural nature with predominantly mixed arable and sheep farming. With rainfall averaging 754mm per year there are good conditions to sustain arable farming. The industry in the catchment is found predominantly along the Rother mainly between Rye and Rye Harbour.

The main river in the area is the Rother, which rises near Rotherfield in East Sussex and flows eastwards through the High Weald and then skirts Romney Marsh. About halfway along its course the river changes its character from an upland stream to an embanked channel with much of its length below the high tide level. The tidal limit of the Rother reaches as far as Scots Float, at Playden, where there is a tidal sluice and lock. Further up stream the river is embanked to provide storage for floodwater. The Rivers Tillingham and Brede join the Rother Estuary at Rye to form a drying harbour extending 4 kilometres out to the sea, with access only possible close to high tide. As well as the River Rother catchment the area also includes the marshes (Romney, Walland and Denge Marshes referred to collectively as Romney Marsh) bounded by the Royal Military Canal.

The area also includes a range of unique and greatly contrasting landscapes, from the ancient woodland of the Wealden valleys in the west, to the flat alluvial marshland dissected by dykes in the east. The coastline in the south includes the important, but environmentally fragile, shingle promontory of Dungeness as well as popular beaches such as Camber.

Industries and other human activities, such as traffic moving through the catchment and the agricultural land use, make their impact on the environment with discharges to air, water and land. There are few industrial discharges in the catchment with the main area of industrial activity situated along Rye Harbour Road. Southern Water provides sewage treatment works for the main towns such as Tenterden, discharging to the Eastern Rother catchment, although there are still a large number of small private discharges in unsewered rural areas. There are 22 active licensed waste facilities in the Eastern Rother catchment but waste is also transported out of the catchment to landfill, which remains the principal means of disposal for domestic waste arisings.

Many of the characteristics that are considered to make up the traditional English landscape, which is increasingly threatened in the South-east, are still present in the Eastern Rother catchment. The aim of this LEAP is to provide the Environment Agency's framework for a sustainable future in this area to preserve these features, whilst considering the range of human and natural pressures that impact on it. This will take account of the need to protect and enhance the countryside whilst ensuring that any development, both inside and adjacent to the catchment, is carried out in a sensitive way with minimal effect to the area and its resources.

3. ENVIRONMENTAL ISSUES AND OPTIONS FOR ACTION

3.1 Introduction

This section of the LEAP details the environmental issues that the Agency considers should be addressed within the Agency's 5 year Action Plan for the catchment. This initial list of issues has been identified from an Agency review of the environment in consultation with the Area Environment Group (AEG) whose members represent a wide range of interests. The Agency has also considered the concerns of organisations with particular interests and responsibilities in the catchment.

Presentations and discussion meetings were held with the AEG and English Nature (EN). The Agency also invited comment by correspondence with other organisations including local authorities. Comments and ideas have been incorporated wherever possible and the Agency is grateful for the contribution of time and effort by respondents and consultees. Appendix 1 lists those organisations that were contacted during this preliminary consultation.

The issues presented in this Consultation Draft are intended to encourage debate and seek your views on the environmental issues that face the Eastern Rother catchment.

3.2 Classification of Issues

The issues are not arranged in order of relative importance but have been grouped in accordance with the Agency's nine principal concerns, as detailed in the Agency's *Environmental Strategy for the Millennium and Beyond*. Many of the issues are inter-related and this reflects the need for integrated environmental management. Although the Environmental Overview makes reference to a number of issues, only eighteen have been brought forward into the Consultation Draft because:

- these are issues which are of particular significance to the Eastern Rother catchment which are not being addressed on a strategic basis through the Kent Area LEAP;
- they are directly relevant to the Agency's responsibilities and are not being addressed by other organisations (e.g. local authorities); or
- they are not matters that can be addressed by the Agency through its day to day responsibilities, such as regulating water abstraction licences, issuing discharge consents, and responding to planning applications.

3.3 Options For Action

For each issue, a number of Options for Action have been proposed. 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. This could be considered an advantage but it should be remembered that this is a short term situation and may only serve to delay costs until a later date when it will have to be resolved.

ISSUES SUMMARY

Environment Agency Concern*	Issue
Addressing Climate Change	1 Risk of loss of aquifer capacity at Denge from saline intrusion (tidal surges).
	The issue of the risk to flood defences from climate change has been covered in issue 1 in the Kent Area LEAP.
Improving Air Quality	No issues identified which are exclusive to the Rother catchment. For more information, see Kent Area LEAP.
Managing Water Resources	2 Future climate changes could give rise to a need for additional winter storage to improve water availability for agriculture.
	3 Need to address water company demands whilst protecting the needs of the environment.
Enhancing Biodiversity	4 Riverine biological decline in the River Line.
	5 Pressures on natural habitats on Romney Marsh and how to achieve the Agency's biodiversity objectives.
	The issue of implementing the EC Habitats Directive has been covered in Issue 8 of the Kent Area LEAP.
Managing Freshwater Fisheries	6 Impact of structures on the passage of migratory fish.
Delivering Integrated River-Basin Management	7 Nutrient rich discharges causing weed growth on Romney Marsh plus weed growth and fish deaths in extreme summers in the Royal Military Canal.
	8 The impact of the Bawl to Darwell Transfer and its effects, such as on water quality and fish health.
	9 Pressure from the tourist industry in the area.
	The issue of the loss of dilution capacity has been covered in Issue 10 of the Kent Area LEAP.
Conserving the Land	10 Maintaining the sea defences on coastal areas.
	11 Impacts from land contamination along Rye Harbour Road.
	Flood plain development has been covered in Issue 21 of the Kent Area LEAP
Managing Waste	12 Future waste disposal methods at British Gypsum from the manufacturing process.
Regulating Major Industries	13 British Gypsum Mountfield mine abandonment - regulation/environment study.

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

Issue 1: Risk of loss of aquifer capacity at Denge from saline intrusion (tidal surges).

The most recent predictions from the Climate Change Impacts Review Group (CCIRG) indicate the following:

- reduced summer rainfall and increased winter rainfall;
- increased frequency of strong winds which will lead towards increased wave height and frequency of tidal surges;
- relative sea level rise at a rate of 6mm per year – attributed partly to rising sea level and partly to the geographical tilting of the British Isles.

During tidal surges, the freshwater/salinity interface rises and if the natural groundwater levels are low, the salinity of the water at the fringes of the aquifer increases. Problems are also caused by waves overtopping the shingle defences and the CCIRG reports that these incidents are likely to increase in frequency. Under normal rainfall conditions, the aquifer is fully replenished and the potable water quality restored. The nature of the aquifer, with its minimal vegetation cover and exposed gravel ridges, means that recharge will occur after all major rainfall events including those in the summer months. Over the last ten years, however, salinity in the eastern fringe of the aquifer has increased during tidal surges and there is evidence that the water quality balance is not being regularly restored. It is assumed that this may be due to prolonged drought periods occurring over that time.

A rise in sea level could therefore have a major effect on the interrelationship of the freshwater/saline interface in the aquifer. Groundwater levels may rise and create more open water in the shingle depressions. This in turn will increase the evaporative losses and reduce the water available for supply.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Draw up and promote a strategy that includes the following: (i) periodic review of aquifer status quality and quantity); (ii) investigation of potential for measures to extend the life of the aquifer.	Monitors and updates strategy to maintain efficiency. Improve management of resource.	Manpower availability.	H	FDWS Mineral extractors EN Nuclear Electric RSPB
Do nothing.	No cost.	Alternative source of water will be required creating additional pressures on neighbouring area.	-	-

Issue 2: Future climate changes could give rise to a need for additional winter storage to improve water availability for agriculture.

Present climate change predictions are that winters will become wetter and summers will become drier. Under these conditions the quantities of water available to abstractors in the summer will be reduced but the need for water, particularly for stock watering and crop irrigation practices, will be increased. A possible solution to this problem would be to increase the amount of winter storage in the catchment so that the storage can be filled during the winters and the water used in the summer.

At present the Water Resources function of the Agency actively encourages abstractors (especially spray irrigators) to construct winter storage reservoirs as it is felt that this makes better use of the water resources in the area. This is particularly important on Romney and Walland Marshes where there are Habitat Directive conservation sites which may be impacted by summer abstraction.

During the winter months the levels in the marsh ditches are kept low to maximise flood storage. This inevitably reduces the total volume of water that could otherwise be made available for use during the summer and therefore ditch storage may be less suitable than off-line storage. It may therefore be appropriate for the Agency to provide general guidance on situations where creation of winter storage could prove effective for irrigation or other agricultural users. A more site specific filling regime would be drawn up by Water Resources in consultation with Flood Defence.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Draw up and implement strategy to: <ul style="list-style-type: none"> (i) identify areas where off-line winter storage would be appropriate; (ii) draw up guidelines for the following aspects: <ul style="list-style-type: none"> - filling regime for storage; - sensitive design of storage reservoirs. 	Effective resource management. Saves water that would have been discharged to sea. Encourages good conservation practice.	Overcome potential decrease in flood storage. Increase in land take and additional construction costs.	M	Crown Estates FRCA IDBs EN FWAG
Do nothing.	No Cost.	Over abstraction may lead to loss of supplies in the summer months, drying out of the marsh and the loss of significant habitat.	-	-

Issue 3: Need to address water company demands whilst protecting the needs of the environment.

Four water companies provide water in the Eastern Rother catchment: namely Folkestone & Dover Water Services (FDWS), Mid Kent Water plc (MK), Southern Water (SWS) and South East Water Ltd (SEW).

The water resources in the catchment are primarily surface water with Darwell Reservoir being the prime source. The groundwater resources are limited due to the composition and structural complexity of the Hastings Beds aquifer. The Denge gravels act as an important local source of groundwater.

At present, every one of the water companies has a supply/demand deficit for those parts of their zones falling within the Rother Catchment and import water into the area. Southern Water enhances the yield of Darwell Reservoir with a transfer from Bewl Water. Folkestone & Dover import water from the Chalk aquifer to the north via a new trunk main. Mid Kent Water bring supplies into the area from Bewl Water and from Lower Greensand boreholes in the Ashford area. The extent of the supply/demand deficit is exacerbated by Southern Water and South East Water having large demands to the west of the area which have historically been supplied by water from the Rother Catchment, e.g. Hastings and Eastbourne.

Therefore, in general, the water demands within the Rother Catchment are dispersed and do not coincide with the major demand centres of the individual water companies. In other words, the Rother Catchment is at the end of the water company distribution systems. This can mean that water is either imported into or exported from the catchment depending upon the structure of the distribution system.

The demand for water in the Rother Catchment is also increasing due to the environmental demands within its lower reaches. Walland Marsh and Dungeness are designated sites under the Habitat Directive and thus it is the responsibility of the Agency under the National Environmental Programme to ensure that the water requirements for these sites are protected. There is also a requirement for the release of freshwater through Scots Float Sluice to encourage runs of migratory trout and ensure the completion of the freshwater stage of their lifecycle.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
<p>Draw up and promote an action plan to:</p> <p>(i) undertake a waterbalance of the catchment to determine total water available in catchment;</p> <p>(ii) assess the total environmental water requirements of catchment (e.g. SPA/SAC sites, fisheries etc);</p> <p>(iii) assess total long-term safe yield for supply (mainly Public Water Supply and agriculture);</p> <p>(iv) implement resource management and development plan incorporating demand management, water conservation and other measures (e.g. aquifer storage and recovery and re-use of water).</p>	<p>Secures the best use of water resources.</p> <p>Basis for effective resource and abstraction management.</p> <p>Environmental enhancement.</p>	<p>Manpower availability.</p>	<p>H</p>	<p>Water companies</p> <p>EN</p> <p>RSPB</p> <p>Fisheries groups</p> <p>OFWAT</p> <p>NFU</p> <p>MAFF</p> <p>DETR</p>
Do nothing.	No cost.	Alternative sources of water required.		

Issue 4: Riverine biological quality decline in the River Line.

The discharge from the abandoned Mountfield gypsum mine is rich in sulphates. This discharge is now regulated by an Environment Agency discharge consent. The receiving River Line, a headwater tributary of the River Brede which discharges to the River Rother at Rye, has elevated sulphate levels.

An examination of the fish stocks in the River Line has revealed a small but valuable stock of wild brown trout and the water quality is not perceived to have an immediate major impact upon fisheries in that area. The same is not the case for aquatic invertebrates. Upstream of the mine discharge, the fauna meets or exceeds the expected standard with 35 taxa represented over a 5 year period. Immediately downstream the fauna is impoverished with only 15 taxa found.

The concentration of sulphate in the discharge is not constant but varies somewhat and the different species of invertebrate each have a different sensitivity to the toxic sulphate ion. An on-going study is into its third year of survey.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Prepare and implement an improvement plan including continued environmental monitoring.	Achievement of improved water quality.	Resources.	M	Landowners
Do nothing.	No cost.	Diminishing numbers of aquatic invertebrates may lead to an upset of the ecosystem.	-	-

Issue 5: Pressures on natural habitats on Romney Marsh and how to achieve the Agency's biodiversity objectives.

Much of the catchment is a low-lying maritime flatland based on a quality soil composed of river silts. This, coupled with irrigation from the many ditches and dykes in the area, makes the land on Romney Marsh ideal for sustaining arable crops. To utilise this resource fully, the land is often ploughed right to the edge of the drains, often to the detriment of native species and wild plants. For example, the habitat may become unsuitable for species such as water voles, as they are constantly exposed to predation where cover is lacking, particularly by mink and birds of prey. Ploughing to the edge of drains also causes bank instability, increases erosion and may increase the level of run-off entering the ditches.

Natural habitats in the area are also at risk from the many agricultural chemicals such as fertilisers, pesticides and herbicides used in modern arable farming methods. Many of the chemicals are complex organic compounds, which although used in very low dosages, still have the potential to cause considerable environmental damage if misused.

As well as arable farming, large flocks of sheep are reared on the Romney Marshes. These used to be dipped with low concentrations of organophosphate insecticides to clear them of parasites. Recently organophosphates have been replaced by pyrethroids, which are seen to have a less toxic effect on farm workers and to be less persistent in the environment. Pyrethroids, specifically cypermethrin, are readily neutralised on contact with the soil but are very toxic to aquatic life in low concentrations. They have been found to have a major impact on aquatic fauna particularly where soils are thin, such as in north west England. No such damage has been found on Romney Marsh but few chemical determinands are monitored on a regular basis by the Agency and specific investigations are only mounted when problems are perceived.

Despite these pressures the catchment supports a number of sites which the Agency has a legal requirement to protect under the EC Habitats Directive. There is also strong evidence of a nationally important water vole population on Romney Marsh. Owing to the high ditch density, regular monitoring requires much survey effort if valuable information is to be gained. The information can then be taken into account when carrying out maintenance works.

In addition flood embankments and field margins with wide buffer zones have been utilised very successfully by barn owls where artificial nest boxes have replaced lost nesting sites such as old barns and hollow trees.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Identify suitable sites for buffer strips and consider monitoring benefits.	Provides the opportunities for habitat enhancement.	Resources.	M	Landowners EN FRCA RMCP
Carry out regular water vole surveys and monitoring to be used in conjunction with water level management plans.	The numbers and trends of water voles can be established and monitored.	Resources.	M	Landowners RMCP SEORP
Implement a series of habitat enhancements on Romney Marsh, notably for water vole.	Secures long term habitat improvements for species of conservation concern. Increases population size and reduces isolation of populations.	Possible conflict with other management objectives.	M	RMCP Landowners FWAG FRCA EN KWT
Continue to support the management of Rye Harbour Nature Reserve and the Two Bays Project.	Strengthen partnerships with other stakeholders.	Needs to be balanced against other demands and priorities with continued funding implications.	L	RHNR Two Bays Project East Sussex CC
Devise and implement a programme of sensitive ditch management of watercourses maintained by the Agency in the catchment, particularly on Romney and Walland Marshes.	Increased biodiversity.	Potential conflict between flood defence and farming interests necessitates extensive consensus building.	L	Landowners Farmers
Investigate the potential for a river restoration project on the River Rother.	Would reverse damage to habitat and increase biodiversity and fisheries quality.	Reaching agreement with riparian owners and users.	M	Landowners Conservation organisations Angling clubs

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Extend and continue to monitor the Barn Owl Box Scheme along the River Brede and RMC.	Increases population.	May be limited number of suitable locations.	L	The Hawk and Owl Trust RMCP FWAG Landowners
Promote information campaign to establish dialogue with farmers and contractors to maintain a continuing high level of environmental awareness.	Adoption of best practice with minimal environmental impact.	Resources.	L	Landowners
Promote good practice for sheep dipping.	Reduction and elimination of environmental impacts.	Resources.	L	Farmers NFU
Targeted monitoring for dangerous levels of agricultural chemicals.	Better understanding of the environmental situation.	Resources.	H	
Do nothing.	No cost.	Further decline in natural habitats.	-	-

Issue 6: Impact of structures on the passage of migratory fish.

There are many man made dams and mills found on the watercourses in the Eastern Rother catchment and historically these have had a number of different uses. Some structures are still used today, for example to prevent saline intrusion and to gauge river flows. Without these structures many of the lower reaches of the Rother catchment would revert to tidal estuaries, with the subsequent loss of a considerable freshwater habitat and flooding to many properties and farmland.

Each of these structures forms a barrier to the free passage of fish within a river system and may obstruct the distribution of other species, such as water voles and crayfish. The acknowledged migratory fish species are sea trout and eels but in practice many of the fish species in rivers and estuaries migrate, albeit short distances, to spawn and feed.

Where salmon or sea trout are present the Agency has the power to have owners of weirs install fish passes, at their own expense, where they fall into a state of disrepair and have to be reconstructed for more than half their length. The Agency would otherwise have to find the full cost of demolition or modification itself, including the installation of any fish pass, if it felt that an obstruction needed to be overcome.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Identify and prioritise structures that could be removed or modified	Provides a logical, cost effective approach to further work.	Resources	M	Landowners
Remove or modify structures.	Fish would be free to swim and spawn in their natural habitats.	River flows may not be so easy to control with a higher risk of flooding, especially in the wetter winter months. Increased saline intrusion to the upper reaches with subsequent loss of habitat.	H	Landowners
Install additional fish passes.	Improve and develop fisheries on greater lengths of rivers.	Resources.	H	Landowners
Review the design and operation of fish passes in the lower part of the catchment in the light of the latest studies on the management of water flows in the area.	Ensure that the best and most cost effective type of fish pass is installed and is operated effectively.	Resources.	M	Riparian owners Angling clubs
Do nothing.	No cost.	Failure to achieve the full potential of the Rother as a fishery.	-	-

Issue 7: Nutrient rich discharges causing weed growth on Romney Marsh plus weed growth and fish deaths in extreme summers in the Royal Military Canal.

In the Rother catchment nutrient rich discharges, which encourage plant growth, arise from the numerous discharges of good quality treated effluent, as well as from leaching of nitrates from agricultural land. Under dry weather conditions these discharges constitute a major proportion of the river flow. For a large part of the year the Rother does not flow via Blackwall Bridge and out to the estuary through Scots Float Sluice. Instead the flow passes up the Potmans Heath Channel where it is pumped via the Reading Sewer into the Royal Military Canal. From here it is fed into the watercourses on the Romney Marsh.

The static water conditions and the presence of nutrients are ideal for excessive proliferation of some water weeds, such as duckweed, which blanket competitor plants and may ultimately deoxygenate the water causing the death of aquatic invertebrate animals, fish and other plants. Because there is low flow in the Rother from Potmans Heath to Scots Float, in hot dry summers there are frequent algal blooms with associated problems due to lack of dissolved oxygen.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Change management of flows to optimise flow in the summer.	Achieves better water quality by additional dilution of nutrients.	Increased pressure on water resources. May require construction of additional water control structures.	H	Landowners
Aerate water using existing pumps.	Reduces the risk of eutrophication and ensures that fish kills are limited.	Additional cost for operating pumps. Does not remove nutrients and is not a sustainable solution long term.	L	
Review the locations and opportunities for buffer strips to absorb nutrients.	Identifies where better water quality could be achieved by avoidance of nutrients entering watercourses.	Resources.	M	Landowners EN MAFF
Monitor in addition the water quality in ditches.	Improves collection of water quality data and establishes the effect of discharges on water quality.	Resources.	M	

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Investigate the contribution of nutrients from STWs in the catchment to weed growth.	Improves understanding of the sources of nutrients.	Resources.	H	Water companies
Encourage farmers to actively reduce fertiliser use or adopt Countryside Stewardship schemes that minimise losses to the aquatic environment.	Less chemicals used that can enter the aquatic environment.	Economic consequences arising from changes to farming methods.	M	Landowners FRCA NFU
Inspect farms with a view to implementing pollution prevention programmes.	Minimise accidents and other pollution incidents.	Resources.	M	Landowners
Do nothing.	No cost.	Watercourses will become increasingly blocked by vegetation.	-	-

Issue 8: The impact of the Bewl to Darwell Transfer and its effects, such as on water quality and fish health.

Darwell Reservoir was constructed primarily as a pumped storage reservoir for water that is abstracted from the River Rother at Robertsbridge. The water is then treated at Brede Waterworks before being fed into the public supply. The Rother catchment upstream of Robertsbridge intake has very few intensive arable farms and therefore very little trace of pesticide residue is found in the raw water.

Since the Bewl Water to Darwell Transfer pipeline has come into use, traces of pesticide residue have been found in the raw water, which were not found before. This is due to the presence of pesticide residues derived from the water transferred from the Medway catchment where there is extensive arable and fruit farming. In future this may require the provision of more advanced potable water treatment such as the use of activated carbon.

The impact of this transfer was considered before the connection was approved and the potential for transfer of several species of fish parasites and aquatic plants was considered but subordinated to the need for the transfer. Whilst the Australian stonecrop, an exotic, prolific plant species in the Medway catchment, has yet to be transferred, the fish parasite *Ergasilus sieboldii* has rapidly infected the trout and coarse fish stocks in the Darwell Reservoir. The fish parasite is classified by the Agency as one that can cause mortalities in fish stocks in certain circumstances and the Agency will not consent the stocking of infected fish unless the recipient water already contains the parasite (Salmon & Freshwater Fisheries Act 1975, Section 30). This parasite is particularly resistant and it is highly unlikely that the situation can be held or reversed.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Continue monitoring for invasive species throughout the Rother catchment.	Provides early warning of new introductions.	Resources.	M	Southern Water Anglers
Monitor for traces of pesticide residues.	Provides additional water quality information.	Resources.	M	Southern Water
Look at methods to treat the "raw" water before it is transferred to the catchment.	Eliminates problem at source.	Cost and difficulty of treatment.	H	Southern Water
Do nothing.	No cost.	Unmanaged deterioration of water quality.	-	-

Issue 9: Pressure from the tourist industry in the area.

The Rother catchment contains a long stretch of coastline running from the north of Hythe to just south of Fairlight. Such an extensive and unique coastline means that the area receives many visitors and holidaymakers each year who make use of the tourist attractions such as the historic town of Rye or the Romney, Hythe and Dymchurch Railway travelling along to the fragile environment of Dungeness.

In addition to the local dependence upon farming, sea fishing and quarrying, the tourist industry contributes significant funds to the local economy. However, with these benefits come the associated problems of congestion, extra demands for water and waste disposal, as well as the need to strike a balance between public requirements and the need to preserve areas of high nature quality such as the Rye Harbour Nature Reserve. Each demand needs careful consideration, planning, control and funding. The Agency has a duty to promote the use of water and associated land for recreational purposes where desirable. It also has a duty of care to the general public when carrying out maintenance operations such as construction works on Agency flood defences. The maintenance programme and operational practices will need to take into account possible increases or changes in use such as greater numbers of tourists or the inclusion of new cycle ways and paths on or over seawalls.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Develop code of practice to advise those involved with building paths on flood walls.	Ensures that all uses for flood walls are taken in to account when further development takes place.	Resources.	L	SUSTRANS LAs
Develop management policies to minimise tourist impact on sensitive habitats.	Avoidance of concentration at and destruction of sensitive habitats.	Resources.	M	LAs EN
Continue to support a seasonal warden and appropriate visitor management on Camber Sands.	Management of sensitive habitat and increased public awareness.	Degradation of the dune system.	M	Rye Bay Countryside Office East Sussex CC
Support development and implementation of appropriate recreational and landscape enhancements along the A259, where consistent with Agency duties, notably landholdings.	Fulfils duty to promote recreation on Agency landholdings, where appropriate.	Resources.	M	Conservation organisations LAs
Assist in the promotion of recognised recreation routes within the catchment, including circular walks and paths.	Increased public appreciation and awareness of area.	Potential increased disturbance.	L	RMCP LAs
Do nothing.	No cost.	Further congestion and strain on resources caused by lack of management may lead to tourists being deterred from visiting the area, with the subsequent loss of this resource to the economy.	-	-

Issue 10: Maintaining the sea defences on coastal areas.

The shingle foreshore between Rye Harbour mouth and Fairlight is maintained by the Agency as a principal flood defence to the maritime marshes around Rye. Currents in the English Channel and Rye Bay continuously sweep the shore gravels to the east which, historically, have been known to block the mouth of the River Rother after major winter storms. The gravel is continuously moved from Nook Point to Cliff End and Dogs Hill throughout the winter to maintain the energy buffering capacity of the foreshore and protect the properties and Pett Level from flooding. In addition, timber groynes have been placed to reduce the erosion along the coast. This recycling operation relies on the build up of shingle along the Rye Harbour Nature Reserve frontage. The western arm of Rye Harbour retains shingle on Nook Beach and prevents it from blocking the mouth of the Rother and moving on to Camber Sands.

The integrity of the soft and hard sea defences at Camber, St Mary's Bay and Dymchurch is paramount in protecting the low lying residential, commercial and farm land of Romney Marsh. Current studies should identify any deficiencies in the coastal defences and make recommendations on the best means of managing the defences. Once this has been done the areas which have been identified can be looked at in more detail to assess the impact on the environment of any required work.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Investigate and model alternative methods for maintaining the flood defences.	Development of a self sustaining system for shingle banks.	Resources.	H	MAFF DETR LAs British Energy
Strengthen areas where deficiencies exist.	Better flood protection.	Resources.	H	MAFF DETR LAs British Energy
Determine the condition and maintenance requirements of Rye Harbour Western Arm.	Supports the coastal protection operations.	Resources.	M	
Do nothing.	No immediate cost.	Gradual deterioration of defences increasing the potential for failure and consequent flooding. Need for major expenditure to remedy deterioration.		

Issue 11: Impacts from land contamination along Rye Harbour Road.

Approximately 35 hectares of the land along Rye Harbour Road has been developed over a period of 50 years for industrial use. This industrialised area is currently the subject of an intensive investigation by the Environment Agency, funded by a grant from the DETR, working closely with local landowners. This has resulted in an extensive study of past and present industrial practices, and it is now evident that a significant area of this land is contaminated (especially the underlying groundwater). The Agency will ensure that landowners, local authorities, and other key individuals are consulted at every relevant opportunity.

Adjoining this area to the west lies a SSSI, forming part of the Rye Harbour Nature Reserve, which could also be adversely affected by contamination.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Continue to monitor pollution levels to confirm both the depth and extent of the contamination.	Better understanding of the problem.	No treatment of potential problems.	M	
Seek further funding for any remedial measures found to be necessary.	Provide resources for rapid alleviation of problems.	May not provide comprehensive solution.	L	DETR
Develop a successful partnership with local industries and landowners. Any future plans to develop land within this area will require careful consideration.	Provide an ongoing programme of remediation.	Remediation could be delayed if it only takes place in conjunction with redevelopment.	M	Landowners
Implement a structured approach towards the successful regulation of existing sites. This will involve a pollution prevention programme.	Clear operational guidelines are established.	Resources.	H	Landowners
Determine remediation options and cost benefit analysis for each option.	The most cost-effective way of dealing with the area can be found.	Resources.		
Do nothing.	No cost.	Contamination may persist.	-	-

Issue 12: Future waste disposal methods at British Gypsum from the manufacturing process.

British Gypsum has large and complex industrial sites situated within two important Sussex river valleys at Brightling and Mountfield with waste from both sites disposed of at Mountfield.

The Mountfield site has two landfill areas (one restored & one currently in use). Both these sites are built over a culvert, through which runs the River Line, a tributary of the River Brede. Waste generated leachate from both these landfill cells is currently discharged to woodland above the main river.

Actions by the Agency will include:

- the implementation of a structured pollution prevention programme;
- encouraging sustainable management of waste produced, ensuring that wherever possible, recycling processes are employed;
- continuing to closely monitor water quality compliance and identify appropriate responses that may be necessary;
- maintaining current environmental studies of the area;
- working with the company to improve the leachate disposal methods in the future; (It is likely that leachate will be produced for at least another 50 years!)
- working with the company to reduce the landfill burden, using new proven technologies that become available. Correct management of both landfill areas will serve to reduce the current level of landfill gas.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Continue to develop with the company an awareness towards identifying significant risks that could endanger potable water supplies.	Avoidance of pollution of potable water supplies.	Resources.	M	British Gypsum
Identify, by using site visits, the key practices which pose waste management problems.	Early identification of potential risks before problems arise.	Resources.	M	British Gypsum
Do nothing.	No cost.	The continuing discharges will affect the water supplies, which may affect the potable sources.	-	-

Issue 13: British Gypsum Mountfield mine abandonment – regulation/environment study.

The gypsum mine at Mountfield was abandoned in December 1998 due to a change to gypsum extracted from power station flue gas desulphurisation systems as the raw material for plasterboard manufacturing at Mountfield. The required notification has been given to Her Majesty's Inspectorate of Mines and water from the mine is being pumped into the River Line. In the long term, abandonment of mines can give rise to contamination of groundwater, which may ultimately affect surface water quality.

A new consent for discharge of mine water was issued in February 1997. The conditions of this consent will be reviewed if environmental monitoring proves this to be necessary.

Options for Action	Advantages	Disadvantages	Financial Cost	Potential Partners
Determine the impact on water quality of the abandonment of Mountfield mine.	Better understanding of possible impacts.	Resources.	M	British Gypsum
Continue to conduct environmental impact assessments.	Provides sufficient background data to determine and justify variation to consent conditions.	Resources.	M	
Do nothing.	No cost.	The mine would be abandoned and left to deteriorate, causing major impacts to the environment. Land could subside adversely affecting groundwater. Opportunities to redevelop a brownfield site could be lost.	-	-

4. A BETTER ENVIRONMENT THROUGH PARTNERSHIP

4.1 Introduction

The Agency is well placed to influence many of the activities affecting the environment through the Environment Act 1995 (EA 95) and other associated legislation. This section examines the major opportunities for the Agency to address environmental issues through partnerships with others.

The Agency must work in partnership with others to ensure that where appropriate the options for action included in Section 3 become real actions and are implemented so that the environmental issues are addressed.

Close links are already established with local authorities, water companies, industry, farmers, landowners, conservation bodies, angling clubs and recreation groups. New partnerships will be sought, both with these organisations and others. It is hoped that this draft LEAP will help us to achieve even more by working closely with others to address issues in the Eastern Rother Area and secure a stronger basis for environmental protection and enhancement.

4.2 Partnership opportunities

4.2.1 Air quality

Kent Air Quality Partnership and Sussex Air Quality Steering Group

EA 95 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 processes (those with lower potential to pollute) are already regulated by local authorities under the Local Authority Air Pollution Control (LAAPC) provisions of Environmental Protection Act (EPA) 90 Part 1.

The Kent Air Quality Partnership covering is an existing forum that promotes co-operation and co-ordinated action on air quality issues. It is the custodian of an emissions inventory and air quality model which are now being used to facilitate member local authority Air Quality Reviews. The Agency is a full member of the partnership and Kent County Council (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.

A similar partnership, the Sussex Air Quality Steering Group (SAQSG), fulfils an equivalent role in both the Sussex counties. This Group comprises the local authorities, East and West Sussex County Councils and the Environment Agency together with other co-opted parties (eg. representatives from Gatwick Airport) and acts as custodian for an emissions inventory that is used to facilitate modelling work. Whilst most of the partners conduct ambient air quality monitoring there is no co-ordinated monitoring network across Sussex similar to the one in Kent. The SAQSG is currently considering the benefits and implications of establishing such a network.

4.2.2 Landscape, biodiversity and recreation

The Agency supports action to sustain or improve natural and man-made assets so that they are made available for the benefit of present and future generations. Many development schemes have significant implications for conservation. The Agency will work with developers, local authorities, conservation bodies and landowners to conserve and enhance biodiversity.

Romney Marsh Countryside Project

The Agency is a funding partner of the Romney Marsh Countryside Project, which has encouraged the uptake of Countryside Stewardship grants by farmers to install the desired buffer strips. It also undertakes survey work, including River Habitat Surveys and water vole survey and monitoring, habitat management and the promotion of recreation.

Rye Harbour Nature Reserve

The Rye Harbour Local Nature Reserve occupies much of the land to the west of the Rother between Rye and the sea. It includes the 157ha Authority owned area between Rye Harbour Village and Winchelsea Beach. In 1970 it was designated as a nature reserve by East Sussex County Council, which is responsible for its management. The Rye Harbour Nature Reserve is an area where wildlife is specially conserved. The remainder of the SSSI supports commercial, agricultural and recreational pursuits.

A management committee funded by East Sussex County Council, including representatives from the Environment Agency, administers the nature reserve. The committee employs a warden with funding from the friends of Rye Harbour Nature Reserve and grants from the Agency.

The reserve is noted for the fine coastal shingle vegetation (over 350 recorded species of flowering plants) and some 270 recorded species of birds.

Two Bays Initiative

The Two Bays initiative is a new wildlife project that aims to study and enhance the habitats and species in the Rye Bay area and across the Channel in the Baie de Somme, Picardy, France. The initiative recognises that wildlife does not occur in isolation and moves across borders into neighbouring countries. The Environment Agency is a partner in this project which is part funded by the European Community European Regional Development Fund.

Rye Bay Countryside Office

This covers the same area as the English part of the Two Bays Project with some additional land above the 10m contour line. The work mainly involves liaising with parishes, carrying out small scale management projects and promoting recreation such as nature trails throughout the area.

Fisheries Consultative Group

Many development schemes have significant implications for fisheries. The Agency will work with anglers, riparian owners, developers and local authorities to protect fisheries. In particular the Environment Agency works closely with the Kent Fisheries Consultative Association (KFCA) which contains representatives sitting on the Agency's Regional Fisheries, Ecology, Recreation, Navigation and Conservation Committee and the Kent Environmental Group (AEG). In turn the KFCA serves four catchment fisheries groups including one for the Eastern Rother.

Farming and Wildlife Advisory Group

In collaboration with Kent and East Sussex County Councils, the Environment Agency Kent Area Office has supported the advisory work of the Kent and Sussex Weald Farming and Wildlife Advisory Group (FWAG) since 1994. This is in recognition of the high percentage of advice provided to landowners relating directly to the protection, enhancement and creation of watercourses and wetlands. The work delivered contributes to Agency Conservation aims through, for example, the production of farm reports, Countryside Stewardship applications and farm biodiversity action plans.

SUSTRANS

SUSTRANS, or Sustainable Transport, works through practical projects such as the National Cycle Network and Safe Routes to Schools. Their aim is to design and build safe routes for cyclists and walkers to provide journeys to work, school and for leisure. There have been a number of routes proposed in the Rother area, including paths for cyclists and walkers from Camber to Pett, passing through Rye and crossing the Royal Military Canal. The Agency has a duty to incorporate recreation facilities into its work wherever it is feasible, and as a result, plays a significant role in the way recreational cycling develops along waterside locations.

Rye Partnership

The Rye Partnership was established in 1996, bringing together key stakeholders to develop a local community response to the socio-economic problems prevalent in the area. The Environment Agency is a member of this partnership, which includes various councils and local interest groups. The partnership has successfully delivered and supported many small scale projects and has undertaken extensive consultations with local people which have provided the foundation of the strategy and the resultant development programme.

In 1999, the Rye Partnership submitted a bid for Single Regeneration Bid (SRB) funding to address the lack of socio-economic opportunities in the Rye Bay area.

4.2.3 Planning Liaison

Planning liaison is the link between the Agency's functions and local authority planners. The Agency is committed to developing close working relationships with local planning authorities to promote effective links between planning and environmental protection. The Agency will encourage best practice, including source control measures and common standards, among local authorities and riparian owners to protect and enhance the environment.

4.2.4 Flood Defence

Internal Drainage Boards

Land Drainage and Sea Defences have had an essential part to play in the development of Romney Marshes. The area is considered to be "The Cradle of Land Drainage in England" and can boast the oldest Drainage Authority in England – The Corporation of Romney Marsh – The Lords, Bailiff and Jurats – known as The Lords of the Level for short. The Corporation has been in existence for nearly 750 years and their work has enabled the Romney Marshes to become productive and important for agriculture. Wildlife has also flourished and developed as a consequence of the successful drainage system and the marshes have become of great interest to environmentalists.

The ancient Corporation exercised its land drainage and sea defence functions from New Hall, Dymchurch until the Land Drainage Act 1930 created Catchment Boards and Internal Drainage Boards. Since the creation of these Boards they have undertaken the drainage and sea defence works and the Corporation is now only a ceremonial body.

The Internal Drainage Boards still operate but the functions of the Catchment Boards have been taken over by a succession of Authorities. The relevant successor authority is now the Environment Agency, which acts as agent for the Internal Drainage Boards carrying out the works on behalf of the five Boards:

- Romney Internal Drainage Board;
- Walland Internal Drainage Board;
- Denge & Southbrooks Internal Drainage Board;
- Rother Internal Drainage Board;
- Pett Internal Drainage Board.

Proposals have now been approved to merge these Boards into a single one.

4.2.5 Waste Management

The Agency will work with waste producers, the waste-management industry and local authorities to reduce the amount of waste produced, increase re-use and recycling, and improve standards of disposal. With users of radioactive materials, the Agency will ensure that radioactive wastes are not unnecessarily created, and that they are safely and appropriately disposed of.

4.2.6 Navigation

Harbour of Rye Advisory Committee (HORAC)

The Environment Agency manages and is the Harbour Authority for the Harbour of Rye. HORAC represents users, including recreational, commercial and fishing interests, local authorities and conservation interests advising the Agency on matters connected with provision and improvement of the harbour facilities

4.2.7 Education

The Agency will seek to educate and influence individuals, groups and industries to promote best environmental practice. It will work in partnership with statutory and voluntary groups to carry out improvement projects and develop a wider public awareness of environmental issues.

The Agency is actively developing an education strategy to help schools and colleges at all levels of the curriculum. We encourage local liaison and project-related work with schools such as initiatives which assist schools with environmental enhancement projects.

Local Agenda 21

The Agency recognises the potential of Local Agenda 21 (LA21) and will continue to work with local authorities to ensure protection and enhancement to improve the local environment. A number of the local authorities in the Eastern Rother catchment have produced LA21 Action Plans. A number of the proposals for action within the LEAP could be implemented through LA21 Action Plans.

4.3 Summary

Many other partnerships occur or are planned within the Agency, all of which are designed to deliver the mutual objectives of the partners involved. The Agency has a diverse network of relationships with many national, regional and local organisations as well as landowners and the general public. One significant area for future development will be the building of partnerships to aid environmental education. It is through these partnerships that we are able to contribute fully towards the goal of sustainable development.

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 the Kent Area LEAP):

- Water Resources
- Flood Defence
- Water Quality
- Air Quality
- Integrated Pollution Control
- Radioactive Substances
- Waste Management
- Contaminated Land
- Conservation including landscape and archaeology
- Fisheries
- Recreation
- Navigation

APPENDIX 2

CONSULTATION UNDERTAKEN

In addition to extensive consultation with members of the Environment Agency, consultation was also undertaken with external consultees. These included the local authorities whose jurisdiction falls within the LEAP area and various interest groups as follows:

Ashford Borough Council*
British Gypsum Limited
CPRE Kent*
Country Landowners Association*
Countryside Commission
East Sussex County Council
English Heritage
English Sports Council (SE Region)*
Farming and Rural Conservation Agency
Folkestone & Dover Water Services*
Harbour of Rye Advisory Committee
Hastings Borough Council
Internal Drainage Boards
Kent County Council
Kent & Essex Sea Fisheries Committee
Kent Fisheries Consultative Association (Rother Catchment Consultative)*
Kent Wildlife Trust
Mid Kent Water*
National Farmers Union (SE Region)
Romney Marsh Countryside Project
Rother District Council
Rother Fisheries Association
RSPB
Rye Harbour Nature Reserve*
Shepway District Council*
Salmon & Trout Association
South East Water*
Southern Water*
Sussex Sea Fisheries Committee*
Sussex Wildlife Trust*
Tunbridge Wells Borough Council
Wealden District Council

* = Response received

A meeting was held with the following organisation:

English Nature

APPENDIX 3**GLOSSARY**

Abstraction	Removal of water from surface water or groundwater, usually by pumping.
Abstraction License	License 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.
Effective rainfall	The rain remaining as runoff after all losses by evaporation, interception and infiltration have been allowed for.
Environmentally Sensitive Area	An area defined by MAFF for which grant aid is available for appropriate agricultural and water/land management.
Flood plain	This includes all land adjacent to a watercourse over which water flows or would flow, but for flood defences, in times of flood.
Groundwater	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.
Main River	All watercourses are designated as either "Main River" (defined in maps held by the Environment Agency and MAFF) or ordinary watercourse ("non-Main River"). Main Rivers include all watercourses which contribute significantly to a catchment's drainage. The Agency has powers to carry out works to protect land and property from flooding by improving the drainage of Main Rivers only, under the Water Resources Act 1991.
Ordinary watercourse	All watercourses are designated as either "Main River" or ordinary watercourses. Ordinary watercourses are Non-main River, and although they are not deemed to contribute significantly to a catchment's drainage, they may be significant locally. Local authorities (and in some areas Internal Drainage Boards) have powers for flood defences on ordinary watercourses, and the Agency has a supervisory role.
Sea defences	Natural or man-made features protecting land below 5m AoD contour.
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**

AEG	Area Environment Group
CCIRG	Climate Change Impacts Review Group
DETR	Department of the Environment, Transport and Regions
EA 95	Environment Act 1995
EN	English Nature
EPA 90	Environment Protection Act 1990
FDWS	Folkestone & Dover Water Services
FRCA	Farming and Rural Conservation Agency
FWAG	Farming and Wildlife Advisory Group
HORAC	Harbour of Rye Advisory Committee
IDB	Internal Drainage Board
IPC	Integrated Pollution Control
KCC	Kent County Council
KFCA	Kent Fisheries Consultative Association
KWT	Kent Wildlife Trust
LA	Local authority
LA21	Local Agenda 21
LAAPC	Local authorities air pollution control
LEAP	Local Environment Agency Plan
MAFF	Ministry of Agriculture, Fisheries and Food
NFU	National Farmers Union
OFWAT	Office of Water Services
RHNR	Rye Harbour Nature Reserve
RMCP	Romney Marsh Countryside Project
RSPB	Royal Society for the Protection of Birds
SAQSG	Sussex Air Quality Steering Group
SEORP	South East Otters and Rivers Project

APPENDIX 5

FURTHER INFORMATION

Further information may be obtained from the following publications, which have been produced by the Environment Agency (or its constituent organisations):

- Action Plan for Land Quality. Bristol, 1998.
- An Action Plan for Recreation. Bristol, 1998.
- An Environmental Strategy for the Millennium and Beyond. Bristol, 1997.
- Environment Agency Corporate Plan 1999-2000. Bristol, 1999.
- Fishing in the South. Southern Region, Worthing.
- Guidance for the Control of Invasive Plants near Watercourses. Bristol.
- Mariner's Guide to Rye. Southern Region, Worthing, 1997.
- Money for nothing - your waste tips for free. Bristol, 1998.
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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.

Rio House, Waterside Drive, Aztec West, Almondsbury, Bristol BS32 4UD

Tel: 01454 624 400 Fax: 01454 624 409

Internet World Wide Web www.environment-agency.gov.uk

ENVIRONMENT AGENCY REGIONAL OFFICES

ANGLIAN

Kingfisher House
Goldhay Way
Orton Goldhay
Peterborough PE2 5ZR
Tel: 01733 371 811
Fax: 01733 231 840

SOUTHERN

Guildbourne House
Chatsworth Road
Worthing
West Sussex BN11 1LD
Tel: 01903 832 000
Fax: 01903 821 832

MIDLANDS

Sapphire East
550 Streetsbrook Road
Solihull B91 1QT
Tel: 0121 711 2324
Fax: 0121 711 5824

SOUTH WEST

Manley House
Kestrel Way
Exeter EX2 7LQ
Tel: 01392 444 000
Fax: 01392 444 238

NORTH EAST

Rivers House
21 Park Square South
Leeds LS1 2QG
Tel: 0113 244 0191
Fax: 0113 246 1889

THAMES

Kings Meadow House
Kings Meadow Road
Reading RG1 8DQ
Tel: 0118 953 5000
Fax: 0118 950 0388

NORTH WEST

Richard Fairclough House
Knutsford Road
Warrington WA4 1HG
Tel: 01925 653 999
Fax: 01925 415 961

WELSH

Rivers House/Plas-yr-Afon
St Mellons Business Park
St Mellons
Cardiff CF3 0LT
Tel: 01222 770 088
Fax: 01222 798 555



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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