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local environment agency plan

HULL AND EAST RIDING

AUGUST 1998



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ENVIRONMENT AGENCY

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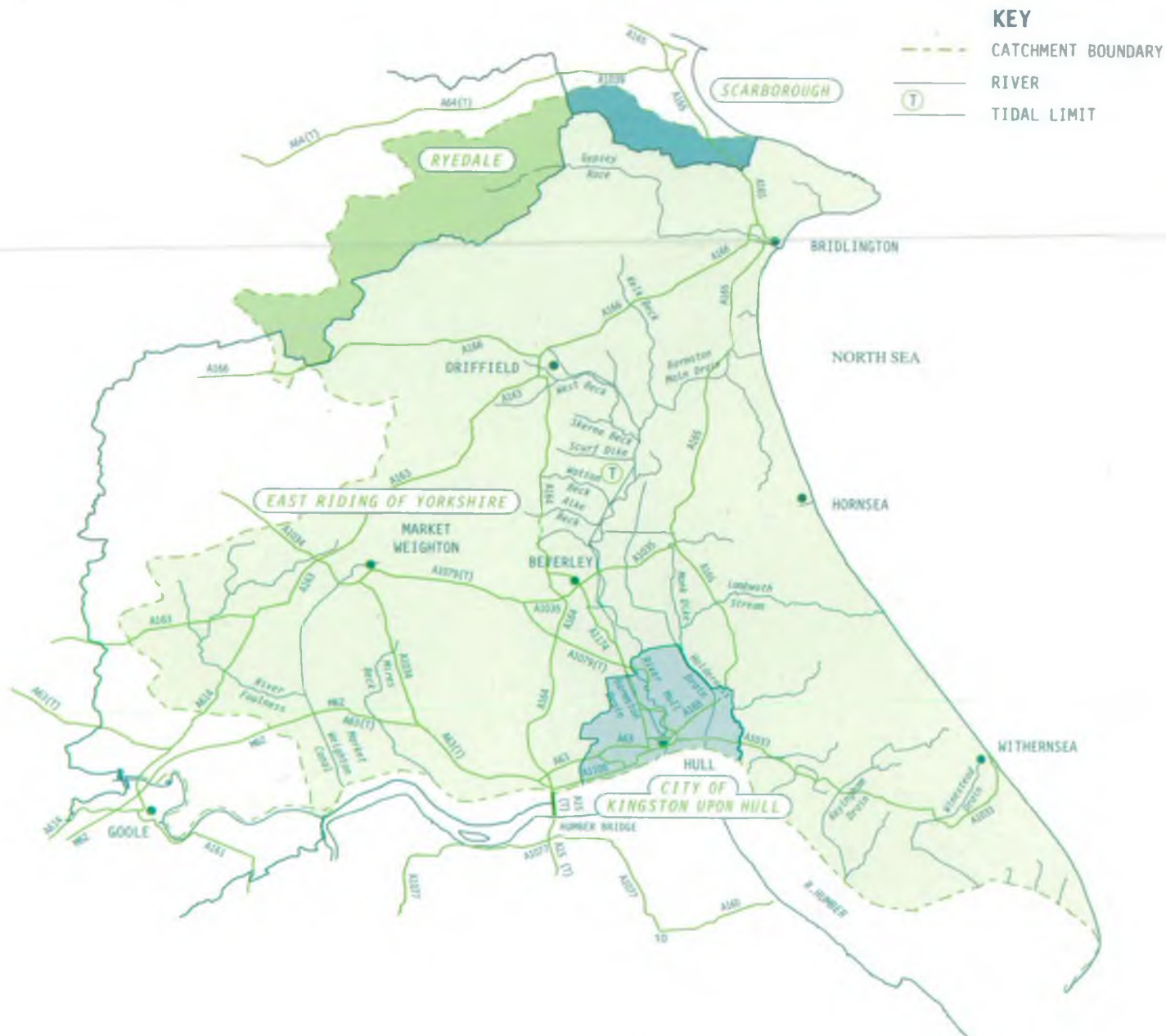
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HULL & EAST RIDING ADMINISTRATIVE BOUNDARIES



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KEY DETAILS

General	
Area	2170 km ²
Key Local Authorities	East Riding of Yorkshire Council Kingston Upon Hull City Council
Other Local Authorities	Ryedale Scarborough
Population (1996)	576,000

Pollution Prevention and Control	
Licensed Sites:	
Landfill sites	28
Transfer stations	27
Scrapyards	25
Civic amenity sites	9
Treatment plants	2
Facilities claiming exemption (inc exempt scrapyards)	124
Registered waste carriers	500 approx.
Special waste movements per annum (estimated)	660

Directive for Freshwater Fisheries (78/659 EEC)	
Salmonid	76 km
Cyprinid - river	113.7 km
Cyprinid - canals	0 km
Stillwaters	1

Water Quality: Length of watercourse(km) in each component of the General Quality Assessment (1996)	
A Good	3.9 km
B	7.9 km
C Fair	24.9 km
D	54.8 km
E Poor	132.2 km
F Bad	13.7 km
Unclassified	128.7 km

Flood Defence	
Length of main river	385 km
Total length of Flood defences along main river:	
tidal	152 km
fluvial	552 km
sea	21 km
Major Installations:	
Hull Barrier	
outfall sluices	9
pumping stations	9
gauging stations	6

Water Resources	
Average annual rainfall	675 mm
Total licensed abstraction	269,949 million litres/year
Mean river flow	million litres/day
River Hull - Hempholme	345.6
Mires Beck - North Cave	17.3
River Foulness - Holme House	51.8
Number of Abstraction Licences:	
Surface Water	99
Groundwater	360
Total	459

FOREWORD

The Environment Agency has the aim of protecting and enhancing the whole environment through contributing towards sustainable development. One aid for achieving this aim is the Local Environment Agency Plan (LEAP). The Hull and East Yorkshire LEAP has been produced following widespread consultation after the public launch of the Consultation Report in August 1997.

Development and land use changes have an impact on the local area leading to increased pressures being put on people and property, natural resources, wildlife and habitats. It is our challenge to balance the legitimate demands and manage the area in a sustainable way.

This plan emphasises the Agency's commitment to protect and where necessary repair and enhance the environment through the Agency's own actions or in partnership with other organisations. We are very grateful for the contributions made during the consultation period and are sure that they represent the spirit of partnership that will be required to implement this plan.

The area borders on the Humber Estuary. The Agency is a member of the partnership which produced in 1997 the Humber Estuary Management Strategy (HEMS) and our Action Plan to implement our HEMS tasks was published in August 1998. One of these tasks is to produce the Humber Estuary Shoreline Management Plan which will assess the need for improvements to flood defences while ensuring valuable environmental resources are protected.

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VISION FOR THE HULL AND EAST RIDING AREA

The Environment Agency's vision for Hull and the East Riding is:

*"to protect and enhance the natural resources and beauty of our local area,
for all to enjoy".*

The Hull and East Riding LEAP covers an area of some 2170km² stretching from Flamborough Head to Spurn Point along the coast and including the Market Weighton Canal and River Foulness to the west. The major centres of population are Hull, Drifffield, Beverley, Market Weighton and Hedon with seasonal tourist centres at Bridlington, Hornsea, Withernsea and Skipsea.

Along with most of the land in England and Wales this area has faced increasing demands for industrial and agricultural development. Increasing population in the area brings with it a demand for new housing and for the supporting infrastructure to be expanded. The pressures of industry and large populations are lower in this area than in the other catchments of the Ridings Area which are centred on the urban areas of West and South Yorkshire. There is however a large concentration of industry around the City of Hull and along the banks of the Humber estuary. Historically all these factors have resulted in a loss of wildlife and habitat, threats to our water resources and low flows in rivers. The Agency's challenge is to protect and manage our natural resources and to work with others to preserve and realise the potential of the area.

KEY OPPORTUNITIES:-

Improvements in water quality by reducing the pollution from sewage treatment systems, agriculture and industry.

Encourage waste minimisation initiatives towards the achievement of national waste reduction targets.

Continued development of an overall Air Quality Strategy to facilitate consultation on local air quality plans.

Physical improvements of channels and habitat rehabilitation in collaboration with local communities and environment groups.

Impacts of water abstraction managed to optimise the benefits for all existing and potential users.

Recognition of the international importance of many areas of the coast as both a conservation resource and a recreation opportunity.

Continued and improved protection of people and property from flooding.

Continue to establish effective links with the land use planning system to achieve integration of the aims of this plan with strategic and local land use plans.

In order to achieve this vision, and the full potential of the local area the Agency will work with Local Authorities, industry, agriculture, environment groups, local action groups and the public in order to:-

- i) achieve a sustainable use of the environment,
- ii) achieve a balanced approach to all activities,
- iii) and be capable of a flexible response to the community at large.

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1 INTRODUCTION

In August 1997 the Ridings Area launched the consultation report for the Hull and East Riding LEAP area. This and the other LEAPs for the constituent parts of the North East Region will represent a shared vision for the future and will contribute to the complete coverage of England and Wales by such plans.

The quality of our local environment and the way it is managed matters to all who live in and visit the area and rely on its natural resources. The Agency recognises that in order to manage the environment as a whole and to achieve environmental improvements, we need to work in partnership with a wide range of organisations and individuals. We are committed to the delivery of environmental improvement at the local level and through this plan we will consult widely to identify local priorities and inform on the implementation of the additional actions.

This Plan is the third stage in the LEAP process for the Hull and East Riding area, which is shown in Figure 1. It outlines areas of work and investment proposed by ourselves and others over the next five years, and will form the basis for improvements to the environment in the Hull and East Riding area. Progress against the Plan will be monitored and reported annually.

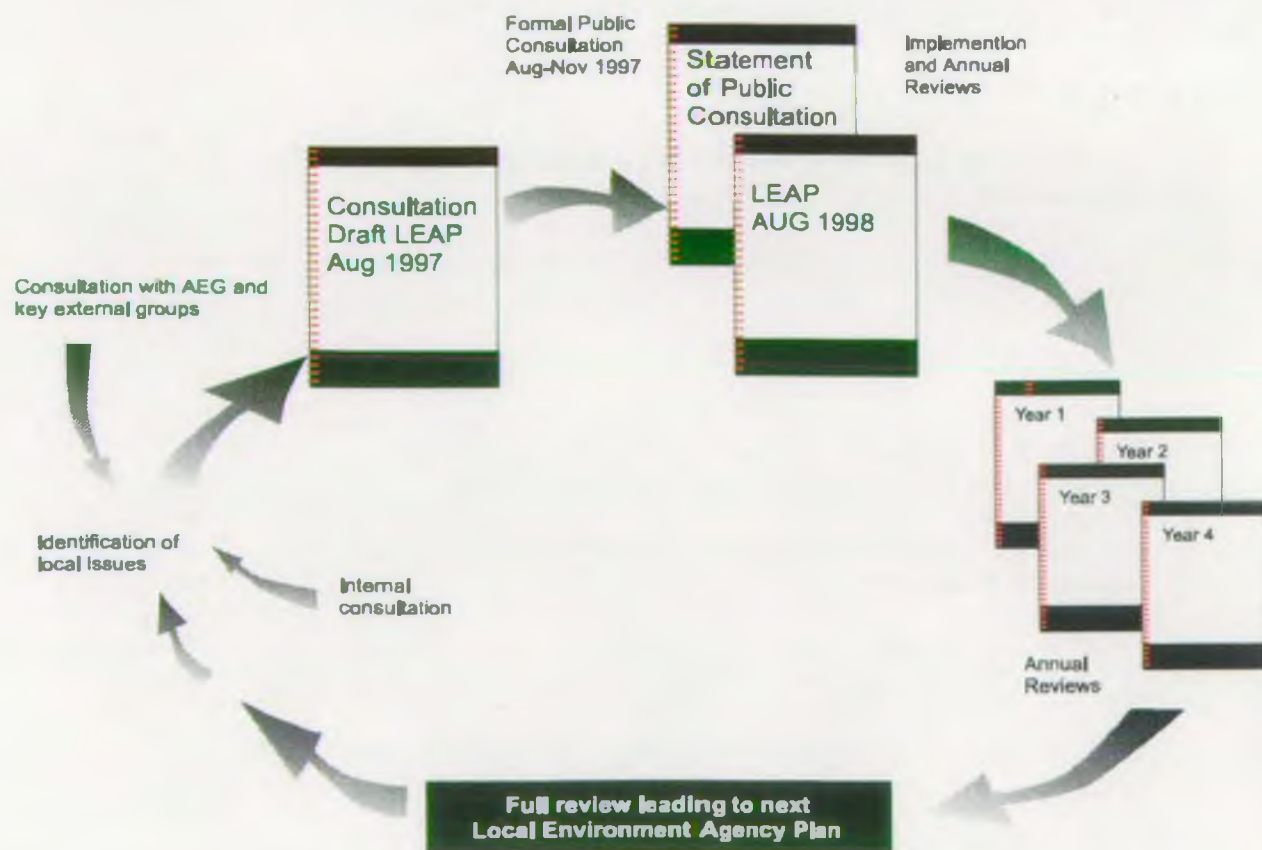


Figure 1 The LEAP process and the main outputs in the five year cycle.

1.1 The Environment Agency

Our vision is:

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

Our 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 re-cycle 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.

We 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 environmental management. We are required by Government to use these duties and powers to help achieve sustainable development, defined as

'...development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

Sustainable development concerns maintaining and improving the quality of life now and in the future while not abusing the environment. Environmental degradation and over exploitation of resources will in time have an adverse impact on the quality of life. We therefore reflect this concept in the way we work and in the decisions we make.

Although the Agency only has duties and powers to protect some environmental resources, we will contribute to other aspects of environmental management which are the responsibility of others, by working in partnership with and setting common goals to achieve agreed objectives.

As it is now generally accepted that environmental changes are occurring on a global scale, the Agency's long term strategy has to be delivered within the framework of international and national commitments which have been developed to address these global issues.

One of the most important issues is that of climate change and the contribution to it from the emission of gases such as carbon dioxide into the atmosphere. It is difficult to predict the effects of climate change but a more variable climate - more droughts and floods, increased storminess - and sea level rise would all be of significance to East Yorkshire. The Government has therefore signed up to the Framework Convention on Climate Change, as agreed at the Rio Summit in 1992, and is taking an active part in negotiations for effective, and achievable reductions of greenhouse gas emissions.

Another outcome of the 'Earth Summit', was the agreement that local action is crucial: *we must all think globally but act locally*. In the UK under the Local Agenda 21 initiative, plans are now being formulated by local government and local communities to identify and address a wide range of local environmental issues. The Agency is also committed to a programme of local action through our Local Environment Agency Plans (LEAPs). These will reflect our close contact with industry, the public, local government and many others in planning actions to address environmental issues.

1.2 Routine Work of the Agency

The Agency has eight regions in England and Wales and these are shown on the back cover of this document. The North East Region comprises three areas, and the Hull and East Riding plan is within the Ridings Area.

As 'Guardian of the Environment' the Agency's principal aim is to protect and enhance the environment, thus contributing to the Government's overall commitment to sustainable development. We do this by integrating environmental protection for land, air and water using pollution prevention and control, resource management, flood defences, education and enforcement where necessary.

Most of our work operates at a local level and there is a strong commitment to an integrated approach to managing the environment. LEAPs are one way of achieving this integrated approach, although they do not cover the routine work carried out to meet statutory requirements or national Agency policy. This work is described in our *Corporate Plan* (published annually in September) and *Environmental Strategy for the Millennium & Beyond* (published September 1997). Our everyday work commits substantial resources to managing the environment, including extensive monitoring and survey operations. A summary of our routine activities is available in Appendix 1.

All works undertaken by the Agency must take into account our duties with regard to furthering conservation, impact assessment, cost/benefit assessment and contribution to sustainable development.

1.2.1 Agency Statutory Committees

As part of our commitment to ensure openness, objectivity and accountability, the Agency is required by law to consult committees on all aspects of its work. Membership of the committees consists of local people drawn from public life, including industry, agriculture, local authorities and environment groups.

The Plan area is served by the following statutory committees:-

- * Regional Environmental Protection Advisory Committee (REPAC)
- * Yorkshire Regional Flood Defence Committee (YRFDC)
- * Regional Fisheries, Ecology and Recreation Advisory Committee (RFERAC)

1.2.2 Area Environment Groups

The Ridings area of North East Region is also served by three non-statutory, advisory, Area Environment Groups (AEG), covering East, South and West Yorkshire. Membership of each consists of 20 local people who live and work in the area and who represent a wide range of interests. These include local authorities, industry, agriculture, conservation, fishing, amenity and recreational interests. The groups advise the Agency on LEAPs, the delivery of local services and acts as a link between the local community, the Agency and its statutory committees. Meetings are held four times a year and are open to the public. A list of current members and further information is available from the Area Office.

The members of the East Yorkshire AEG have made regular detailed contributions to the development of the consultation report and this action plan, and will provide a forum for continued monitoring of actions in the area.

1.3 Environmental Services Provided by Others

The Agency does not cover all aspects of environmental service to the general public. We are not responsible for:

- * noise problems (except if it is to do with our work);
- * litter (unless it is restricting the flow of a river);
- * air pollution arising from vehicles, household areas, small businesses and small industry;
- * collecting waste in your local area;
- * planning permission
- * environmental health;
- * food hygiene

Your local authority deals with these issues and will involve the Agency if necessary.

We are not responsible for the quality of or supply of drinking water at the tap or for treating sewage waste, although we regulate the quality of effluent discharges from sewers and sewage treatment works.

We also do not issue grants for environmental enhancement but we may be able to give advice on some funding sources that are available.

Routine activities of the Agency are outlined in Appendix 1.

1.4 The Local Environment Agency Plan Process

The Agency is committed to delivering environmental improvement at the local level and one of the ways to do this will be through Local Environment Agency Plans. LEAPs are integrated local management plans for

“....identifying, prioritising and solving local environmental issues, related to the Agency's functions, taking into account the views of the Agency's local customers.”

The process of drawing up the Plans involves consultation with many interested parties and promotes the effective, accountable and integrated delivery of environmental improvement at the local level. The Plans translate policy and strategy into delivery on the ground and result in actions, either for the Agency to fulfil, or for others to undertake through influence and partnership. We believe the process will benefit the local community by influencing and advising external decision makers and public opinion. It will build trust by being open and frank when dealing with all issues.

This document is, therefore, part of a process that will enable a shared vision to be developed, along with a strategy for the area's management. This will guide all our activities for the next five to ten years and will hopefully influence the activities of other key bodies.

Together with the Area Environment Group, we will monitor implementation of the LEAP and report on progress in a published Annual review. The Annual review will also examine the need to update the plan in light of any changes in the plan area and will identify where actions are no longer appropriate or require amending.

1.4.1 LEAPs and other plans

The Agency shares the regulation and management of the environment with others. Whilst LEAPs are the Environment Agency's plans, their content and development will reflect these shared responsibilities. LEAPs will complement and integrate with other organisations' plans such as Local Waste Plans, Local Air Quality Management Plans, Local Biodiversity Action Plans, Development Plans and Local Agenda 21 Action Plans.

2 THE HULL AND EAST RIDING PLAN AREA

2.1 Introduction

The Hull and East Riding plan area covers 2170 km² and includes Hull, Driffield, Beverley, Market Weighton and Hedon, with seasonal tourist centres at Bridlington, Hornsea, Withernsea and Skipsea. The area has a distinctive landscape, from Chalk Wolds to the Holderness plain and the Coast and Humber Estuary.

This varied landscape has been shaped by centuries of agricultural and other human activities such as quarrying and development. The landscape sustains elements of our daily life, and the local flora and fauna, which as well as being important in its own right, is also essential for the well being of existing and future generations.

The coast is characterised by a number of sites of national and international importance including the Heritage Coasts of Flamborough (including Bempton Cliffs) and Spurn, and Hornsea Mere. The coast is attractive for tourism and has 12 beaches designated under the EC Bathing Waters Directive. Other recreational activities include walking and birdwatching, boating, canoeing, fishing, and other water sports. The coast is also economically important for commercial fisheries and industrial activities.

The headwaters of the River Hull, as the most northerly Chalk stream system in Britain supports a range of nationally important species and habitats. It is designated as a Site of Special Scientific Interest (SSSI), and the Agency is working closely with English Nature to ensure its future protection.

The Chalk is also an important aquifer, providing water for public supply and agriculture. There are concerns about reduced levels in the groundwater and reduced spring flows. The Agency has undertaken a comprehensive study into the sustainable management of water resources in the area (see section 4.8).

The low lying nature of the catchment makes flooding an ever present risk and the area is protected against flooding from rivers and the Sea by a complex network of drains and specially designed flood defences. The Hull Barrier is designed to stop water from the Humber overtopping the defences along the River Hull in the City.

The pressures of industry and large populations are lower in this area than in the other catchments of the Ridings area which are centred on the urban areas of West and South Yorkshire. There is however a large concentration of industry around the City of Hull and along the banks of the Humber Estuary. The area has faced increasing demands for industrial and agricultural development. Increasing population brings with it a demand for new housing and for the supporting infrastructure to be expanded. These pressures and land use changes impact on our natural resources, transport routes, flood defences and on local residents and biodiversity.

The Humber Estuary has not generally been considered as a part of this LEAP, but it has been the subject of a Management Strategy (HEMS) developed as a partnership initiative and which looks at the activities impacting on the Estuary from both banks. An action plan published in August 1998 details the Agency's contribution towards delivering the HEMS objectives, and includes the development in partnership of a Humber Estuary Shoreline Management Plan (HESMP) which seeks to protect the urban, industrial, navigation and environmental assets of the estuary.

Where actions within the Humber Estuary Action Plan impact on the area of this LEAP they have been highlighted.

2.2 Summary of Uses, Activities and Pressures

A detailed assessment of the Hull and East Riding plan area was given in the Consultation Report. The following provides a summary of key points.

Development and Infrastructure

Local authority structure and development plans, and strategies will play a major part in the future land use and development of the area. The Agency will participate in the development of the Rural Strategy currently being prepared by the East Riding of Yorkshire Council (ERYC), the Joint Structure Plan of both the ERYC and the Kingston Upon Hull City Council, and other local plans as appropriate.

Rural Development

While agriculture is still important and likely to remain a dominant activity in the area, because of the reduced direct employment there is increasing pressure for diversification and the development of alternative employment opportunities. PPG7 "The Countryside - Environmental Quality and Economic and Social Development" advises of the need to accommodate an appropriate scale of employment generating uses within rural areas. This usually takes the form of the conversion of redundant agricultural buildings and is generally small scale. Good infrastructure and support is essential for any industrial and commercial development needs, particularly transportation links, sewerage systems and utilities.

Residential Development

Substantial numbers of new homes will be required in the plan area to provide for our increasingly mobile population. The consultation document *'Household Growth: where shall we live?'* (November 1996) highlights the potential problem of accommodating new housing. The Agency wants to make sure that new development does not worsen existing pressure points or risk creating more problems where existing infrastructure and resources are limited or near capacity. There are particular concerns in this area about the adequacy of sewage treatment facilities in outlying rural areas.

Process Industries and Power Generation

Industrial processes which are included under the Environmental Protection Act 1990 are regulated either by the Agency or by the local authority, to minimise their impact upon the environment. In general the Agency is responsible for regulating those processes which have the greatest potential to cause pollution. We have no overall regulatory control over air quality, but contribute to the management of air pollution through the integrated pollution control (IPC) system. There are currently 36 processes authorised in the LEAP area and these authorisations contain legally binding improvement conditions which set out the environmental and operational improvements required and the dates by which they must be completed. Integrated Pollution Prevention and Control (IPPC) when it is introduced under the new Directive, will regulate even more industrial sectors (including some livestock units) and take into account more environmental concerns than IPC, including energy conservation.

While there are currently no power stations located within this area, the air quality is influenced by a number of large coal fired power stations along the Trent Valley (to the south) and between Leeds and the Humber (to the southwest). These stations are major emitters of pollutants but all have programmes to reduce emission levels over the next few years. A gas fired power station has also been authorised at Saltend which will be operational in 2000 and will incorporate the latest technology to minimise emissions of oxides of nitrogen.

Drax is the largest power station which influences the area, and has been the subject of extensive public consultation on both the burning of Petcoke and the temporary closure of the flue gas desulphurisation (FGD) which significantly reduced the amount of sulphur dioxide emitted to air. Public consultation extended beyond the immediate locality, to include the wider interests of neighbouring areas, including the Hull & East Riding area.

Storage, Use and Disposal of Radioactive Materials

The Radioactive Substances Act 1993 provides for controls to be exercised over the use and keeping of radioactive materials and the accumulation and disposal of radioactive wastes. The Agency is responsible for administration and enforcement of the Act in England and Wales.

The area has five authorisations under the Radioactive Substances Act 1993 to accumulate and dispose of radioactive waste covering universities and hospitals. The main uses for radioactive substances at these sites are medical diagnosis and therapy, and research in biology, chemistry and geology.

Water Quality

Rivers and tributaries in the River Hull Headwaters are mainly of high quality water, suitable for abstraction for drinking water and capable of supporting both cyprinid and salmonid fisheries. There are however, a few short stretches with moderate water quality, which require upgrading to meet the Agency's Water Quality Objectives.

A comprehensive water quality monitoring programme enables the Agency to assess whether or not the objectives for the watercourses are on target to be reached and more importantly, to ensure compliance with the relevant European Commission (EC) Directives.

Surface Water Quality

As the waters are important for potable supplies, agriculture and fisheries, discharges in the area must be carefully controlled to minimise the impact on both surface and groundwaters, particularly from the wide scale agricultural practices.

Inspection campaigns targeting farming practices have resulted in a reduction in agricultural pollution incidents, however further prevention work, along with investment in improved treatment and sewerage systems is required to maintain and improve water quality.

There are 12 bathing beaches, designated under the EC Bathing Waters Directive along the coast stretching from Withernsea to Flamborough Head, with a further bathing beach at Danes Dike due to be added to the list by May 1999. Although there has been generally good compliance with the Directive over past years, there are places where further remedial works are required to improve both aesthetic and water quality for all water users.

Groundwater Quality

Groundwater in general is of high quality both microbiologically and chemically and usually requires little treatment for public supply. However, there are many activities that can cause pollution through underground seepage and once polluted it is extremely difficult and costly to remediate. The Agency has published a document entitled 'Policy and Practice for the Protection of Groundwater' which is being implemented within the Region. Groundwater protection zones have been designated around the public drinking water supply boreholes. These zones will be published and most of the controls will be achieved through close liaison with the local authority planning department.

Nitrate concentrations in groundwater across the area have increased and are believed to be due to agricultural activities. Nitrate Sensitive Areas (NSA) have been designated at Kilham, Springwells and North Newbald, and Nitrate Vulnerable Zones covering the above NSAs and expanding into further areas of the Upper River Hull, Bridlington and Cottingham.

Surface and Ground Water Abstractions

Groundwater and surface water together combine to make up the water resource of the area, and must be protected in terms of quality and quantity by achieving a balance between the rights of abstractors, other lawful users of the water and the needs of the environment.

The River Hull and its headwaters, provide an important supply of potable water to the city of Hull and surrounding areas. Surface water abstraction in the River Hull headwaters is high when compared with the lower reaches of the River. In addition to the abstractions for drinking water, there are a number of fish farms who rely on a regular supply of good quality water for salmonid and coarse fish rearing.

The Chalk is an important aquifer with abstraction for public water supply and agriculture being the major uses. The extensive abstraction of groundwater in the Hull area is being closely monitored and controlled to ensure that the aquifer is not over-abstracted during dry periods.

Waste Management

Centres of population give rise to waste which has to be managed. In 1995/96 the two unitary authorities, Hull City and East Riding of Yorkshire, which encompass the Hull & East Riding catchment, collected 108,000 and 148,000 tonnes of household waste respectively. Approximately 8% was recycled through around 200 recycling sites.

Within the area there are ten civic amenity sites exclusively for the householder's use. These sites provide disposal facilities for general wastes such as old furniture and garden rubbish, they also provide collection points for recyclable and re-useable objects and material such as shoes, clothes, glass and newspapers, plus safe disposal for hazardous household waste arisings such as used oil, solvents and unwanted pesticides.

Approximately 650,000 tonnes per year of controlled waste goes to landfill and this is currently the only final disposal method available in the area. As landfill becomes more expensive due to the filling of sites, Landfill Tax and the imposition of greater environmental protection measures, recycling options such as composting become a more attractive alternative. Options being explored in the development of a Joint Waste Local Plan by Hull City and the East Riding of Yorkshire Councils, include large scale composting, anaerobic digestion, materials recovery facilities, energy from waste, gasification and refuse derived fuel.

Flood Defence and Land Drainage

Large areas of land in the area lie below maximum tide levels and are protected from flooding from the Humber Estuary by a combination of earth embankments, steel sheet piling and concrete or brick walls. The Hull Tidal Surge Barrier is the area's largest flood barrier and was constructed to stop tidal water from the Humber entering the River Hull and overtopping the City's flood defences. Urgent flood defence works programmed on the River Humber and the development of the Humber Estuary Shoreline Management Plan are covered in the Agency's Humber Action Plan (1998).

Much of the area is very low lying and flat and flood protection is provided by a complex network of drains and specially designed flood defences. Tidal effects restrict the gravity flows into the Humber, and in order to provide adequate drainage to certain areas, run-off from the land must be pumped. An ongoing programme of work ensures that defences throughout the area are constructed or improved to continue to afford the required protection.

Along the East Coast, the Agency maintains short lengths of sea defence which stop direct flooding from the North Sea. As most of the land is above high tide level, artificial defences are not generally required. Severe erosion however, is occurring along this length of coastline, and the responsibility for coastal protection lies with the East Riding of Yorkshire Council. The Agency has worked closely with the local authorities along the coast on the production of a Shoreline Management Plan, to aid decisions on coastal protection in the future (see sections 4.3 & 4.9).

Fisheries and Angling

The headwaters of the River Hull above Driffield have long been recognised as a high quality brown trout fishery. The presence of a number of commercial fish farms has impacted on the natural fishery as a result of abstraction, discharge of effluent and escapes of non-native species, particularly rainbow trout.

Angling activities on the upper River Hull, its tributaries and along the coast are likely to continue at current levels in the future, while improved water quality in the lower river should permit better angling opportunities. There are also possibilities for improved facilities on adjacent stillwaters such as ponds and gravel pits and other waters such as the Market Weighton Canal.

Recreation and Amenity

The area offers opportunities for holiday makers, day tourists and casual visitors, inland and at the coast. Although Bridlington is the major holiday making resort along this part of the coast, Skipsea, Withernsea and Hornsea attract modest numbers of visitors.

Recreational pursuits along the River Hull corridor, include walking and birdwatching, with associated long distance paths 'The Holderness Way' and parts of the 'East Riding Heritage Way' and 'the Wolds Way'. In addition to its importance for angling the River Hull is of significant interest to users of pleasure craft, small motor cruisers mainly, dinghy sailors at Brigham and canoeists. Beverley Beck, Leven Canal and the Driffield Canal formerly extended navigation from the main course of the river to trading communities adjacent. There are currently initiatives being promoted to restore navigation to some of these waterways.

Care is required to balance the pressures associated with this high level of recreational use and the need to preserve the quality of the environment on which this depends.

Flora and Fauna

The coastal cliffs at Flamborough Head are formed from the most northerly outcrop of Chalk in England, and are home to the largest gannetry in mainland England and provide nesting sites for one of the most important sea bird nesting colonies in Europe with over 200,000 birds including kittiwakes, guillemots, razorbills and puffins. As well as its importance for birds it has a rich intertidal and sub-tidal flora and fauna. The area is a Special Protection Area and candidate Special Area of Conservation under European Directives.

The upper parts of the River Hull are nationally important for the aquatic communities which they support and a substantial length is designated as a Site of Special Scientific Interest (SSSI), supporting a unique Chalk stream flora in the fast flowing sections.

The flood banks within the corridor provide a good refuge for small mammals in an area where there is little pasture which attracts a good population of barn owls. There is also a small but significant population of otters on the upper River Hull.

Archaeology and Heritage

The area has a wide range of sites and areas of historical importance. Many of these are associated with the water environment such as mills and bridges. There are also parts of some of the major settlements such as Beverley, Driffield, Hull and the coastal towns which have a rich history reflecting industry and commerce which has now declined or disappeared. The Agency is committed to protecting these important features and working with partner bodies to ensure that they are maintained for future generations.

3 REVIEW OF THE CONSULTATION PROCESS

3.1 Summary of Public Consultation

In recognising the importance of seeking the views of groups and individuals who live and work in the area, the Environment Agency is committed to full consultation during all stages of the Local Environment Agency Plan (LEAP) process. As part of the preparatory work for the LEAP we undertook extensive consultation with interested parties and with the members of the East Yorkshire Area Environment Group (AEG). This section reviews the consultation process and provides a brief summary of the results of the consultation.

3.1.1 Informal Consultation

In preparing the Consultation Report, Agency staff held discussions with key groups, local authorities and other representative bodies, on an initial list of issues and problems affecting the environment in the area. Their comments were considered and where appropriate incorporated into the Consultation Report.

Members of the East Yorkshire AEG were invited to comment on and participate in the development of the report which formed a major item on the agendas of their meetings in 1997.

3.1.2 Formal Consultation

The Consultation Report was launched in August 1997, when over 100 organisations and individuals were invited to the launch. This included local authorities, government departments, environmental organisations, industry, recreation, sports groups and angling clubs; a total of 57 people attended. Delegates received a copy of the Consultation Report prior to the launch, which allowed them time to consider its contents, and then raise relevant issues and concerns at the launch event. A key feature of the public launch was the opportunity for discussion with Agency specialists. Directly after the launch further reports were distributed to a wide range of organisations and individuals.

3.2 Summary of Responses

A total of 32 organisations replied to the consultation, and their responses were summarised in our 'Statement of Public Consultation' (available on request). A list of all those who commented is given in Appendix 2.

The consultation process has given us a more comprehensive understanding of the issues and options presented in the LEAP and of the public's concern for the plan area. Key points raised during the consultation process include:-

Scope of the LEAP

Generally, the LEAP has been welcomed. The production of an overall environmental plan for the area, which considers the many inter-related issues, and focuses on sustainable development is seen to be a major step forward. There was much support for the development of partnerships, and opportunities for collaborative initiatives.

<i>Biodiversity</i>	There was a general perception that wildlife and biodiversity were given a low profile in the report, and it did not adequately express the Agency's commitment to the UK Biodiversity Action Plan, despite the Agency being the lead contact for several species and habitats. The final plan will confirm the Agency's commitment to biodiversity, and highlight our own and others involvement in local Biodiversity Action Plans.
<i>Water Resources</i>	There is clear concern in the area over the management of water resources, and the current abstraction regimes in particular. The Chalk aquifer is seen as being over exploited, and the need for more effective controls over new and existing abstraction licences is a constant theme.
<i>Flood Defence</i>	The nature of the area is such that Flood Defence and Land Drainage are of particular concern. In the main the need for flood defences to be subject to cost/benefit assessment is accepted and supported, and that this should include the effect on wildlife and maximising ecological benefits so that any future works are sustainable. However, there is concern that this should not be at the expense of the ratepayer where additional cost in flood defence works resulting from such considerations is wholly disproportionate to the perceived environmental benefit to be gained.
<i>Waste Management & Minimisation</i>	The disposal of sewage sludge was not referred to in the report and yet this is a subject that is giving rise for serious concern, as is the environmental impact of current agricultural practices. These have now been addressed within the actions developed for the plan. The impact from the introduction of the Landfill Tax is a complex issue that includes not only the perceived increase in flytipping incidents but also the increase in 'landspreading wastes'; the loss of suitable inert/dense materials to utilise as cover in landfills, and the spin off creation of unnecessary landscape forms to create a repository for the same materials.
<i>Air Quality</i>	<p>Air Quality improvement programmes should not just be targeted at industry because it is the one contribution that is directly regulated by the Agency but should reflect the real causes of the problem such as road transport and domestic activities.</p> <p>The implications of emissions from power stations and the problems of acid rain depositions were raised as, although no power stations are located in the area, these issues recognise no geographical boundaries, and are likely to have some impact, and the plan should indicate how it will be dealt with.</p>
<i>Water Quality</i>	<p>There was a general lack of detail on existing and current trends in groundwater quality for the area. Apart from the setting up of Nitrate Sensitive Areas and Nitrate Vulnerable Zones, there were no proposals to deal with any deterioration in quality. As the Chalk aquifer is of such importance in the area this lack of information was surprising.</p> <p>Concern was also expressed over the impact of fish farm discharges on the water quality in the River Hull.</p>
<i>Recreation & Navigation</i>	<p>There was general support for the development of recreational initiatives, improving access to water and waterside footpaths, although it was felt that the Agency should not restrict its activities to its own landholdings, but should take a broader view.</p> <p>While the Agency has no navigation responsibility in the area, the promotion of navigation is seen as an activity the Agency should be involved in, and we have a role to play in the liaison between those bodies with an interest in and responsibilities for navigation. Particular concerns were raised over the continuing problems associated with the accumulation of silt & effluent on the Driffeld Canal which restricts the potential for navigation on the canal.</p>

4.0 ACTIONS

4.1 Environmental Strategy

The Agency's Environmental Strategy sets out how we are taking forward an integrated approach to management of the environment across air, land and water through the principles of sustainable development. The strategy identifies nine environmental themes which the Agency, in partnership with other groups, will address. These are:

- * CLIMATE CHANGE
- * AIR QUALITY
- * WATER RESOURCES
- * BIODIVERSITY
- * FRESHWATER FISHERIES
- * INTEGRATED RIVER BASIN MANAGEMENT
- * CONSERVING LAND
- * MANAGING WASTE
- * MAJOR INDUSTRIES

This Plan translates the Strategy into action on the ground, structured around the 9 themes.

4.2 Implementation

Implementation of the plan is based on the 28 key issues, identified and discussed in detail in the Consultation Report (August 1997). In order to achieve real improvements within the plan area these issues need to be addressed. The actions tabled in the following sections have been developed as result of both, the consultation process and the existing close contacts between the Agency and local industry, local government and other local interest groups.

The plan covers the five year period to 2003 and the additional actions are presented with a target timescale; identified 'lead'; other potential partners involved and a estimated Agency cost. The total cost of the schemes or a projected estimate will be more accurately costed later. *Costs attributable to other organisations will only be shown where this is known and has been agreed.*

The additional actions are not intended to reflect the full total activities undertaken by the Agency and do not necessarily form part of the Agency's statutory or routine activities. Yet, they have been identified as important to achieve the key issues identified in the Consultation Report.

Although it is not the aim of this plan to include the full range of activities of the Agency, some key activities which have commitment from the Agency and others, have been identified as 'we will' statements to provide a more complete picture of the activities planned for the area.

The following points should also be noted:

- i) our everyday work commits substantial resources to monitoring and managing the environment. Some of this work was explained in the Consultation Report and is summarised here in Appendix 1.
- ii) some actions will require feasibility studies and cost-benefit appraisal of options prior to work commencing. In some cases, depending on the outcome of these studies, further action may not be justified. The Agency and participating organisations have limited resources and powers; some work may take longer than indicated owing to funding availability, government policy or more urgent priorities.
- iii) should more issues become apparent during the life of this plan, further actions will be added at succeeding Annual Reviews.

4.3 ADDRESSING CLIMATE CHANGE

Perhaps the most important issue affecting our environment is climate change. Burning fossil fuels in cars, power stations and in industrial processes emits gases into the atmosphere these 'greenhouse gases' such as carbon dioxide, are believed to contribute to long-term climate change.

It is difficult to predict the effects of climate change but current predictions suggest a more variable climate - more droughts and floods, increased storminess - and sea level rise, these would all be of significance to East Yorkshire. The Government has signed up to the Framework Convention on Climate Change, as agreed at the Rio Summit in 1992, and is taking an active part in negotiations for effective, and achievable reductions of greenhouse gas emissions.

Locally, the Agency's main influence on climate change will be to help ensure that the Government's greenhouse gas reduction targets are met, by regulating emissions from major industrial processes. We will also set an example by reducing our own energy and fossil fuel consumption. We have targets to achieve the following by March 1999:

- * reduce energy use in our offices and depots by 20%;
- * compile 'Green Transport Plans' to reduce commuter transport impacts by Agency staff at all key sites;
- * reduce mileage on Agency business by 5% without affecting operational effectiveness;
- * improve overall fuel efficiency for the Agency's badged vehicle fleet by 3 miles per gallon.

Information is required to identify opportunities to promote the benefits of waste minimisation.

In this area, as is the case nationally, the main disposal method for controlled waste (household, industrial and commercial) is currently landfill and this situation is likely to persist for the foreseeable future. As waste products begin to break down in landfill sites, significant quantities of methane can be generated. Methane is a 'greenhouse gas' with an impact on climate change that is 25 times greater than carbon dioxide.

Venting the gas to atmosphere is still the main method of gas control at landfill sites. However, where a site produces large quantities of landfill gas of an appropriate quality (determined by methane content) then 'flaring' becomes an option (burning the methane). This process converts the methane into carbon dioxide and water through the combustion process, and so reduces the contribution to global warming. The burning of methane can also be used to generate power which, as well as resulting in significant reductions in greenhouse gas emissions, can potentially reduce the amount of fossil fuels that are consumed.

One landfill operator in the area is currently investigating the feasibility of a scheme that would utilise the heat produced as a consequence of the generation process to heat greenhouses and use the carbon dioxide produced to aid plant growth. Catwick Grange landfill site in Brandesburton is also currently investigating the feasibility of installing active extraction with flaring or energy recovery.

Additional Actions:

Ref	Action	Benefits	Lead. (Others)	Timescale	Costs
4.3.1	Encourage collection and utilisation of methane gas from landfill and methane produced by other sites.	Sustainable use of gas as fuel and reduction in demand on natural resources.	Agency	1999-2003 1998-1999	to be determined £5 k

4.3.2	Initiate feasibility studies on installing active extraction with flaring or energy recovery, on existing landfill sites which passively vent gas.	Potential reduction in global warming.	Site Operators Agency Local Authority	1999-2003 1998-1999	to be determined £5 k
4.3.3	Identify and utilise sources of funding for the installation of collection & flaring/utilisation plant for gas from landfill and other sources.	Maximise potential take up of feasible options.	Site Operators Agency Local Authority Industry	1999-2003 1998-1999	to be determined £5 k

~~Rises in sea levels are resulting in higher low tide levels which block the ability of heavily silted outfalls to the Humber.~~

Due to the combined effects of global warming and sinking land levels, sea levels are rising generally and hence, the level of the low tide is rising relative to ordnance datum. One of the results is the deposition of silt which affects the efficient operation of outfalls and will eventually lead to blockages.

A geomorphological study has already commenced on the Humber Estuary to examine the effects of these climate changes and the results will be fed into the Humber Estuary Shoreline Management Plan (HESMP). Further studies which may be carried out to look at long term siltation patterns can identify specific problems and make assessments regarding increased flood risk.

We Will: Undertake studies related to HESMP in order to establish long term siltation patterns and rates and identify potential flood risks.

Monitor rates of siltation and adjust flood defence maintenance programmes as appropriate.

We Will: Continue to refine predictions for maximum flood levels and future sea level rise, as techniques improve and more information becomes available, and update flood defence standards in line with latest forecasts.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.3.4	Undertake studies to assess options at outfalls in poor condition, and prepare action plans.	Appropriate flood defence standards achieved and outfalls options studies undertaken.	Agency Internal Drainage Boards	1998-2003	£35 k

4.4 IMPROVING AIR QUALITY

Air quality is one of the important factors governing quality of life within an area and considerable progress has been made in improving air quality over the last fifty years.

The major sources of air pollutants are transport and industry. Local authorities are responsible for assessing air pollution from transport which is significant in some urban areas. Leading by example, the Agency is aiming to reduce emissions from its own vehicles by reducing mileage and encouraging staff to use public transport (see section 4.3). We are also encouraging the public to consider the impact their travel has on the environment.

The Agency is working with the Government to ensure that the National Air Quality Strategy improves air quality and that emissions from major industries and vehicles are reduced.

We Will: Develop an overall Air Quality Strategy for releases from Part A processes in the LEAP area, to ensure long term improvements in air quality.

Local air quality planning is the responsibility of local authorities which regulate the smaller industries and processes, and monitor traffic pollution. The Agency is responsible for regulating emissions to air from major industrial processes under a system of Integrated Pollution Control (see section 4.11).

Local authorities have a statutory responsibility to carry out periodic reviews of the air quality in their areas. They are required to assess present and likely future air quality against prescribed standards and objectives set out by the Government. These reviews will form the basis for Local Air Quality Strategies on which the Agency will be consulted. The Agency will seek to produce an Air Quality Strategy for Agency regulated processes in the area which will support local air quality strategies.

We Will: Develop an overall Air Quality Strategy for releases from Part A processes in the LEAP area, to ensure long term improvements in air quality.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.4.1	Develop in partnership with Local Authorities, an overall air quality strategy for releases from Agency regulated processes in the area.	Improved contribution to local Air Quality plans.	Local Authorities Agency	1998-2000	£5 k

While there are no power stations located in this area, the air quality is influenced by a number of large coal fired power stations along the Trent Valley (to the south) and between Leeds and the Humber (to the southwest). These stations are major emitters of pollutants but all have programmes to reduce emission levels over the next few years. The Agency will ensure that these are considered in the relevant LEAPs being produced and that links to action within this LEAP will be taken into account.

There is still room for improvement in the monitoring of air quality as weather conditions and local variations can still cause problems and unexplainable pollution episodes.

We Will: Assess the impact of the air pollution episode protocol which came into effect 1 July 1996 to enable a proactive approach to air pollution from Part A processes to be taken.

4.5 MANAGING OUR WATER RESOURCES

There is a continuing need to balance the demands for, and supply of fresh water. Nationally about half of the present demand is for water to be put into public supply. Water resources which have been developed to meet this demand are highly integrated; in many cases they involve a combination of water drawn from rivers, underground aquifers, and reservoirs. In the East Yorkshire Area the Chalk aquifer and the River Hull are important sources of good quality water for public supply, serving the needs of the public, agriculture and industry.

At their worst, water shortages lead to dry taps for consumers and cause rivers to fall to levels which may affect plants and animals. The Agency's responsibilities include ensuring that water companies, industry and the public use water more efficiently. We urge water companies to reduce leakage, manage the water demands of their customers more effectively and we advocate targets to Government and Office of Water Services (OFWAT) to reduce losses. We are also addressing our water use by setting-a-target to:

- * reduce water use in offices and depots to 30% below either the accepted norm for the office type or our 1996/97 consumption, whichever is higher, by 30 September 1998.

Further plans to develop the management of the Chalk aquifer and the water from the headwaters of the River Hull are underway.

The River Hull and its headwaters, provide an important public water supply and surface water abstraction is relatively high. In addition to the abstractions for drinking water, there are a number of fish farms who rely on a regular supply of good quality water for salmonid and coarse fish rearing.

The flow regimes of the headwaters have been the subject of a integrated study to establish options for the sustainable management of this valuable resource, which will meet the needs of the users and the environment while permitting adequate flood defences (see section 4.8). The options identified through the study will be assessed for their feasibility and implemented as appropriate. One of the first actions identified relates to the effective measurement of the abstraction of water by fish farms.

We Will Implement options as identified through the River Hull Headwaters Study in collaboration with other interest groups, to integrate management regimes for the Hull Headwaters (see action 4.8.1).

Water resources are vital for domestic use, industry, agriculture, recreation and as a habitat for wildlife. The use of water can put our resource under considerable strain, particularly at times of drought. Conserving water by reducing the amount that is actually used should minimise the need to impose restrictions on water use during the summer months.

We already encourage water conservation in industry through our waste minimisation initiatives which promote more efficient use of raw materials, energy and water to all businesses (see also section 4.6). We also encourage agricultural users to develop winter storage facilities in order to minimise demand on resources in summer and at times of low flows. Active, positive and targeted programmes are needed to ensure implementation of effective water conservation practices.

In the past licences to abstract water were granted without time limits or restrictions during periods of low flows. A policy using time limits and a restriction where, if river flows fall below a pre-defined figure, abstraction is stopped until flows recover, was developed in the 1980s. The policy has now been refined and updated to take more account of environmental needs.

We Will: Implement Surface Water Abstraction Licensing Policy on all new licences in the area to ensure a balance is achieved between the needs of the environment and needs of abstractors.

With the increasing and changing demands on the water resource, the Department of the Environment, Transport and the Regions (DETR) has initiated a comprehensive review of the current abstraction licensing legislation (consultation paper: Water Abstraction Licensing System in England and Wales, 1998). The aim of the review is to ensure that abstraction licensing and related arrangements provide full protection for the environment while enabling fair and flexible measures for meeting properly managed demand for water resources.

We Will: Actively participate in the current DETR national review of existing Abstraction Licensing Legislation to ensure the effective management and protection of water resources for present and future generations.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.5.1	Identify suitable boreholes and initiate regular sampling to assess long term changes in groundwater quality.	To establish baseline groundwater quality.	Agency	1998-2000	£40 k
4.5.2	Use the East Yorkshire Chalk Groundwater Model:	Achieve environmentally sustainable groundwater abstraction licensing policy and most effective protection of public supply abstraction.	Agency	1998-2000	£30 k
4.5.3	1 In the appraisal of groundwater abstraction licensing policy. 2 To review the Chalk Groundwater Protection Zones around public water supply boreholes.				

The Chalk aquifer is especially at risk from agricultural activities.

The Chalk is an important aquifer with abstraction for public water supply and agriculture being the major uses of water resources in the catchment. Groundwater and surface water together combine to make up the water resource of the area, and must be protected in terms of quality and quantity by achieving a balance between the rights of abstractors, other lawful users of the water and the needs of the environment.

The aquifer is vulnerable to pollution from agricultural activities such as leaching of nitrates from fertilizers, sheep dip disposal, agrochemical sprays, slurry applications and the storage of chemicals. Within the area there are approximately 1900 farms. Farming activities can seriously impact on water quality if good agricultural practice is not carried out. The farming community as a whole therefore has a responsibility in this area to ensure the protection of the water environment. Only with good farming practices and liaison with Ministry of Agriculture Fisheries and Food (MAFF) and the Agency can this be achieved.

We Will: Undertake comprehensive studies on agricultural activities relating to agrochemical usage oil, silage storage and slurry disposal in East Yorkshire.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.5.4	Undertake collaborative projects in the East Yorkshire area on: 1 horticultural pesticide usage and disposal.	Protection of ground and surface waters in line with the Agency's groundwater policy.	Agency <i>Consultants</i> ADAS MAFF (proposed)	1998-1999	£15 k
4.5.5	2 agricultural oil storage in sensitive areas	Maintenance of surface and groundwater quality.	Agency <i>Consultants</i> National Farmers Union Farming community	1998-1999	£25 k
4.5.6	Inspect all British Agrochemical Standards Inspection Scheme (BASIS) stores in the area.	Protection of ground and surface waters.	Agency <i>Fire Service</i>	1998-2003	£15 k
4.5.7	Assess earth banked slurry lagoons in the area to identify structures posing potential pollution threats and plan action to minimise the risks.	Potential pollution problems addressed and a full comprehensive database compiled. Major spillages from ageing structures averted. Sustainment of good water quality.	Agency <i>Consultants</i> Site operators	<u>Phase 1</u> 1999-2000 <u>Phase 2</u> 2000-2001	Agency £5 k Consultants £25 k £12 k
4.5.8	Assess agrochemical storage facilities at agricultural units in Ground Water Protection Zone's and plan action to minimise risk to water quality.	Improved knowledge and information resulting in greater environmental awareness and aversion of potential pollution incidents	Agency <i>Consultants</i> Fire Service Health & Safety Executive ADAS Farmers	2000-2001	Agency £3 k Consultants £30 k

Increases in nitrate concentrations in surface and groundwaters used for public drinking water supplies, are a result of leaching from agricultural nitrogen fertilizers. It is now necessary to protect the Chalk and groundwater vulnerability maps have been published. Nitrate Sensitive Areas (NSA) have been designated at Kilham, Springwells and North Newbald, and Nitrate Vulnerable Zones (NVZ) covering the above NSAs as well as further areas of the Upper River Hull, Bridlington and Cottingham. The farming community as a whole has therefore a responsibility to ensure the protection of the water environment.

We Will: *In collaboration with MAFF and DETR, undertake a review of the current designations for NVZs in the area to ensure the protection of the surface and ground water drinking water supplies.*

4.6 ENHANCING BIODIVERSITY

Biodiversity, the variety of life, is declining and in the UK alone, more than 100 species are thought to have become extinct this century. In June 1992, at the Earth Summit in Rio, the Convention on Biological Diversity was signed by the UK and over 150 other countries. The UK response to this commitment was launched in January 1994 with 'Biodiversity: The UK Action Plan'.

Over the last 50 years, many important wildlife habitats have been destroyed and many species are in decline or have disappeared from this area altogether. Many of the natural and semi-natural ecological features have been lost to the area due to land drainage, agriculture intensification, poor water quality and urban development. Local authorities and a wide variety of other statutory and non statutory bodies are now working on local Biodiversity Action Plans (BAP) to redress the situation and provide for the re-establishment of key species and habitats.

Implementing the UK's Biodiversity Action Plan.

The UK Biodiversity Action Plan identifies a number of species relevant to the LEAP area which require conservation action. The Agency has a lead role in 19 species action plans (including the otter and water vole), and 4 habitat action plans (including Chalk rivers). Conservation of these species and habitats will require accurate information about their current status.

The Chalk streams of the area are the most northerly found in Britain and to ensure their protection have been designated as a Site of Special Scientific Interest. The streams support a biodiversity significant to the area and require protection from the impacts of human activities. As part of the UK's Biodiversity Action Plan a national group has been set up to assess the needs of the Chalk Stream habitats:

We Will: Take an active role in the National Chalk Streams Biodiversity Group and seek best practice solutions for managing the Upper River Hull.

We Will: Determine the status of species present in the LEAP area for which the Agency has taken special responsibility as lead contact. Carry out work ourselves and in collaboration with others to improve the status of these species.

We Will: In collaboration with the lead contacts, implement actions for other species and habitats listed in the UK BAP for which we have responsibilities but are not the lead contact.

Local Authorities are working on Local Biodiversity Action Plans and we will support the development of these Plans to ensure the protection of locally important species.

We Will: In partnership with Local Authorities, support the development and implementation of the Humber and East Yorkshire local BAPs.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.6.1	Assess the need for baseline surveys of important species, in collaboration with organisations involved in producing Local Biodiversity Action Plans, and plan action to protect.	Baseline against which success of improvement work can be monitored.	Agency Local Authorities English Nature RSPB Yorkshire Wildlife Trust	1999-2000	to be determined

There are extensive opportunities to improve the environmental quality of the catchment by working in partnership with others.

The area contains many sites of international, national and local conservation value. The Agency will be working closely with a wide variety of partner organisations to ensure the continued protection and sustainable management of these areas.

We Will: In collaboration with English Nature produce and implement a conservation strategy and consenting protocol for the River Hull Headwaters Site of Special Scientific Interest (SSSI).

We Will: Work with Yorkshire Wildlife Trust and English Nature to investigate the improved joint management of the Pulfin Bog SSSI and adjacent land owned by the Agency.

We Will: In collaboration with English Nature review the current studies on fisheries and fisheries management on the Leven Canal SSSI.

We Will: Work with English Nature and landowners to produce a management plan for Hornsea Mere, a site designated as an Special Protection Area (SPA) because of its importance for overwintering bird populations. There are currently concerns about high nutrient concentrations in this water body.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.6.2	Continue provision of nesting sites for Barn Owls, on the River Hull.	Continued expansion of the Barn Owl populations.	Hawk & Owl Trust	1998-2000	£10 k
4.6.3	Identify opportunities and plan action to extend the project to other parts of the area.		Agency	1998-2000	£1 k
4.6.4	Extend previous partnership on the enhancement and protection of field margins.	Increased biodiversity leading to sustainable populations.	Farming & Wildlife Advisory Group Hawk & Owl Trust Market Weighton Internal Drainage Board, Agency	to be determined	to be determined
4.6.5	Review Agency action to protect sites of local importance for nature conservation in the area.	Protection of sites of local importance for nature conservation.	Agency Local Authority	1999-2000	£2 k
4.6.6	Identify priorities for habitat conservation and restoration by carrying out a catchment review, and develop action plans.	Programme of habitat rehabilitation.	Agency Users	1998-1999	£2 k
4.6.7	Identify sites for appropriate tree planting on the River Hull corridor.			1998-1999	
4.6.8	Identify and implement habitat improvement and river rehabilitation schemes. e.g. River Hull between Baswick Landing & Hempholme Weir.	Increased biodiversity leading to sustainable populations.	Agency Local Authority Riparian Owners	to be determined	to be determined

4.6.9	Implement recommendations of National R & D Project to assess the effect of predatory birds.	Protection of fish stocks. Conservation of predatory birds protected under the Wildlife & Countryside Act.	Agency <i>Riparian Owners</i>	1998-1999	to be determined
4.6.10	Liaise with local authorities, developers and landowners to act to protect the area from: 1 the inadvertent introduction or spread of alien weeds.	Protection of native species and habitats.	Agency <i>Local Authority Developers Riparian Owners</i>	1998-1999	to be determined
4.6.11	2 the spread of the phytophthora disease of alder.				

The Agency will continue to work in close liaison with the relevant local authorities.

The marine environment has come under increasing pressure from a variety of source including tourism, recreational use and some commercial activities. Resolving competing demands, regulating and managing the use of the marine environment is the responsibility of a number of agencies.

The Habitats Directive will have a major impact on the management and protection of the most valuable marine areas. Flamborough Head has been proposed as a Special Area of Conservation (SAC) under the Directive.

We Will: Continue liaison with identified coastal interests to promote effective and integrated management of the coast and its environment.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.6.12	Support the continuing development of the Flamborough Sensitive Marine Area (SMA) project into the SAC. Review topic papers in year two.	Scheme of management in place. Protection of the international importance of the site.	English Nature <i>Agency North Eastern Sea Fisheries Committee Local Authority Yorkshire Water Services</i>	1998 - 2000 SAC project launched 7/98	£10 k

4.7 MANAGING OUR FRESHWATER FISHERIES

Long term strategies for the maintenance and improvement of salmon, trout and coarse fisheries are being developed. Our vision for fisheries is that all suitable waters will be capable of supporting thriving fish populations and everyone will have the opportunity to experience a wide range of good quality of fishing.

The West Beck (River Hull) is heavily used for fish farming.

The headwaters of the River Hull above Driffield have long been recognised as a high quality brown trout fishery, while below Poundsworth to Frodingham Beck the mixed trout and grayling stocks are replaced by a range of coarse fish species.

The water quality in the river also makes it a good source of water for the rearing of fish in fish farms. In the area there are several farms dealing mainly with the production of rainbow trout, a popular but non-indigenous species, and there have been some impacts from the escape of rainbow trout from these fish farms.

We Will: Work with fish farmers and angling clubs to mitigate the impacts of escaped non-native species.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.7.1	Identify sites where fish populations have remained discrete and retained their genetic integrity, and plan action to ensure their protection.	Genetic characteristics retained.	Agency Fishery Owners	1998-2000	to be determined

The high quality of the water in the River Hull requires protection from pollution and the Hull is a valuable resource to the local area.

Significant ecological damage has occurred to the delicate environment of the Chalk streams as a result of low flows and past unsympathetic channel management. Increased siltation resulting from reduced velocities has led to compaction of gravels, rendering them unsuitable as fish spawning areas.

We Will: Utilise the results of the River Hull Headwaters study to manage flow regimes in the West Beck and the impacts of discharges (see action 4.8.2).

We Will: Continue to work with landowners and angling clubs to break up areas of compacted gravels and monitor the success of this action in allowing fish to spawn.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.7.2	Monitor fish populations on the environmental mitigation and enhancement works at: 1 West Beck 2 Broomfleet Ponds	Better understanding of how works benefit stocks which can then be used to maximise benefits in future works.	Agency	1998-2001	£5 k

Physical obstructions to the passage of fish such as weirs and valves prevent the free movement of fish within the area. Previous work has identified the current status of obstructions on the River Hull and this could be extended to cover all watercourses. In some cases there are obstructions which prevent certain species entering the watercourses from the sea and estuary. This has a significant effect on the composition, structure and development of the fish populations. As water quality improves some watercourses will remain inaccessible to upstream migrating fish unless some facilities to aid passage are provided.

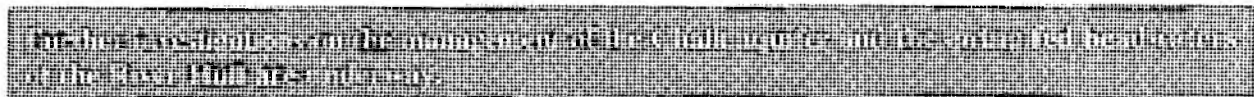
We Will: Classify the rivers in the area according to the National Fisheries Classification System, to assist in the management of fish populations.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.7.3	In collaboration with Riparian Owners seek opportunities to install fish pass structures, while ensuring the protection of heritage features.	The development of sustainable fisheries in further stretches of the river.	Riparian Owners Agency Angling Interests English Heritage	1998-2003	£2 k

4.8 DELIVERING INTEGRATED RIVER BASIN MANAGEMENT

Integrated river basin management is a way of looking at the river and its surrounding land as a whole. It not only looks at the quality and quantity of water in the river but also at its physical environment, including landscape, recreational use, flood control works and the wildlife.



The upper parts of the River Hull system are not only a nationally important conservation resource but are also used for potable water supply, fish farming and effluent disposal. Local agriculture relies on the extensive land drainage system and the protection afforded by the network of flood defence banks and structures.

The 1995/96 drought and concerns about the level of protection afforded by flood defences highlighted a need for the Agency to look in detail at the integrated management of the upper catchment as part of the development of the plan.

The project undertaken includes a comprehensive environmental appraisal that will encompass all aspects of the River Hull Headwaters management and will culminate with recommended improvement schemes to address the varied issues encountered within the area.

The study has focused on four key areas and how these can be integrated:

- * management of groundwater resources;
- * the impacts of abstractions and discharges on surface water;
- * flood defence;
- * protection and management of the ecological resources.

We Will: Appraise the options identified in Phase I of the multifunctional River Hull Headwaters Study in order to achieve sustainable flood defences, and water resources and enhancement of the ecology and water quality.

Phase II: Prepare and implement options identified, to maximise the ecological potential and maintain the required level of defences.

Hull Study Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.1 Links to section 4.5	Implement a comprehensive measurement system for abstraction and discharges from fish farms, in compliance with existing consents.	Improved information on the quantities of water abstracted and the assessment of potential environmental impact	Fish Farm Owners Agency Fishery Owners English Nature	1998/99	£6 k
4.8.2 Links to section 4.7	Undertake further investigations regarding the impact of minor control structures and riverbed modifications and implement pilot schemes.	Encourage variation in flows and enhancement of aquatic habitats.	Agency Riparian Owners Angling Clubs	1998-2000	£100 k
	Undertake raking/breaking up of compacted gravels.	Improvement to spawning gravels and increased brown trout recruitment.		1998/99	£5 k
4.8.3 Links to section 4.9	Identify suitable locations and undertake bankside planting and fencing to create riparian buffer zones.	Improved habitats, prevention of degradation of riverbanks, reduced siltation, and improved water quality.	Riparian Owners Agency English Nature	1998/99 6 months	£1 k

Parts of the area are vulnerable to flooding from the Humber and this is a consequence of the existing defences being below standard or in need of major refurbishment.

Large residential areas, valuable agricultural land, industry and communications are situated below maximum high tide levels and are protected from flooding from the Humber by embankments and other defences. Improvements in methods of analysis for possible flood levels, and predictions for future sea level rises, have identified the needs to reappraise the long term standards of flood defence provided along the Humber. Shoreline Management Plans form the strategic basis for coastal defence work, and the Humber Estuary Shoreline Management Plan will assess the need for improvements to flood defences while ensuring valuable environmental resources are protected (see section 4.3). Details of urgent flood defence works on the River Humber can be found in the Humber Action Plan (1998).

We Will: Identify and promote works required to high risk areas, to ensure an appropriate standard of flood defence is achieved.

Defences in some parts of the area are below standard or are in need of major refurbishment.

The Agency has specific powers relating to 'main rivers' which enable it to carry out maintenance, improvement works, construct flood defences and control work by others. To ensure the integrity of existing defences, a significant level of maintenance work is undertaken throughout the year. Budgetary constraints do however mean that work needs to be prioritised so as to maximise the benefit to the main river system as a whole.

Flood defence needs for the future are constantly being identified and are incorporated into an ongoing programme. This ensures that defences throughout the area are improved as necessary to achieve an appropriate level of protection. Before any scheme within that programme can be implemented however, it must be shown to be economically justifiable and due account must be taken of the availability of funding. Every opportunity is taken during the design of schemes to maximise environmental benefits.

We Will: Undertake a programme of works to maintain and where necessary, improve the standard of protection afforded by existing flood defences (see table a, in Appendix 3).

The flood forecasting and warning systems could be further improved.

The Agency operates a flood warning service with the aim of warning people in areas at risk of imminent flooding from rivers so as to enable measures to mitigate the damage. Agency staff monitor river levels 24 hours a day, using telemetry and forecasting systems so that timely flood warnings can be issued. The Agency aims to ensure that in areas covered by the flood warning service, at least 65% of properties which are flooded receive prior warning of flooding.

We Will: Improve existing flood warning service, and extend the service to more flood risk areas.

The Environment Agency supports a number of flood defences which are owned by local authorities and cannot address some common problems associated with these defences.

In addition to works on main rivers the Agency also has a general supervisory duty over all flood defence matters, including powers to control weirs and culverts which would affect flows on ordinary watercourses. This requires working in close partnership with other drainage authorities, who have powers to undertake works on stretches of river outside Agency remit (ie local authorities or internal drainage boards (IDBs) and riparian owners). This encourages a common approach to the provision of flood defences.

We Will: Continue to liaise with local authorities and Internal Drainage Boards to maintain a sustainable and consistent approach to flood defences across all watercourses in the area.

A tension sometimes exists between flood defence and farming activities which can be managed.

The interests of flood defence and conservation sometimes conflict with regard to some maintenance activities such as the cutting of weeds and reeds within the channel, cutting back bankside growth such as bushes and trees and the cutting of grass on embankments. This maintenance can cause environmental problems affecting water quality and river habitats. For example, whilst it is desirable to retain some reed within the channel to provide habitat for fish and other wildlife, excessive accumulation obstructs flow and raises water levels thereby increasing flood risks.

We Will: Undertake studies on main rivers, to establish those with particular conservation interest and establish best working practices to promote conservation interest whilst still retaining adequate standards of flood defence and promote sustainable management of all watercourses.

Develop flood defence maintenance management plans consistent with conservation interests for non SSSI watercourses.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.4	Establish a forum to provide education and advice on current best practices for watercourse management.	Best practices established and implemented.	Agency Riparian owners, Internal Drainage Boards, Nature Conservation	1999-2000	to be determined

Sewage treatment pumping stations owned by the East Yorkshire Agency, with the main one between 20 and 30 years old. In the event of failure of any one of the stations, large areas of prime agricultural land would be affected.

Large areas of low lying land in the plan area are totally reliant on pumping to provide land drainage, and the reliability of each station is therefore paramount. Studies to assess the condition of each station and prioritise a programme of refurbishment as appropriate would ensure works are carried out in order of importance.

We Will: Undertake condition assessments at the major pumping stations and report on the priorities and options identified to develop a programme of refurbishment (see table b, in Appendix 3).

Investments in improvement schemes designed and the programme of remedial action at a Sewage Outfalls (SOD) will reduce the environmental impact of sewage discharges, such as the cost and risk concentration of the Urban Waste Water Treatment Directive (UWWTW).

Remedial action has been taken in the form of significant capital expenditure on improvement schemes, some of which have been completed while others are yet to commence. Important improvement schemes to both Sewage Treatment Works and CSOs will result in improvements in water quality and a reduction in the frequency and volume of storm spills to river to reduce aesthetic problems.

The area has seen significant capital expenditure on improvement schemes not just inland (Driffield, Market Weighton, Beverley, etc.), but at several coastal sites. This expenditure has been mainly on sewerage systems which have dramatically eradicated crude and partially treated sewage effluents.

Major sewage flows diverted to the Bridlington Headworks from the Gypsy Race CSO's, Bessingby Industrial Estate and the villages of Wilsthorpe and Bessingby have brought about marked improvements to the quality of the Gypsy Race and Auburn Beck, a watercourse that flows onto the designated bathing beach at Fraithorpe. Also a settled sewage discharge that once cascaded over the chalk cliffs at Selwicks Bay has been included in a major upgrade of the sewerage system at Flamborough, where all foul flows are treated at the Flamborough Waste Water Treatment Works (WWTW).

Yorkshire Water Services (YWS), with full consultation with the Agency is committed to their 'Coastcare' improvement scheme. With further improvement work planned for Bridlington (Bridlington WWTW and the North Bay CSO's), Hornsea (New WWTW) and Withernsea, it is anticipated that significant improvements in the bathing water quality will be attained to the benefit of all water users. The Agency will ensure that all the necessary monitoring programmes are in place to ensure improvements are recognised and do result within the next few years.

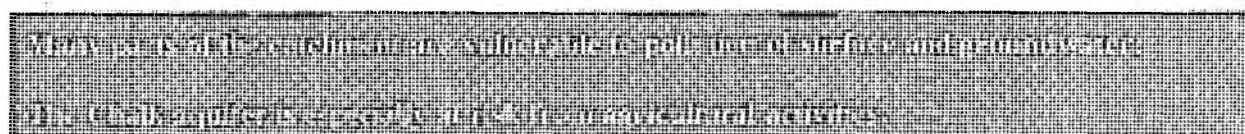
Also of particular concern in this area are the village drains (sewer dykes) which receive sewage effluent from domestic properties and discharge into small watercourses where they have an impact on water quality. A number of village drains are adopted and are therefore the responsibility of YWS. Under the Urban Waste Water Treatment Directive, these village drains qualify for 'Appropriate Treatment'. Investment will occur in the next Asset Management Plan period (AMP3) covering the years 2000 to 2005, and prioritisation will be based on the impact that village drains have on the receiving watercourse and the nuisance they cause.

The Agency will identify schemes for consideration under AMP3 to ensure that further improvements to the water environment are achieved and maintained. A list of schemes proposed by the Agency, and currently under consideration is included in Appendix 4.

We Will: Participate in the investment programme discussion between YWS and OFWAT to agree the significant investment in sewerage and sewage treatment for the period 2000 - 2005 (AMP3). Monitor improvements agreed under the AMP2 for the period 1995 - 2000. (See table in Appendix 4).

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.5	Identify and produce a business case for relevant YWS assets in need of improvement within East Yorkshire.	Resolution of existing water quality problems. Mutually agreed strategy for improvements at YWS assets.	Agency YWS	1998-1999	£4 k
4.8.6	Undertake a study on the rural sewage and septic tank disposal problem in the Holderness area.	Resolution of long standing water quality problems. Identify target areas for capital investment improvement schemes.	Agency YWS Consultants	1999-2000	£25 k



Industry and agriculture pose a threat of pollution when oil and chemicals are transported, handled, used and finally disposed of. This might result from accidents, inappropriate practices, vandalism or fires. Agriculture poses additional threats from the storage and disposal to land of slurries, farmyard manures and silage liquors.

Agency activity in the prevention of pollution is based on education and the provision of advice to others to bring about improvements in water quality and minimise the risk of water pollution. It seeks to change behaviour, and that good practices are accepted (eg adherence to the Code of Good Agricultural Practice for the protection of Water) and replace the poor practices still evident in many situations. Pollution prevention within water quality has strong cross functional links to waste disposal and minimisation, land spreading of wastes and contaminated land.

Within East Yorkshire problem areas have been addressed already and will be subject to review, however more recently a number of new areas have been identified as requiring pollution prevention work.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.7	Carry out proactive prevention campaigns on farms and industrial estates in the catchment. Eg Winestead Drain Carnaby Burstwick Drain Holderness Drain Keyingham Drain Ottringham Drain	Reduction in the number of farm & industry related pollution incidents.	Agency <i>Formers National Farmers Union MAFF Industry Local Authority</i>	1998-2002 (1998-1999) (1999-2000) (2000-2001) (2001-2002)	£23 k

4.8.8	Undertake a survey on the disposal of waste oils at garage premises in the area and plan a collaborative & proactive 'Oil Care' campaign.	Safe disposal of waste oils and increased awareness of the national 'Oil Care' campaign.	Agency <i>Garage Owners Oil Industry</i>	1999-2003	Agency £5 k Consultants £20 k
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The river opportunities to provide improved recreation and access facilities in many locations including for the disabled, and there are no inter-linked water relationships or navigation in the area.

Improving water quality and riverside improvement works will bring an increased interest in recreational use. There is currently much interest in the use of rivers and other water environments for leisure pursuits. Many open spaces in the lower Hull valley have watercourses within them which are currently under-utilised for sport and recreation.

We Will: Identify opportunities to provide improved facilities along the lower River Hull for recreation and access for all, whilst addressing problems associated with dereliction.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.9	Survey all Agency land for, and develop collaborative initiatives on:	Best use of resource. Protection of other users interests. Resolution of potential conflict.	Agency <i>Local Authority, Riparian Owners, Inland Waterways Authority (IWA), Navigation interests, Tidy Britain Group.</i>	1999-2000	£10-15 k
1	potential for recreational use, and access for all;				
4.8.10	2 archaeology and heritage value;				
4.8.11	3 opportunities for education and interpretation;				
4.8.12	4 extent of problems with litter in watercourses.				

In recent years there have been a number of proposals to restore navigation, or redevelop some waterways, while at the same time some of the existing facilities associated with navigation may be under utilised. There is potential for increased demands on scarce water resources and conflict between user groups if this issue is not managed in a sensitive manner.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.13	Establish a navigation forum to promote regular liaison with navigation and other interests.	Resolution of potential conflicts. Agreed strategy for navigation & code of best practice for all navigation users.	Navigation bodies <i>Agency, Riparian Owners, Other user groups.</i>	to be determined	to be determined

4.8.14	Review of code of conduct for use of Market Weighton Canal.	Resolution of potential conflicts between users.	Agency, Market Weighton Internal Drainage Board (IDB) <i>IWA, User groups, IDB</i>	1999-2000	£1 k
4.8.15	Review procedures for use of Weighton Lock and Weighton Canal.	Protection of flood defence interests.* IDB interest.	Agency <i>IWA, User groups , IDB</i>	1999-2000	£1 k

4.8.2.2. *Work with Hull City Council on the development of their Parks and Open Spaces Strategy.*

The Agency has forged strong links with local organisations involved in conservation and improvement work in order to promote collaborative improvements, as the increasing public perception of a need for restoration of the environment present great opportunities.

We Will: Work with Hull City Council on the development of their Parks and Open Spaces Strategy.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.16	Develop collaborative partnerships with Hull City Council on improvements to R Hull corridor.	Environmentally sensitive use of the river corridor. Integration of uses.	Kingston upon Hull City Council <i>Agency, Other users</i>	1998-2000	to be determined
4.8.17	Undertake collaborative community projects on 'Project Lifestyles'.	Protection and enhancement of local amenity.	Humberside Police <i>Agency, Local Community</i>	1998-1999	£1 k

The Agency is the operating authority for a number of Sites of Special Scientific Interest (SSSI) which require the production of Water Level Management Plans (WLMP). Water levels are important for agriculture and conservation interests/wildlife will be dependant on an appropriate water management regime. It is therefore necessary to ensure a balance is maintained for areas which have a conservation interest and where control of water levels is important.

We Will: In consultation with riparian owners and conservation interest groups, formulate WLMPs for Sites of Special Scientific Interest to promote greater understanding of the water environment and to balance the needs of flood defence, agriculture and ecology:

Plans developed for the Pulfin Bog, Boynton Willow Garth and the Upper Hull SSSIs.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.18	Investigate the potential to extend WLMP approach to all watercourses/bodies in the area.	Protection of wetland and aquatic species and habitats.	Agency <i>Riparian Owners, IDBs</i>	1998-2000	to be determined

We will do our best to influence Town and Country Planning systems which are the responsibility of local authorities, to prevent housing and industrial development in inappropriate places. This will include discouraging development in flood plains, and ensuring that availability of water and sewerage infrastructure is considered when new developments are planned.

When consulted on any contaminated land site, either through the planning consultation system or directly by the site owner, the Agency will provide appropriate technical advice, encourage best practice and determine the degree of remediation required to protect water resources and ensure that the ecological potential is fully developed. After implementation of the new Contaminated Land Regulations (section 57; Environment Act 1995) we will, in conjunction with local authorities, report on the extent of contaminated land and will regulate identified special sites.

The Agency has a key role in gaining the remediation of contaminated land.

The Environment Act 1995 conveys new powers and duties on the local authorities and the Agency for dealing with contaminated land and provides the opportunity to work together to deal with some of the worst contaminated land sites, and bring about an improvement in the environmental quality of the area.

As a result of past industrial and commercial activity, East Yorkshire has been left with areas of environmental degradation. This is particularly true around sites which were formerly involved with activities such as coal gas production, waste disposal, timber treatment, engineering and chemicals manufacture. Contamination of soils and waters as a result of such activities, can pose a direct threat to human health, water resources and to other ecological systems. Wherever possible the Agency uses its existing powers to prevent or mitigate this pollution, and seeks to take action against the polluter to bring about improvements. There are, however contaminated sites within the area where the persons responsible for the pollution cannot be found.

We Will: Identify and prioritise contaminated sites which are having a known impact on controlled waters but where the persons responsible cannot be found.

Secure funds from relevant institutions to remediate the sites identified, working in partnership where possible with local authorities.

We Will: Work in partnership with the local authority, quantify and assess the extent of groundwater pollution arising from the former Woldgate Landfill site near Bridlington.

The Agency will need to develop a partnership with the local authority and the public.

The Humber Estuary Shoreline Management Plan is being developed through a partnership initiative which includes the Agency, and the Shoreline Management Plan for the Holderness Area is being produced by the Humber Estuary Coastal Authorities Group (HECAG), for the area from Flamborough Head to Spurn Point and into the Humber Estuary, and will highlight the areas of risk, and the prioritisation of required works.

Shoreline Management Plans consider natural processes, planning pressures, current and future land use, defence needs and environmental considerations.

We Will: Input into the development of the Humber Estuary Shoreline Management Plan and the Coastal Shoreline Management Plan to secure integrated management of the Estuary and the Coast.

There are various possibilities to improve the environmental status of the catchment by working in partnership with others.

Land drainage, agriculture intensification, poor water quality and urban development adjacent to watercourses and the coast has led to the loss of many of the natural and semi-natural ecological features found in the catchment. Modern agricultural land use practices, such as removal of hedgerows, can also result in an increase in soil erosion which in turn, can increase the amount of sediment washed into watercourses. Changes in the natural input of sediment into watercourses can have significant effects on stream habitats and may result in drainage problems and harm to wildlife. Sediments can also carry chemical pollutants such as pesticides or nutrients. Risk of erosion is greatest on vulnerable soils (such as sandy soils) with steep slopes.

Changes in land use management are important for tackling this issue and one technique for reducing diffuse pollution from agriculture lies in the use of buffer strips. These are generally a vegetated strip of land alongside a watercourse that is managed separately from the rest of a field. They reduce pollution by distancing agriculture from a riparian area, thus reducing direct pollution (e.g. spray drift) and by intercepting run-off and soil movement from agricultural land. The Ministry of Agriculture, Fisheries and Food (MAFF) funds a range of schemes under its agri-environment package and has taken over the funding of the Countryside Stewardship Scheme from the Countryside Commission. Improvement works have also been identified as part of the River Hull Headwaters study (see action 4.8.3).

Marginal vegetation and tree growth are also vital for fishery habitats as well as for maintaining biological diversity. Bank erosion problems can be caused by unconsented fishing platforms and the digging away of the river bank to give fishermen access to the river.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.9.1	Develop more valuable river corridors through the creation of buffer zones and sensitive land management:	Protection and enhancement of valuable habitats.	FWAG	1998-1999	£20 k
4.9.2	1 support the Farming & Wildlife Advisory Group (FWAG) 2 encourage take up of Countryside Stewardship Scheme and other grants.	Further development of environmentally sensitive farming and land use.	Agency MAFF Agency, FWAG, FRCA		
4.9.3	Identify areas of bank erosion caused by angling activity and collaborate in action to remedy the problem.	Environmentally sustainable angling platforms to reduce erosion.	Agency Anglers, Riparian Owners	1999-2000	£1 k

The Agency is committed to developing close working relationships with Local Planning Authorities (LPAs) to promote effective links between planning and our specialist staff. To assist in this the Agency published documents entitled '*Environment Agency Liaison with Local Planning Authorities*', '*Guidance Notes for Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans*' and '*Policy and Practice for the Protection of Floodplains*'. These statements provide a general guide to LPAs on what policies should be included and why they are important.

Development that takes account of the environment can reduce the risk of pollution, for example by preventing the storage of oil or other chemicals on sites where leakage would pose a threat to groundwater supplies; and can reduce the risk of flooding by preventing rapid surface water run-off in urban areas, or maintaining flood storage capacity. The conservation of water resources, the protection-of-wildlife habitats and the reduction of the danger to people and property from the mitigation of landfill site gases are other goals that can be achieved through the control of development.

We Will: Assess the effectiveness of planning comments made by the Agency through monitoring of planning application decision notices.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.9.4	Establish a forum to promote greater use of Sustainable Drainage systems	Best practices encouraged to achieve environmentally sustainable development.	Agency Local Authority Yorkshire Water Services Internal Drainage Boards	1998-2000	£8 k
4.9.5	Provide information on best environmental practices to developers and others to promote sustainability in development.	"	Agency Local Authority	1998-2000	£5 k

4.10 MANAGING WASTE

The Agency's main objective in relation to the management of waste, is to adopt an integrated approach for achieving consistent standards for the treatment, storage, movement and disposal of controlled waste in a safe manner.

Waste impacts on our lives in many different ways, from litter on our streets to bad smells and gases from landfill sites. The Agency's tasks include measuring the effectiveness of taxation to reduce waste and encourage its re-use and recycling. Other responsibilities include the apprehension of fly tippers and implementing the new Producer Responsibility Regulations, which require industry to recover or recycle packaging waste. We are also working to encourage industry and consumers to recycle their waste. We are urging consumers to consider waste when selecting products and industry to reduce the amount of waste it produces.

Local authority responsibilities for waste management involves the collection, disposal and recycling of household and commercial waste, and also waste management land use planning through their development plans. Local authorities also have powers to deal with litter and flytipping.

Information is required to quantify waste disposal needs in the area and to identify opportunities to promote the benefits of waste minimisation.

In this area, by far the greatest proportion of controlled waste (household, industrial & commercial) is currently sent to landfill. Landfill can release chemicals to surface and ground waters, and to the soil, they also generate significant quantities of methane which is a greenhouse gas (see section 4.3).

Working towards sustainable waste management will require the commitment of not only the authorities responsible for regulating and controlling waste, but also the diverse groups of waste producers from individuals through to industry. It is vitally important that everyone is clear about what contribution they can make to promoting sustainable waste management.

We Will: Support the East Yorkshire Waste Panel to raise environmental awareness of waste disposal issues and improve the flow of information and knowledge.

The Agency will also be undertaking the first National Waste Arisings Survey and thousands of randomly selected companies will be asked to take part. The survey will provide for the first time, comprehensive data pertaining to the types, amounts, disposal methods etc., of waste produced by industrial and commercial companies in this country.

This information will be used by the government to assist in the formulation of the National Waste Strategy. It will help local planning authorities and developers identify where and what sort of waste management sites, will be needed in the future. It will also enable us to monitor the effectiveness of waste minimisation campaigns, landfill tax and other fiscal measures and education initiatives.

We Will: Develop effective links between the Agency and the surveyed firms to support a strong basis for providing the required data.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.1	Develop collaborative partnerships with industry, business and support organisations to promote waste minimisation. Eg Regional Sustainability Plans.	Improved flow of information and knowledge resulting in greater environmental awareness, and a reduction of waste going for disposal.	Agency <i>Local Authority Humber Resource Efficiency Centre, Industry</i>	1998-2000	£4 k
4.10.2	Work with local authorities on the development of a Waste Management Strategy for the area.	Sustainable methods of waste management adopted.	Local Authority Agency	1998-2001	£2 k
4.10.3	Undertake a survey of 'exempt sites' in the area to identify those activities posing potential pollution threats and plan action to minimise the risks.	Potential pollution problems addressed and a full comprehensive database compiled.	Agency <i>Consultants Site operators</i>	1999-2000	Agency £5 k Consultants £15 k

Producer Responsibility will encourage the recovery and recycling of waste from consumer goods.

The Packaging Waste Regulations 1997 encourage companies to cut down on the amount of packaging waste they produce, as reducing their obligated packaging will reduce the company's costs. The Packaging Regulations are the first part of the "Producer Responsibility" to be actioned. "Producer Responsibility" initiatives are being promoted for tyres, vehicles, newspapers, electric goods and other used products and will be a key tool in the future for promoting the recovery of value from waste. Also, the Landfill Tax ensures that landfill costs reflect environmental impact, thus encouraging business and consumers to produce less waste, recover value from more of the waste that is produced and dispose of less waste to landfill.

We Will: Review the requirements of producer responsibility as Regulations and initiatives are implemented and keep industry abreast of the implications for their business.

Encourage the adoption of Waste Minimisation Techniques.

Many linked problems of waste creation and transport, energy use and air and water pollution, recycling and environmentally friendly operation can be tackled by systematic study of alternatives to existing methods of working and operation. Waste minimisation projects have demonstrated how waste minimisation techniques can reduce operational costs, save on raw materials, water & energy (see section 4.5), and reduce waste outputs. It makes good business and environmental sense to manage and reduce resource consumption and thus minimise the amount of waste produced.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.4	Extend existing waste minimisation concepts to the agriculture and service sectors, domestic activities and primary natural suppliers.	Within these sectors, increased awareness, leading to waste elimination, reduction, reuse and recovery.	Agency <i>MAFF Humber Resource Efficiency Centre</i>	1999-2002	£10-15 k

4.10.5	Identify where waste prevention recycling or minimisation could be encouraged and develop initiatives to promote this.	Maximised opportunities to reduce waste and provide financial and environmental benefits.	Agency <i>Humber Resource Efficiency Centre, Industry</i>	1999-2000	£3k
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Separation and minimising programmes for the land spreading of waste used in L.E.A. Districts

Land spreading of organic wastes (manure, silage effluent, certain industrial wastes, food processing wastes) represents an economical and when properly controlled, environmentally safe way of recovering value. These wastes provide valuable nutrients which allow farmers to reduce the amount of inorganic fertilisers required. Potential disadvantages, however include, possible soil contamination and pollution of water including groundwater. Education measures within the agricultural sector and best practices for the applications of waste to land, should ensure waste is spread in a manner that benefits the land and ensures activities will not put groundwaters at risk.

We Will: Maintain existing database register on land spreading activities in the area to ensure effectiveness in the regulation of landspreading of waste, and ensuring real benefits to land.

The application of sewage sludge to agricultural land is regulated throughout the EU by Council Directive 86/278 which is enforced in the UK by the Sludge (Use in Agriculture) Regulation 1989. With the recent developments of the new Urban Waste Water Treatment Works in Hull and Bridlington the issue of sludge disposal in the area is one of particular concern.

We Will: Set up a working party to produce a joint sludge disposal policy in East Yorkshire for the protection of the environment.

Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.6	Set up and maintain a database register on all sewage sludge to land activities in the area. Improve liaison between parties involved in sludge disposal. Formulate a Joint Code of Practice for the disposal of Sewage Sludge to land.	A joint working strategy to ensure the protection of water quality in sensitive areas.	Agency <i>Farmers, Industry, Yorkshire Water Services, Local Authority</i>	1998-2000	£5 k

The introduction of the Landfill Tax provides incentives for waste minimisation in East and North Yorkshire and the avoidance of fly tipping.

There is evidence to suggest that Landfill Tax introduced in October 1996, has resulted in an increase in fly-tipping in an effort to avoid disposal charges. The Agency and the Local Government Association (who represent local authorities) have developed a protocol identifying responsibilities for dealing with flytipping incidents.

We Will: Develop collaborative partnerships with local authorities to implement the Flytipping Protocol and ensure that enforcement action is taken against flytipping.

The area is important for the import and export of waste.

The Government has published the document 'United Kingdom Management Plan for Exports and Imports of Waste' which is likely to form part of any future statutory national waste strategy. The plan states that no exports for disposal will be permitted and the UK will not accept waste from developed countries which are able to develop their own facilities, although imports for genuine recovery may continue subject to appropriate controls.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.7	Liaise with the Port Authorities to promote greater awareness and understanding of responsibilities with regard to Waste Management.	Improve understanding of responsibilities, and improved management of waste. Reduced risk of pollution from 'dangerous' goods.	Agency Port Authorities	1998-1999	£3 k

4.11 REGULATING MAJOR INDUSTRIES

Pollution from industrial sources can harm people and the whole living world. Many of the potentially most harmful pollutants come from industry. One of the Agency's key responsibilities is to prevent the release of pollutants into the air, water or land through Integrated Pollution Control (IPC). Where releases do occur, the requirement is that they are minimised and rendered harmless.

Overall strategies for the reduction of pollution controlled under IPC require development. Best practice, environmental indicators and standards for further reduction of pollution and the 3 Es are under development and will be implemented.

Local authorities regulate releases to air from thousands of industrial premises under Part I of the Environmental Protection Act 1990. These are the industrial processes that have a lesser potential to pollute than those the Agency regulate. The Agency has responsibility in general for the larger, more complex and potentially most polluting industries ('Part A' processes) under a scheme of regulation known as Integrated Pollution Control (IPC).

The 3 Es project (Emissions, Economics and Efficiency) is a waste minimisation initiative developed by the Agency, and being used by some companies to optimise their processes (regulated by IPC). As with other waste minimisation techniques, there are benefits to the environment through reduced emissions to air, land and water and financial benefits to companies.

We Will: Develop environmental monitoring of IPC processes to improve information about the origin and dispersion of pollutants.

Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.11.1	Assess the potential for extending the existing 3 Es methodology to appropriate companies in the area.	Maximise the opportunities to reduce waste and provide financial and environmental benefits.	Agency Industry	1998-2000	£3 k

A similar approach to IPC will be introduced throughout the European Union under the new Directive on Integrated Pollution Prevention and Control (IPPC). IPPC will regulate more industrial sectors and takes into account more environmental concerns than IPC, including energy conservation and clean-up of sites when activities stop. Of importance to East Yorkshire is the inclusion of livestock units.

We Will: Assess the impact of IPPC in the LEAP area to ensure improved environmental control and consistency within European Union.

The Agency will work together with the Health & Safety Executive as the joint competent authority, on implementation of the European Directive for the Control of Major Accident Hazards Regulations where dangerous substances are involved. Regulations are expected to be in place by 1999, with appropriate amendments to the Planning Legislation.

We Will: Assess the impact of Control Of Major Accident Hazards regulations (COMAH) in the Leap to improve environmental control over major incidents.

The Agency is also has responsibilities for the administration and enforcement of the Radioactive Substances Act 1993 (RSA93) which provides for controls to be exercised over the use and keeping of radioactive materials and the accumulation and disposal of radioactive wastes. There are no nuclear installations in the area but there are a number of medical and industrial uses, including weld radiography, crop flow measurement and process control.

We Will: Review authorisations and registrations issued under the RSA 93 with particular attention to justification of use, storage and disposal, to ensure less radioactive substances in the environment.

5 A BETTER ENVIRONMENT THROUGH PARTNERSHIP

Partnership essentially means a number of different interests willingly coming together, formally or informally, to achieve a common purpose in the spirit of trust and communication. Partnerships are desirable because they provide accountability, reduced duplication, a pooling of scarce resources and joint funding. Partnerships take time to develop; establishing close and responsive relationships with all sectors of the community are vital if we are to achieve a better environment for present and future generations.

5.1 Introduction

Our natural environment is complex. Even where we do have a good understanding of a particular element, what is often much less clear is how it interacts with all other aspects of the local, regional, national and global environment. It is becoming clear that even local impacts can have knock on effects for others. It is this kind of understanding that led to the Rio Earth Summit in 1992, the adoption of sustainable development principles and the commitment to manage the environment in an integrated way through partnership.

The Agency is well placed to influence many of the activities affecting the environment through its own activities and enforcing the Environment Act 1995 and other legislation. However, achieving environmental improvement often depends on co-operation between the Agency and others. The Memorandum of Understanding between the Agency and the Local Government Association sets out how we will work together. It seeks to establish a framework to promote better integration of our work and ensure the best use is made of resources.

5.2 Working With Local Authorities

5.2.1 Land Use Planning

The control of development and land use change is primarily the responsibility of Local Planning Authorities (LPAs), through implementation of the Town and Country Planning Acts. Local development plans provide a framework for land use change and are the key consideration in the determination of planning applications.

The Agency is a statutory consultee of the land use planning system and seeks to ensure that local authorities take into account the needs of the environment when preparing development plans and determining planning applications.

A close working relationship is required with authorities on mineral workings, waste disposal issues, infrastructure works, works within river corridors or floodplains, and any activities likely to pollute surface waters or groundwaters, increase demand for water resources or adversely affect the conservation and amenity value of the environment.

Guidance regarding the applications the Agency would wish to see is contained in our publication *'Liaison with Local Planning Authorities'* (Environment Agency, March 1997). An annex to this document, *'The Environment Agency and Development Plans'*, is also being developed.

5.2.2 Waste Management

Controlled wastes are managed or disposed of through a variety of facilities including landfills, transfer stations, householders waste recycling centres, treatment plants, scrap yards and recycling process plants. These facilities normally require planning permission and the Agency is consulted by Local Planning Authorities over environmental matters. The local authorities are also involved in contractual arrangements with the waste management organisations and individuals, in order to make sure that municipal waste arising within their boundary are disposed of properly and safely.

The Agency's task in waste regulation is to protect the public and the environment from potentially adverse effects of waste treatment and disposal, primarily through the waste licensing system. The Agency is not involved in the direct collection or disposal of controlled wastes (household, industrial and commercial), however we regulate those organisations and individuals who are.

Local authorities will develop a Waste Local Plan to ensure that the future waste management needs of the area are assessed, and the Agency will provide advice. Hull City Council and East Riding of Yorkshire Council are currently producing a Joint Waste Local Plan which the Agency will be consulted on. Promotion of waste minimisation techniques is also a key area of joint activity.

5.2.3 Air Quality

Local authorities are responsible for regulating the greater proportion of industrial processes, which contain the less polluting services. This regulatory function, coupled with their responsibility to oversee discharges to air from domestic and more diffuse sources, as well as odours and noise pollution, means that they are the principal body concerned with general air quality in a given locality.

The Agency regulates discharges to air, water and land from the more complex and potentially polluting industrial processes. The Agency monitors emissions at each of these sites and maintains a register of monitoring data from all the processes in the area.

The Agency collaborates with local authorities in a number of ways by sharing monitoring and modelling data and expertise, providing information on authorised processes, engaging in consultation on reviews and assessments and participating in local steering groups.

5.2.4 Contaminated Land

When consulted on any site (usually through the planning process or directly by the site owner or another route), where there is potentially soil or groundwater contamination, the Agency provides appropriate technical advice, encourages best practice and determines whether the degree of soil and groundwater cleanup proposed is sufficient to protect water resources. The Agency also endeavours to ensure that the ecological potential of site reclamation is fully developed.

The Government is expected to implement section 57 of the Environment Act 1995. The Agency and local authorities will then have new powers to prevent harm or pollution arising from land impacted by previous polluting activities. The local authority will have responsibility for identification and regulation of contaminated land, however the Agency will have responsibility for regulation of sites fulfilling specific criteria known as 'Special Sites'. Together we will have access to legal means of requiring the appropriate person to take remedial action to clean up contaminated sites provided that:

- * the contamination poses unacceptable or potential risks to health or the environment, and
- * there are appropriate and cost effective means available to do so, taking into account the actual or intended use of the site.

5.3 Working With the Community

The Agency needs the support of local voluntary and special interest groups and the general public to tackle pollution and enhance the environment. Local Authorities are assisting their communities in developing local strategies and action plans for sustainable development. We will seek to work with them, to protect and improve the local environment through our LEAPs and Local Agenda 21 Action Plans.

5.3.1 Local Agenda 21

Local Agenda 21 was one of four main agreements signed at the Rio Earth summit by representatives of 150 countries including the UK Government. It is intended to be a:-

"Comprehensive programme of action needed throughout the world to achieve a sustainable pattern of development for the next century"

In 1994 the Government produced a national sustainable development strategy and action plan for the UK. This is an environmental action plan for the next century, which recognises the central role of local authorities, the value of partnerships and the local community in achieving sustainable development. Local authorities are seen as the focus for promoting and encouraging local community action, and most are working with local communities to produce their own Local Agenda 21 programmes. The Agency will actively participate in the LA21 process by increased communication and where possible the promotion of joint projects.

Since then the Government has revised the strategy in the consultation paper "Opportunities for Change", February 1998. A new Sustainable Development Strategy will be published by the end of 1998.

5.4 Working With Others

The Agency is funding the post of an advisor for the Farming and Wildlife Advisory Group (FWAG) in Humberside. The project is providing advice and assistance for farmers and landowners to encourage environmentally sensitive farming. As well as targeting conservation improvements there are considerable benefits for preventing pollution.

At Flamborough Head, the internationally important marine conservation reserve is to be protected by the designation of the area as a Special Area of Conservation (SAC). The scheme of management for the candidate SAC is being progressed by a group made up of local authorities, the North Eastern Sea Fisheries Committee, English Nature and is currently chaired by the Agency.

5.5 Education

In many cases a lack of information and awareness is one of the factors which leads to environmental damage or neglect whether it be accidental or deliberate. Therefore there is a need for a greater level of educational involvement by the Agency and a need to raise awareness of environmental issues.

Our education strategy 'Green Shoots' (1997) which considers education into the next century outlines the following goals:

- * to help educate young people through teaching aids and other initiatives;
- * to improve understanding of environmental issues, through links with education, work placements and an awards scheme;
- * to work with industry and produce marketing campaigns to promote prevention of pollution rather than its remediation;
- * to foster public awareness of environmental issues to encourage responsibility for the environment and its challenges;
- * to build on established and create new international relationships to further sustainable development.

The Agency has close links with all educational institutions within the East Yorkshire area, in particular the University of Hull and the Bishop Burton College. In addition, educational visits by field staff to primary and secondary schools have proved a valuable lesson in educating the younger generations in the value of conserving the environment.

6 FUTURE REVIEW AND MONITORING

The Agency will be jointly responsible, with other identified organisations and individuals, for implementing this Plan. Progress will be monitored and reported annually by the Agency to all the key partners and other interested parties.

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

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

The East Yorkshire Area Environment Group (AEG) will have an important part to play in the review.

6.1 Prioritising LEAP Actions

- The resources available to carry out LEAP actions will be limited in any one year and there is therefore a need to prioritise those actions proposed. A Prioritisation Methodology is being developed through consultation with the West Yorkshire Area Environment Group which identifies environmental criteria to score each action against. AEG members will be asked to score the LEAP actions against the criteria to provide an overall ranking.

The criteria proposed for measuring benefits are not necessarily of equal value (e.g. an action that would remediate contaminated land and bring it back into use would score 5 on "land use management" but might be considered of greater benefit than an action to create new recreational potential which would also score 5 but under "recreational use"). A weighting will be applied to reflect this.

The funds available through the Agency, and its partners where appropriate, will then be assessed through the annual business planning process and LEAP actions given the necessary resources will be highlighted in the Annual Review. It must be noted however, that funding streams within the Agency are legally constrained to specific functions and cannot be transferred, even when actions in another function may have merited higher priority.

THE ROUTINE WORK OF THE AGENCY

On a day-to-day basis, the Agency carries out a huge environmental monitoring and regulatory operation, most of which is to achieve statutory requirements. The aim of regulation is to balance the needs of people and the environment. The Agency works to:-

- * save, redistribute and improve river, lake, reservoir and groundwater supplies
- * prevent and control pollution of air and water
- * reduce the risk of harm from contaminated land and bring it back into use
- * make sure waste is dealt with safely and legally
- * make sure radioactive materials are kept, used and disposed of safely
- * ~~reduce risk from~~ reduce risk from flooding by providing effective defences and efficient flood warning services.

Regulating the environment takes place through permitting. The Agency manages licences/authorisations/consents for abstraction of water from rivers and boreholes, releases to air and water, the carrying and disposal of waste and to carry out work in, over, under or near a watercourse. Within Ridings Area we manage over 1,800 water abstraction licenses, 3,800 consents to discharge to water, 850 waste management licences, over 280 authorisations under Integrated Pollution Control for processes which make releases to air and 460 permits for radioactive materials and waste. We determine approximately 400 applications each year for works on or near water.

We monitor the environment to ensure that pollution is controlled and resources are adequately protected. We regularly monitor the quantity and quality of rivers, estuaries and the sea, and check emissions from the processes we regulate. Results are reported on public registers which can be inspected at the Agency's main offices. We run a 24-hour service for receiving reports of and responding to flooding and pollution incidents, and emergencies in the air, water or on land. We also work with others to reduce the risk of harm from contamination and to bring land back into good use.

We work to minimise waste and prevent pollution through advice and education, including national campaigns, and through working with other environmental regulators. When necessary, we are prepared to enforce environmental legislation in a tough way. Those who show little regard for the law and who cause blatant and persistent damage to the environment can expect to be prosecuted. We are a statutory consultee on the land use planning system and in Ridings Area we respond to approximately 4800 planning applications and 1300 planning enquiries, providing advice and guidance on environmental matters.

The Agency also has the role of reducing risk to people and the environment from flooding by providing effective defences. Protecting life is our highest priority and to meet this aim we provide a flood forecasting and warning service and discourage development in flood-risk areas. We also manage over 900 km of flood defences and aim to protect and improve the natural environment by promoting flood defences that work with nature.

We are responsible for maintaining, improving and developing freshwater/salmonid fisheries. We regulate fisheries by issuing licences for rod angling and net fishing. We carry out improvements to fisheries by improving the habitat and fish stocks and providing advice to fishery owners. The Agency seeks to ensure that wildlife, landscape and archaeological heritage are protected both in any work we carry out and also in work carried out by others.

Our principal aim for recreation is to protect, improve and promote the water environment for recreational use. We do this by protecting existing use and creating opportunities in the course of our work and by maximising the use of Agency owned sites for recreation.

ORGANISATIONS WHO RESPONDED TO CONSULTATION.

ADAS
 Beverley & North Holderness IDB
 Bewholme Parish Council
 BP Chemicals
 Country Landowners Association
 CPRE East Riding Branch
 Driffeld Navigation Trust
 East Riding Fisheries Consultative Assoc
 East Riding of Yorkshire County Council
 English Nature
 Flamborough Head Sensitive Marine Area
 Govt. Office for Yorkshire & Humberside
 Hedon Town Council
 Hull City Council
 Hull Friends of the Earth
 Humber Archaeology Partnership
 Humber Resource Efficiency Centre
 Humberside Wastewise Waste Management Services
 Inland Waterways Association
 Lower Ouse IDB
 Ministry of Agriculture Fisheries Food (MAFF)
 Market Weighton IDB
 North Eastern Sea Fisheries Committee
 Royal Society for the Protection of Birds (RSPB)
 South Cave Parish Council
 South Holderness Countryside Society
 The Ramblers Association
 Tidy Britain Group
 Wolds & Riverbank Countryside Society
 Yorkshire Wildlife Trust

The East Yorkshire Area Environment Group (chair Mr J H Mitchell) has been consulted and involved in all stages of the development of the plan.

FLOOD DEFENCE WORKS PROGRAMME FOR THE HULL & EAST RIDING AREA

(Table a)

Action	Benefits	Provisional start date	Estimated Cost £
Improve the standard of protection against flooding at:	Reduced risk of flooding, environmental protection & enhancement of flora and fauna, landscape and heritage.		
Hessle Clough		1999-2000	£140 k
River Hull bank stabilisation Phase 2		1998-1999	£650 k
Hull Headwaters		2001 +	£400 k
Burstwick Drain		2000-2001	£100 k
Hull Tidal Surge Barrier Chains Refurbishment		2001-2002	£400 k

(Table b)

Action	Benefits	Provisional start date	Estimated Cost £
Report on the priorities and develop a programme of refurbishment for the pumping stations at:	Maintain standard of flood defences.		
Winestead Outfall		1999-2000	£200 k
Winestead Booster		2000-2002	£160 k
Great Culvert		}	£130 k
Hempholme		}	£160 k
Skeffling		} 2000 +	£160 k
Tickton		}	£160 k
Willholme		}	£220 k

Urgent Flood Defence works programmed on the River Humber and the development of the Humber Estuary Shoreline Management Plan are covered in the Agency's Humber Action Plan (1998).

YORKSHIRE WATER PLC

ASSET MANAGEMENT PLAN (AMP) PROPOSALS FOR 2000-2005.

It should be stressed that all the schemes listed are those which the Agency regards as requiring investment, but at the time of preparing the plan there is no guarantee that funds will be allowed in AMP3.

Sewage Treatment Works		Combined Sewer Overflows*/Village Drains	First Time Sewerage/Sewerage Treatment
Atwick	(3.4)	Bewholme	Arnold
Aldborough	(18.5)	Great Hatfield	Asselby
Beeford	(1.6)	Hollym	Dunnington
Burton Pidsea	(8.4)	Holmpton	Elstronwick
Drifffield (phase II)	(3.8)	Lelley	Foston-on-the-wolds
Holme-on-Spalding- Moor		Mapleton	Halsham
Humbelton		Molescroft *	Hilston
Keyingham	(10.8)	New Ellerby	Laytham
Kilham	(8.7)	Ottringham	Routh
Leconfield	(2.5)	Riston	Spaldington
Nafferton	(2.9)	Skeffling	
Pattrington	(7.8)	Tower Lane (Hedon Road)	
Roos	(8.2)	Welwick	
Rudston	(2)	Weel	
Skidby			
Skipsea	(3.6)		
Skirlaugh (Inc in Aldborough stretch)			
Wansford			
Watton	(7.7)		
Withernwick (Inc. In Aldborough stretch)			

() figures in brackets indicate potential length of improvement in quality of river stretch.

Glossary

Abstraction	The removal of water from any source, either permanently or temporarily.
Abstraction Licence	Licence issued by the Environment Agency under s.38 of the Water Resources Act 1991 to permit removal of water from a source of supply.
Agenda 21	A comprehensive programme of worldwide action to achieve a more sustainable pattern of development for the next century. UK Government adopted the declaration at the UN Conference on Environment and Development (the Earth Summit) held in Rio de Janeiro in 1992.
Aquatic	Pertaining to the water environment.
Aquifer	A water bearing-stratum situated below ground level. The water contained in aquifers is known as groundwater.
Asset Management Plan (AMP)	Water Companies' Strategic Business Plans - initiated (eg AMP 2) by OFWAT as part of the periodic review of water company charges.
Biodiversity	Diversity of animal and plant life.
Borehole	Well sunk into a water bearing rock.
Buffer Zone	Strip of land 10-100m wide, alongside rivers which is removed from intensive agricultural use and managed to provide appropriate habitat types.
Catchment	The total area from which a single river system collects surface run-off.
Coarse Fish	Freshwater fish other than salmon and trout.
Combined Sewer Overflow (CSO)	An overflow structure which permits a discharge from the sewerage system during wet weather.
Culvert	Drain or covered channel carrying water across or under a road, canal etc.
Cyprinid fish	Coarse fish belonging to the carp family, eg. Roach, Dace and Bream.
EC/EU Directive	A type of legislation issued by the European Union which is binding on Member States in terms of the results to be achieved but which leaves to Member States the choice of methods.
Effluent	Liquid waste from Industry, agriculture or sewage treatment plants.
Fauna/Flora	Animal life/ Plant life.
Floodplain	This includes all land adjacent to a watercourse over which water flows or would flow but for flood defences in times of flood.
Geomorphology	Scientific study of land forms and of the processes that form them.
Groundwater	Water which saturates a porous soil or rock substratum (or aquifer). Water held in storage below ground level.
Humber Estuary Management Strategy (HEMS)	A partnership initiative to ensure that future actions and developments in and around the Estuary are economically and environmentally sustainable.
Inter tidal	Refers to the region of the shore lying between the highest and lowest tides.
Integrated Pollution Control (IPC)	An approach to pollution control in the UK which takes account of potential effects upon all environmental media. Applies to processes authorised under Part A of the Environmental Protection Act 1990.
Integrated Pollution Prevention & Control (IPPC)	Similar in concept to IPC but includes a range of industries not covered by IPC, eg large sewage treatment works, waste management sites and intensive livestock units.
Landfill	Site used for waste disposal into/onto land.

Main River	The watercourse shown on the statutory 'main river maps' held by the Environment Agency and MAFF. The Agency has permissive powers to carry out works of maintenance and improvement on these rivers.
Nitrate Sensitive Areas (NSA)	An area where nitrate concentrations in sources of public drinking water exceed, or are at risk of exceeding the limit of 50 mg/l laid down in the 1980 EC Drinking Water Directive, and where voluntary, compensated agricultural measures were introduced in 1990 as a means of reducing those levels.
Nitrate Vulnerable Zone (NVZ)	An area where nitrate concentrations in sources of public drinking water exceed, or are at risk of exceeding the limit of 50 mg/l laid down in the 1991 EC Nitrate Directive, and where compulsory, un-compensated agricultural measures will be introduced from 1996 as a means of reducing those levels.
Ordinary watercourse	A watercourse that does not form part of a Main River.
Pesticides	Substances used to kill pests, weeds, insects, fungi, rodents etc.
Reach	A length of a river.
River Corridor	The continuous area of river, river banks and immediately adjacent land alongside a river and its tributaries.
Salmonid Fish	Game fish eg. trout and salmon.
Sewage	Liquid waste from cities, towns and villages which is normally collected and conveyed in sewers for treatment and/or discharge to the environment.
Sewerage	Means of conveying foul or surface water.
Site of Special Scientific Interest (SSSI)	A site given a statutory designation by English Nature or the Countryside Council for Wales because it is particularly important, on account of its nature conservation value.
Special Protection Area (SPA)	Internationally important sites designated under the EEC Wild Birds Directive.
Surface Water	Water collecting on and running off the surface of the ground.
Sustainable Development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Waste Minimisation	The reduction of waste and pollution at source by increasing the efficiency of production processes and the nature and formulation of products.
Winter Storage Reservoir	Reservoirs built by farmers to store water during the winter months when it is "plentiful" for re-use during the summer.

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.

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

ENVIRONMENT AGENCY GENERAL ENQUIRY LINE

0645 333 111

ENVIRONMENT AGENCY EMERGENCY HOTLINE

0800 80 70 60



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