

EA-NORTH EAST LEAPS Box 2

# **local** environment agency plan

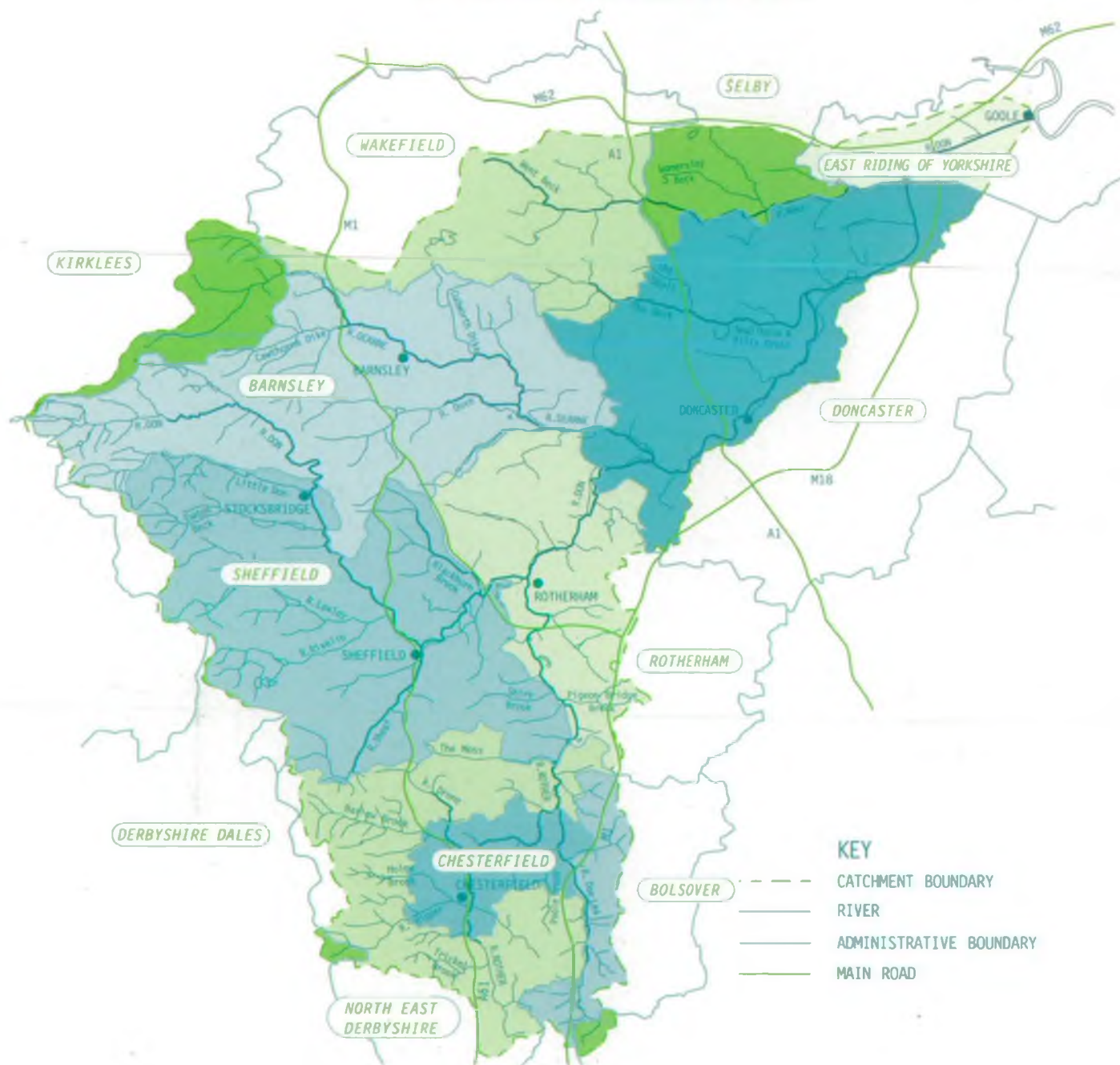
## **SOUTH YORKSHIRE AND NORTH EAST DERBYSHIRE**

**AUGUST 1998**



**ENVIRONMENT  
AGENCY**

# **SOUTH YORKSHIRE AND NORTH EAST DERBYSHIRE AREA ADMINISTRATIVE BOUNDARIES**



## KEY DETAILS

General	
Area	1849 km <sup>2</sup>
Key Local Authorities	Barnsley MBC Chesterfield DC Doncaster MBC North East Derbyshire DC Rotherham MBC Sheffield City Council
Other Local Authorities	East Riding of Yorkshire Bolsover Kirklees Selby Wakefield
Population	1.4 million

Water Resources	
Average annual rainfall: Redmires South Emsall	1090mm 644mm
Total licensed abstraction	210.2 million m <sup>3</sup> /year
Mean river flow @ Doncaster Summer	691 million litres/day
Winter	2419 million litres/day
Number of Abstraction Licences: (Surface and Groundwater)	381

Flood Defence	
Length of main river	271 km
Number of people and property protected from flooding	20516 house equivalents
Major Installations:	
river regulators	5
outfall sluices	20
pumping stations	7

Water Quality: Length of watercourse(km) in each component of the General Quality Assessment (1996)	
A Good	5.6 km
B	133.2 km
C Fair	179.6 km
D	198.2 km
E Poor	178.3 km
F Bad	36.3 km
Unclassified	53 km

Pollution Prevention and Control		
Licensed Sites:	Total	350
	Landfill sites	95
	Transfer stations	106
	Scrapyards/vehical dismantlers	114
	Civic amenity sites	22
	Treatment plants	8
	Storage facilities	5
	Incinerators	1
Facilities claiming exemption (inc exempt scrapyards)		778
Registered waste carriers (South Yorkshire only)		1531
Special waste movements (1 May 97 - 30 April 98)		38 000
Consented Discharges to water:		
Sewage		967
Trade		331



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# 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 South Yorkshire & North East Derbyshire Plan has been produced following widespread consultation after the public launch of the Consultation Report in September 1997.

The South Yorkshire & North East Derbyshire area has a long history of industrial and commercial activity, and is densely populated, with almost one and a half million people concentrated in the urban areas of Barnsley, Chesterfield, Doncaster, Rotherham, and Sheffield. The area also encompasses parts of the Peak District National Park, with its attractive moorland landscape and reservoirs, as well as attractions such as the Rother Valley Country Park, and The Earth Centre, a visionary project currently under development.

Development and land use changes have impacts 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 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.



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# VISION FOR THE SOUTH YORKSHIRE AND NORTH EAST DERBYSHIRE AREA

The South Yorkshire and North East Derbyshire LEAP covers the catchment areas of the Rivers Don, Rother and Dearne. An area of 1849 km<sup>2</sup> stretching from Chesterfield to Goole and to the moorlands of the Peak District National Park above Sheffield and Stocksbridge encompassing a range of contrasting rural and urban settings. The population numbers approximately 1.4 million people with major centres at Doncaster, Barnsley, Rotherham, Sheffield and Chesterfield.

Although the area has a legacy of pollution and contaminated land from its industrial and coal mining past, dramatic improvements have been made in the past five years, particularly in water quality. The challenge for everyone, during the five year life of this plan, is to maintain this established momentum in support of the local environment and realise its full potential for the benefit of the whole community.

## KEY OPPORTUNITIES

- Further improve the quality of our environment by reducing pollution from industry, contaminated land and sewage treatment systems.
- Encourage waste minimisation initiatives to achieve national waste reduction targets.
- Reduce the incidence of illegal waste tipping (flytipping) through education and enforcement of legislation.
- Physically improve water courses and create habitats for wildlife in collaboration with local communities and environmental groups.
- Seek to manage the impact of water abstraction and compensatory flows to optimise the benefit for all existing and potential users, through liaison with Yorkshire Water Services and other abstractors.
- Recognise and develop the importance of the area for recreation particularly for local people.
- Maintain and improve protection of people and property from flooding.
- Maintain 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, local action groups and the public in order to:-*

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

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In September 1997 the Ridings Area launched the consultation report for the South Yorkshire & North East Derbyshire 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 priorities and inform on the implementation of the proposed actions.

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

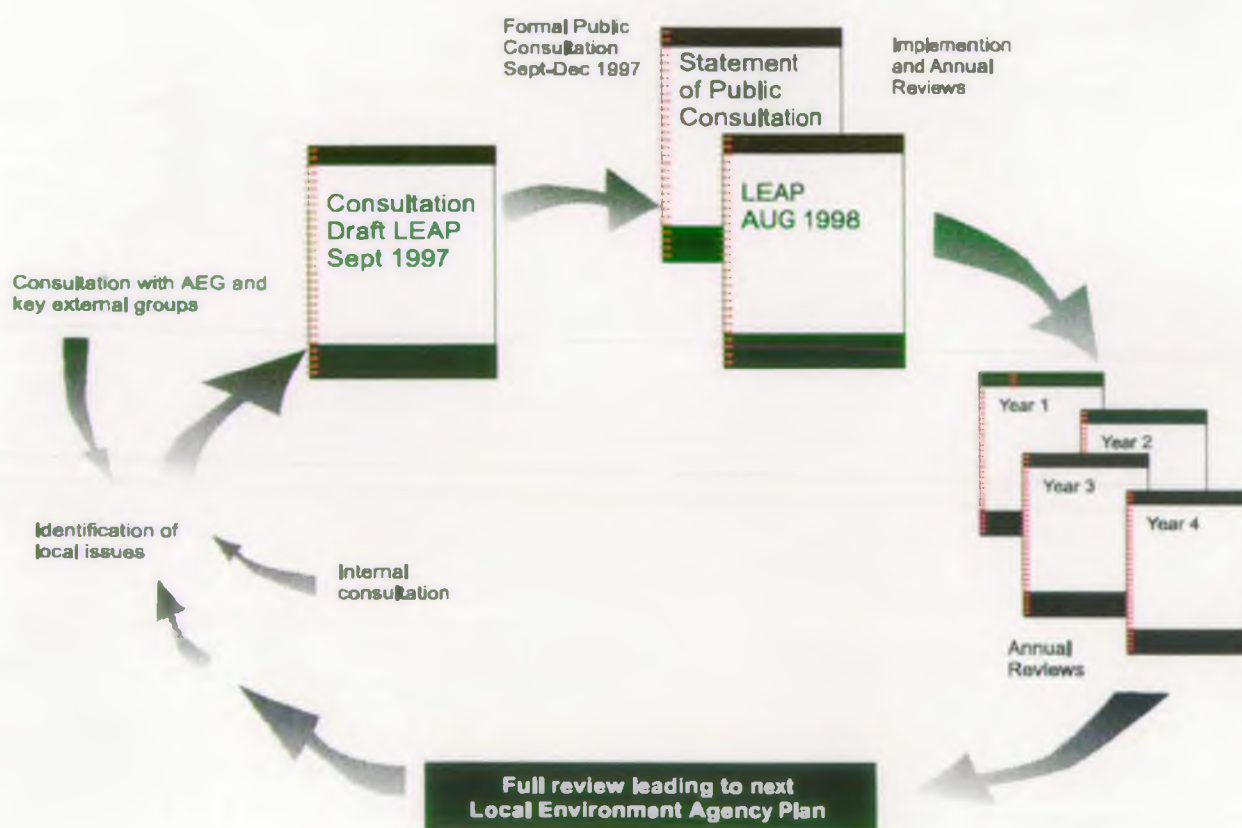


Figure 1 The LEAP process and the main outputs in the five year cycle.

## 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 resources over exploitation 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 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 South 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 many 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 South Yorkshire and North East Derbyshire 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 defence, 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 the North East Region is also served by three advisory, non statutory, **Area Environment Groups (AEG)**, covering East, South and West Yorkshire. Membership 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 group advises 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 South 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 enhancements 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 all interested parties. It 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 results 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.

### 1.3.1 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.

There are many different plans and strategies that exist for this area. As well as the statutory documents such as local plans developed by local authorities, there are also many locally developed conservation and recreation strategies all supporting the development, regeneration and enhancement of the area (see Appendix 2). Actions identified in this plan are likely to have links with one or more of these strategies and the organisations involved. Where possible we have identified other parties who also have an interest in or responsibility for the actions, but with such a complex and active area to cover it is likely that there will be other potential partners still to be identified.

## **2 THE SOUTH YORKSHIRE & NORTH EAST DERBYSHIRE PLAN AREA**

### **2.1 Introduction**

The South Yorkshire & North East Derbyshire plan covers an area of 1849 square kilometres and lies mainly within South Yorkshire, and the north eastern part of Derbyshire and includes the major urban areas of Doncaster, Barnsley, Rotherham, Sheffield and Chesterfield. The area also has many smaller communities which developed around the mining industry.

The area has a diverse and distinctive landscape, ranging from the characteristic moorlands of the Pennines dissected by deep river valleys, to the low lying floodplain between Doncaster and Goole. This varied landscape has been shaped by centuries of agricultural and other human activities such as mining, 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 area is densely populated and industrialised with a long history of pollution. In particular steel, coal mining and fuel production have left a legacy of contaminated land, poor air and water quality. The decline of traditional heavy industries in the area has left a legacy of dereliction. Regeneration and redevelopment of these sites however, provides a unique opportunity for their nature conservation and recreational potential as well, and also enables contamination on the sites to be removed or stabilised to lessen the risk of pollution. Many of these schemes have been promoted by local authorities and English Partnerships. The Agency welcomes continued involvement in such projects.

The upper reaches of the area's rivers flow through some very scenic areas, where there are designations of local or national importance for conservation and a variety of leisure and recreational facilities. Improvements in water quality have facilitated the recovery of many fisheries in the area, although further work on rehabilitation of physical habitats will be necessary to achieve the desired ecological diversity.

The steep-sided headwater valleys of the rivers respond rapidly to rainfall. Combined with the tidal influence of the Humber Estuary on the River Don and the low lying nature of parts of the area, there are major implications for flood defences. The urbanised nature of much of the catchment also make defence against flooding vital and there is an extensive network of defences including flood banks, washlands and control structures to safeguard people and property.

Although water powered industry is now virtually non-existent in the area, the physical infrastructure remains often surprisingly intact, and in many cases are listed for heritage value. There are few better locations to understand the area's industrial heritage than from its riverbanks.

These pressures and land use changes impact on our natural resources, transport routes, flood defences and on the local residents and wildlife.

## **2.2 Summary of Uses, Activities and Pressures**

A detailed assessment of the South Yorkshire & North East Derbyshire area is given in the Consultation Report (September 1997). The following provides a summary of key points.

### **Urban Development**

Substantial numbers of new homes will be required in the plan area to provide for an 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.

Significant areas for commercial development are the Wath Manvers Regeneration Scheme in the Dearne Valley and the regeneration of the Don Valley area of Sheffield. There are Enterprise Zones in the Barnsley, Doncaster and Rotherham MBC areas. These sites for industrial and commercial development and landscaping have already been granted planning permission and the Agency has requested and obtained conditions to be attached to protect the environment.

### **Transport**

The plan area has several major transport corridors with the M1/M62/M18 encircling the north east of the area, the M1 and A61 routes through the south of the area and the A1 to the north east. In addition the heavy industrial and urbanised nature of parts of the area, mean that the traffic emissions form a significant part of the overall contributions to pollution levels.

### **Industrial Processes and Power Generation**

Industrial processes which are included under the Environmental Protection Act 1990 are regulated either by the Agency or by the relevant local authority, to minimise their impact upon the atmospheric environment. In general the Agency is responsible for regulating those processes which have the greatest potential to cause pollution. We have no regulatory control over air quality, but we contribute to the management of air pollution through the Integrated Pollution Control (IPC) system. There are currently 47 licensed IPC processes in the area.

The air quality of the area is also influenced by a number of large coal fired power stations to the south of the area along the Trent Valley and also to the north of the area between Leeds and the Humber. The stations currently operating in these areas continue to be major emitters of pollutants but all have programmes to reduce emission levels over the next few years.

### **Storage and Use 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 Environment Agency is responsible for administration and enforcement of the Act in England and Wales.

There are no major nuclear installations in the area but there are a number of medical and industrial uses, of which industrial radiography as a service primarily to the metal industry is the most predominant.

### **Mineral Extraction, Mining and Associated Activities**

Many of the sites of the former British Coal Property have been taken over by English Partnerships, a government body whose responsibilities include regeneration of industrial sites. In this area there are twenty-four sites varying in size from a few hectares to several hundred hectares. The programme of regeneration will take between eight and ten years and a close collaboration with the Agency has been established to ensure reclamation takes place in an environmentally acceptable manner.

## **Waste Management**

Households, commerce and industry give rise to waste which has to be managed. Waste poses a threat to the environment and to human health if it is not managed properly by recovery or safe disposal. It is essential, therefore, that everyone in the waste disposal chain from production and transport, through to final disposal or recovery, manages waste in a safe and proper manner.

It is estimated that about 2.6 million tonnes of municipal, commercial and industrial (controlled) waste is disposed of in the area each year. Cross-boundary movement of wastes vary and are difficult to monitor, but overall the area is a net importer, imports accounting for approximately 340,000 tonnes. Landfill is the main disposal method used in the area and there are 306 licensed landfill sites, although Sheffield also has an incinerator to dispose of household wastes.

## **Effluent Disposal**

The discharges of effluents from industry, sewage treatment works, sewerage systems and agriculture can have a significant impact on the quality of receiving waters, particularly when treatment is inadequate or dilution is low. The legacy of colliery spoil heaps and contaminated land also causes pollution at a number of sites.

The actions of Yorkshire Water and the major industrial dischargers, paper manufacture and the steel industries, have resulted in significant improvements in river quality over the past six years in particular, and Yorkshire Water's improvement programme is still ongoing.

## **Surface Water Abstraction**

Abstraction of water for potable, industrial or irrigation purposes is an important use of the surface water resource. There are nineteen reservoirs in the upper reaches of the area which are used for the supply of drinking water, plus a further six reservoirs which are used to supplement flows in the rivers in order to compensate for that lost to supply.

Industrial abstractors use water and despite the decline of the traditional heavy industries, there are still 125 licensed abstractions for cooling or manufacturing purposes.

Agriculture is another user of water, either for spray irrigation or domestic and agricultural purposes. There are currently sixty licences for spray irrigation within the area of which fifteen are subject to a condition which requires abstraction to stop when river flows are equal to or less than a specified flow. These conditions are used to ensure that the environmental needs of the river and legitimate users will be protected.

## **Groundwater Abstraction**

Groundwater provides considerable volumes of generally good quality water and in the LEAP area is used for both public and private drinking water supplies, and other purposes. In the eastern part of the catchment boreholes in the Sherwood Sandstone, designated a Major Aquifer, supply a large proportion of the public water supply of Doncaster and surrounding areas. The Magnesium Limestone, Coal

Measures and Millstone Grit are generally not used for public water supply but are used extensively to supply industrial processing, cooling, agriculture, bottling, golf course irrigation and other uses.

Management of groundwater resources is achieved through licensing of abstractions under the Water Resources Act 1991, and protection of aquifers from pollution is achieved through application of the Agency's Policy & Practice for the Protection of Groundwater 1998.

## **Flood Storage and Flood Defence**

The altitude of the headwaters of the Don river system results in the highest parts of the catchment sometimes having a deep covering of snow in the winter. A rapid thaw can cause severe flooding problems in the lower parts of the catchment, especially if accompanied by heavy and sustained rainfall. Rainfall runs quickly off the surrounding hills giving a very quick response time to rainfall events. These upper reaches of the rivers are especially prone to flooding during summer months when high intensity but localised storms are more frequent. Run off rates are exacerbated by the large areas of impermeable ground, resulting from urbanisation.

From Sheffield and Barnsley the catchment becomes much flatter, the valleys open out and gradients and velocities decrease. Doncaster suffered its most severe flooding in 1947 when snow-melt coincided with widespread heavy rainfall and high tides. The river banks were overtopped and large areas of Doncaster and Bentley were flooded. In response to this a system of washlands was developed to store flood water in the valleys of the Don, Rother and Dearne, upstream of Doncaster.

## **Flora and Fauna**

The area contains a varied and valuable range of habitats and species which reflect the differing land uses across the area. Although typically thought of as urban and industrial, the area includes internationally important wildlife sites such as the South Pennine Moors Special Protection Area (SPA) and the Thorne Moor (proposed Special Area of Conservation). Mining has also helped to create valuable sites such as Denaby Ings SSSI and Sprotborough Ings SSSI, where subsidence resulted in permanent flooding.

Some watercourses and wetland grass areas have a high conservation value due to their very natural character, and unpolluted state; these are designated as Sites of Special Scientific Interest (SSI) by English Nature, or Sites of Importance for Nature Conservation (SINC) by the local authority.

As the rivers enter the urban fringe, development presses up to the water's edge, restricting both the natural river corridor and the physical habitats within the channel. Despite this urbanisation, many features of wildlife interest exist, for example, weir pools with fringing reed-beds, goits, islands, and gravel shoals, fig trees in Sheffield, and other diverse flora that has colonised the old retaining walls.

The native white-clawed crayfish (targeted for protection under the UK Biodiversity Action Plan) is known to populate The Moss, and otters (also targeted for protection) have been sighted in the area.

## **Fisheries and Angling**

Fish populations are dependent upon water quality and quantity and on the physical habitat for their well being. They serve as excellent indicators of the quality of the water environment and generate financial benefits to local communities through exploitation by fisheries. Until recently fish populations in the Don catchment were restricted to sections of the headwaters where small populations of brown trout exist. Improving water quality throughout the system has allowed the redevelopment of the River Don and parts of the Rivers Dearne and Rother as fisheries, which are also becoming increasingly important for recreational angling.

Through a process of restocking and natural recolonisation populations of a range of coarse fish species are now established in the River Don. Grayling re-introduced in the early 1980s now extend from the headwaters above Penistone to the centre of Sheffield and experimental stocking with this species has also taken place on the rivers Rivelin and Loxley.

Below Doncaster, the River Don becomes tidal and runs through a channel which has been heavily modified for the purposes of, flood defence and land drainage. Despite the work the upper tidal reaches have developed into an excellent coarse fishery and because of its tidal status is a 'free' fishery which now attracts increasing numbers of anglers.

At Doncaster the River Don feeds the Stainforth Keadby and New Junctions Canals, which have developed into exceptional coarse fisheries and become increasingly important for competition angling. The match angling programme on these canals reflects their importance nationally as competition venues, with regular national angling championships.

## **Archaeology and Heritage**

The Don, Dearne and Rother catchments have a rich and varied history with many sites of heritage interest. Examples are the Roman occupation of the area, Conisborough Castle and the introduction of water power from Europe, the forerunner to modern technology. The introduction of water power resulted in the creation of dozens of mills which relied on the impounding effects of weirs built across the rivers. Many of these structures remain, and they form an important link with the area's industrial heritage.

With improving water quality throughout the catchment these weirs once again form obstructions to the free passage of fish within the system. The Agency has a statutory responsibility set down in the 1975 Salmon & Freshwater Fisheries Act to gain fish passes over such structures. Achieving this without detriment to the architectural value of the sites poses significant challenges.

## **Navigation and Water-based Activity**

Use of the water environment for amenity and recreation is now recognised as vital to parts of the local economy. Passive recreational use includes viewing scenery, walking near water and enjoying the associated flora and fauna. Active recreation can include rowing, sailing, canoeing and angling. There is an extensive network of footpaths and bridle ways in the area which allow access to some parts of the rivers and associated environs.

From the centre of Sheffield downstream the River Don is a navigation which contributed significantly to the industrial success of the area. More recently its use for commercial navigation has significantly decreased but it has become popular for pleasure boating. The Sheffield Canal has been restored and now provides opportunities for craft to sail into the centre of the city where the canal basin provides mooring and other facilities.

Below Doncaster the navigation splits away from the natural course of the river eventually forming the Stainforth Keadby and the New Junction Canals. Excellent facilities for boating are provided here by British Waterways and the canals now represent one of the most important match angling venues in Britain. Projects for the restoration of derelict canals are being pursued, and particularly for the Chesterfield Canal.

The work of the Five Weirs Walk Trust has restored access to the river Don along sections which were traditionally the most seriously damaged by industrial activity. The recovering ecology of this length of the Don is probably the most vivid demonstration of the improving condition of the catchment. The work of the trust has achieved the delicate balance between nature and the conservation of the industrial heritage of the area.

The Trans Pennine Trail (with European status) is a major route for walkers, cyclists and horse riders coast to coast between Liverpool to Hull, and runs alongside the lower River Dearne as well as the Don and Rother. Millennium funds have been granted for its development and several sections of Agency owned river bank are being used.

## **Tourism**

Visitors are drawn to the area by a range of varied attractions. The area encompasses part of the Peak District National Park with its attractive moorland landscape and reservoirs. Sheffield with its good hotel stock provides a good base for visitors to explore the park. The Peak District National Park and the local authorities in the area are working to enhance the image of the area and promote a number of measures to increase its attraction to visitors, including increased countryside access.

In addition to the area's natural assets, a range of superb man-made facilities draw visitors to the area for entertainment, business and educational events. The area boasts one of the best arrays of sports facilities in Europe and has a resultant impressive programme of sport. The Meadowhall shopping and leisure complex attracts several million visitors per year from outside the area.

Also worthy of note is the Rother Valley Country Park with its watersports facilities, wildlife and other attractions. The park is being extended and Rotherham Council are placing particular emphasis on increasing its usage by long distance visitors.

Impressive future facilities are also planned for the area. The Earth Centre is a visionary project under development at Denaby Main and its objective is to promote and demonstrate more sustainable use of our environment. In Sheffield, work is to begin on the National Centre for Popular Music, and in Rotherham on the Magma Industrial Centre.

## 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 South 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. A preliminary document was then sent to selected representative organisations for comment in April 1997, and their comments were considered and where appropriate incorporated into the Consultation Report.

Members of the South Yorkshire AEG participated 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 September 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, in order to allow them sufficient 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 33 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 3.

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.

#### *Education*

The issue of education for both the general public and for industry & organisations, was felt to be of great importance, particularly at this time when environmental issues have a high profile.

<i>Clarity of Roles</i>	The Agency and local authorities have joint responsibilities with regard to such as Air Quality and Waste Management, and these responsibilities should be clarified. Local authorities consulted believed that the consultation report itself did not go far enough in defining the levels of responsibility, and this could lead to some confusion. The final plan does go further in clarifying these roles.
<i>Contaminated Land</i>	The reclamation of such lands is a key issue in the area and the Agency and Local Authorities both have specific responsibilities, which need to be highlighted and clarified. Redevelopment plans will be an important aspect of reclamation, and the Agency should work closely with Local Authorities to encourage appropriate development for these brown field sites.
<i>Air Quality</i>	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. Co-ordination and liaison between local authorities and the Agency, and the sharing and integrity of data, were central to any actions being developed.
<i>Noise Pollution</i>	Sheffield City Council raised the issue of the lack of formal controls to deal with noise from road traffic and asked the Agency to join with local authorities in lobbying the Government to implement a strategy for dealing with transportation noise that would complement the current air quality initiatives.
<i>Flood Defence &amp; Ecology</i>	The nature of the area is such that Flood Defence is of particular importance. 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 future works are sustainable.
<i>Source Control</i>	Some local authorities were concerned about the risk of localised flooding as a result of rapid run-off of surface water, and raised the issue of alternative methods to reduce this risk. Alternative means of disposal than sewer should be encouraged through the development processes, to benefit groundwater resources levels and reduce flood risk.
<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 some concern in the area over the management of water resources and the current abstraction regimes, particularly with regard to the potential impact from proposed canal restoration schemes. The Agency is urged to consider the future water requirements to support potentially increased navigation, and to review compensation releases into dammed rivers to increase dilution of pollution and to benefit river ecology.
<i>Canal Restoration</i>	There are a number of proposed canal restoration schemes in the area, including the Chesterfield Canal, the Dearne & Dove Canal and the Barnsley Canal. Consultees have emphasised the economic and social benefits of restoring canals and are keen to see Agency involvement in feasibility studies for canal restoration at the early stages to discuss water supply strategy and ensure the minimisation of impacts.

## 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       | * INTEGRATED RIVER BASIN MANAGEMENT |
| * AIR QUALITY          | * CONSERVING LAND                   |
| * WATER RESOURCES      | * MANAGING WASTE                    |
| * BIODIVERSITY         | * MAJOR INDUSTRIES                  |
| * FRESHWATER FISHERIES |                                     |

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 19 key issues, identified and discussed in detail in the Consultation Report (September 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 an 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 'greenhouse gases' such as carbon dioxide, which 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 - would all be of significance to South Yorkshire and North East Derbyshire. 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.

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.

Environmentally detrimental substances and fuels, radioactive technologies, and less efficient technologies are sometimes used in industrial and domestic processes when more benign technologies are available.

The main disposal method for controlled waste (household, industrial and commercial) is currently landfill. 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.

A number of landfill sites in this area have gas management systems in place and two extract the gas for use as a fuel in brick manufacture. In addition to landfilling, substantial quantities of household and commercial waste from the Sheffield area are incinerated with energy recovered as heat.

### *Additional Actions:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.3.1	Improve the extent and quality of data submissions for landfill gas generation at licensed landfill sites.	Methane emissions reduced by gas flaring.	Agency	1998-2001	£8 k

4.3.2	Encourage collection and utilisation of methane gas from new and current landfills for energy production.	Sustainable use of gas as fuel and reduction in demand on natural resources.	Local Authorities Agency <i>Site Operators</i>	1998 -2001	£10 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 <i>Agency, Local Authorities, Industry</i>	1998 -2001	£4 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.

*Air quality improvements are dependent upon the close co-ordination of air quality measurements to support local air quality management plans and to distinguish between local and transboundary effects.*

The Agency is working with government to ensure that the UK National Air Quality Strategy will improve air quality and mean that emissions from major industries and vehicles are reduced. The development of a national plan will cause substantial reductions in emissions of sulphur dioxide and oxides of nitrogen in the period up to 2005. Further discussions are underway to increase the current rate of improvement. This substantial effect on the background levels of these pollutants is one element to be considered in the overall control of National, Regional and Local Air Quality.

*We Will: Contribute to the development of a National Air Quality Strategy to reduce emissions of sulphur dioxide and oxides of nitrogen from power station and other prescribed processes*

While there are no power stations located in this area, the stations of the Trent Valley to the southeast and the Aire Valley to the north, inevitably have some impact on the air quality of the area. These stations continue to be 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 any 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 cause problems and unexplainable pollution episodes.

*We Will: Liaise with local authorities on the investigation and follow up of pollution episodes to determine causes and remedial actions.*

#### *Additional Action:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.4.1	In partnership with Local Authorities, identify the major sources of emissions in the area and the trans-boundary effects of pollution.	Improved knowledge and information to assist with pollution 'episode' follow-up protocol.	Agency <i>Local Authorities</i>	1998-2003	£10 k

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: Collaborate with local authorities to assess future trends in combustion gas emissions and the implications for Regional Air Quality and industrial and public/domestic developments.*

#### *Additional Action:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.4.2	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 Strategies.	Agency <i>Local Authorities</i>	1998-2003	£5 k

## **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 this area many tributaries have been reservoirised to supply the water needs of the catchment. However, they do not provide sufficient water to meet all of the needs of the catchment, and as a consequence, water is imported from reservoirs and rivers in North Yorkshire and Derbyshire.

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 the 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.

**Groundwater resources require careful management to ensure long term sustainability.**

The Sherwood Sandstone occurring in the northeast of the area, is a Major Aquifer used extensively to supply water, for agriculture, industry and for potable supply. There are major public water supply well fields in the Sherwood Sandstone south of Selby and southeast of Doncaster, just outside the boundary of this LEAP. These abstractions have caused a lowering of groundwater levels in the aquifer and may have long term implications for groundwater resources. Groundwater protection zones for the Selby and Doncaster well fields extend into the area.

*We Will: Continue to monitor the after effects of the drought of 1995/96 and assist in the collation of information and the production of a final report.*

*We Will: Update and refine the computer model of the Sherwood Sandstone aquifer in Yorkshire to aid water resources management.*

**Additional Actions:**

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.5.1	Use the Sherwood Sandstone Groundwater model:	Achieve environmentally sustainable groundwater abstraction licensing policy and most effective protection of public supply abstraction.	Agency	1998-2000	£30 k
4.5.2	1 In the appraisal of groundwater abstraction licensing policy. 2 To review the Sherwood Sandstone Groundwater Protection zones around public supply boreholes.				
4.5.3	Improve hydrological data collected in the Don Catchment.	Better understanding of flows in the Area and effects on surrounding areas including biodiversity.	Agency <i>British Waterways Board, Yorkshire Water Services</i>	1998/99	£10 k
4.5.4	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

**The health and diversity of wetland and river ecology is influenced by the management of abstractions, releases from reservoirs, and water levels.**

During the 19th century and early 20th century many tributaries on the Don system were impounded to supply water for industrial and drinking purposes. The compensation flow amounts set for the reservoirs were determined primarily by the industrial needs of the then water power users and were not designed to protect the ecology nor indeed to optimise the yields of any associated supply reservoirs. Since the decline in industrial abstraction a reassessment of compensation releases will be of benefit to both the environment and public water supply.

*We Will: Undertake a review with Yorkshire Water Services (YWS) of the compensation release regime from their reservoirs to ensure protection of the aquatic environment and the effective use of water resources.*

### Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.5.5	Formal compensation arrangements to be agreed at Worsborough Reservoir.	Improved water quality and habitats in the River Dove to its confluence with River Dearne.	Agency <i>Barnsley MBC, YWS, Angling clubs</i>	1998/99	£5 k

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 usually granted without time limits or restrictions during periods of low flow. 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 Don, Rother & Dearne catchments 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.*

## 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.

*We Will: In partnership with local authorities, support the development and implementation of local Biodiversity Action Plans, with particular regard to those species and habitats for which the Agency is a contact point or lead partner.*

### Additional Action:

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

*Species and habitats, particularly where they are rare or declining, require conservation, enhancement and rehabilitation to promote the development of a healthy and diverse ecosystem.*

Past industrial activity has had an impact on the ecological diversity of the area. The loss of important natural habitats has a limiting effect on the restoration or re-establishment of certain species such as the otter and the salmon, and has a degrading effect on ecosystems as a whole.

Improvements in water quality have allowed many species to re-colonise naturally or be re-introduced to the river-system. There is evidence of otter activity in the River Dearne catchment, and a large salmon was caught by an angler from the River Don.

However, improvements and much physical rehabilitation, along with protection of existing valuable habitats, is required to achieve the desired sustainable ecological diversity. The area still holds populations of declining species such as the white-clawed crayfish and the water vole, although habitat protection and enhancement, and monitoring will be required, along with research and education, in order to reduce other threats to uncommon species.

*We Will: Ensure the protection and enhancement of internationally important sites by reviewing all consents and licences affecting :*

*the South Pennine Moors Special Protection Area and the Thorne Moor proposed Special Area of Conservation and Special Protection Area.*

### Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.6.2	Negotiate and identify rehabilitation of river channels damaged by past industrial/land drainage activity in the Don, Dearne, Rother catchment.	Increased biodiversity & re-development of indigenous fish populations.	Agency  <i>Local Authorities English Nature Riparian Owners Wildlife Trusts</i>	1998-2003	to be determined.

4.6.3	Investigate opportunities and carry out remedial works on the tidal River Don including the re-connection of oxbow sections of the original river channel where appropriate. eg Kirk Bramwith Thorne Waterside	Increased biodiversity leading to sustainable populations.	Agency  <i>Local Authorities Riparian Owners English Nature Wildlife Trusts</i>	1999-2003	£10 k
4.6.4	Investigate opportunities to restore degraded habitats resulting from past land drainage works on: e.g. the River Went, downstream of the A19.  the River Ea Beck, from the A1 Downstream to Carcroft.	Increased biodiversity leading to sustainable populations.	Agency  <i>Fisheries Interests Riparian Owners Local Authorities English Nature Wildlife Trusts FWAG</i>	1999-2000	£5 k
4.6.5	Undertake habitat improvement and river rehabilitation schemes in the River Dearne catchment:  e.g. Old Moor Washlands	Increased biodiversity and re-development of indigenous fish populations.	Agency  <i>Riparian Owners Local Authorities English Nature Wildlife Trusts</i>	1998-2003  1998/99	  £25 k
4.6.6	Carry out habitat improvements at Houghton on the River Dearne.		RJB Mining Ltd  Agency	1998/99	£1 k

**Washland areas may be more effectively used for storage of flood waters and as sites for nature conservation.**

The area has a sophisticated system of washlands to protect major towns from flooding. The operation of the washland system is to be reviewed, to ensure its optimal operation. Many of these washlands are valuable sites for nature conservation, or offer potential for wetland rehabilitation and opportunities to develop recreational and amenity interests. Wherever possible agreements are reached with local authorities, or conservation bodies to utilise the washlands while maintaining their primary function as flood storage. Any washland system review must consider impacts of changes on the environment, and the potential for creation of new wetland features.

*We Will: In collaboration with local authorities, carry out a study to identify opportunities to improve the ecological value of washlands throughout the Dearne Valley.*

#### **Additional Actions:**

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.6.7	Identify opportunities to:  Create open water areas and other wetland habitats, on existing washlands alongside the tidal River Don.	Improved biodiversity. Habitat creation, possibly achievement of BAP targets	Agency  <i>Local Authorities Wildlife Trusts</i>	1998-2003	£10 k
4.6.8	Collaborate on habitat improvements within washland areas, especially on Agency owned land.  e.g. Sprotborough, Woodhouse Washlands, Dearne Valley	Habitat creation and enhancement to benefit of wildlife and people.	<i>others FWAG RSPB</i>	1998-2003	£10 k
4.6.9	Undertake a catchment review and identify priorities for habitat conservation and restoration.	Programme of habitat restoration.	Agency  <i>Users</i>	1998 -99	£20 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 waters will be capable of supporting thriving fish populations, although not necessarily available for fishing. Opportunities will be available for everyone to experience a wide range of good quality of fishing.

*Groundwater and rivers continue to be polluted by minewater from long-abandoned mines and are threatened by further pollution from the more recent and future closures of mines.*

The long history of mining in the catchment not only means a legacy of large areas of contaminated and despoiled land, but also polluted mine waters. As coal mines close and the pumping of minewater ceases, groundwater builds up and becomes contaminated with red oxides, chlorides and ammonia. These rust-coloured discharges from abandoned mines have for decades caused many of the local streams to run orange and be depleted of animal and fish life as the iron deposits blanket the bed of the river.

*We Will: Work with the Coal Authority to identify and prioritise abandoned minewater discharges for remediation works.*

*We Will: Ensure improvement of the water quality currently affected by mine closures and ochreous discharges from abandoned mineworkings.*

*In collaboration with key partners, monitor the effect of the minewater treatment plant from the abandoned Bullhouse Colliery.*

*Species and habitats, particularly where they are rare or declining, require conservation, enhancement and rehabilitation to promote the development of a healthy and diverse ecosystem.*

Rivers and tributaries in the area are of varying water quality and major improvements, especially over the past six years, have led to most stretches of the main rivers being capable of supporting coarse fisheries.

*Additional Action:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.7.1	Identify opportunities to redevelop indigenous fish populations as water quality improvements allow.	Re-establishment of indigenous fish species and maximisation of recreational potential.	Agency  <i>Conservation Groups, Fish Consultants, Angling Groups, Yorkshire Water Services</i>	1999-2003	to be determined
	1 On the River Don following Bullhouse minewater remediation project.				£25 k

Physical obstructions to the passage of fish, such as weirs prevent the free movement of fish within the catchment. This has a significant effect on the composition, structure and development of the fish populations. As water quality improves in the watercourses of the catchment, areas will remain inaccessible to upstream migrating fish unless some facilities to aid passage are provided. Various

designs of fish pass are available and can be fitted to most weirs without detriment to other uses. A database has been prepared recording all current weir structures present on the main rivers in the area.

*We Will: Where refurbishment is being undertaken, ensure the provision of fish passes on in-channel structures (weirs etc) which currently prevent the free passage of fish.*

*Provide facilities at the Crimpsall structure on the River Don, at Doncaster (costs identified in Appendix 4, table b).*

#### **Additional Actions:**

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.7.2	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, Local Authorities, English Heritage British Waterways Archaeologists, Local History Groups	1998-2003	£2 k
4.7.3	Ensure the creation of the fish pass on the Rother at Orgreave results in improved fish passage.	The development of sustainable fisheries in further stretches of the river.	RJB Mining  Agency	1999-2000	£1 k

There are many environmentally sensitive habitats in the area which are already afforded protected status, and others being identified on an ongoing basis. However, there are also many valuable sites still unrecognised and therefore vulnerable to damage. These sites have great potential for the regeneration and renewal of urban areas. In particular stillwaters within urban areas could be promoted for angling to benefit the local community and the disadvantaged.

*We Will: Assist in the management of local authority and other owned waters to maximise uptake of Agency advice leading to sustainable management and improvement of fisheries.*

#### **Additional Action:**

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.7.4	Collaborate on enhancements to degraded urban fisheries habitats.	Habitat creation and enhancement to benefit of wildlife and people.	Local Authorities Riparian Owners  Agency	1999-2003	£50 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 risk of flooding at some locations is high because they are unprotected or are protected by defences which are either below standard or ageing.**

Some of our urban areas are prone to flooding due to development historically encroaching into flood

plain and accelerated surface water run off, which increases flood peaks. While the risk of flooding can never be eliminated completely, it can be reduced through development of flood defences. 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. An ongoing programme of work, approved by the Yorkshire Regional Flood Defence Committee, has been devised to ensure that defences throughout the area are constructed or improved to achieve the desired level of protection from flooding.

When devising that programme, due account must be taken of the areas at risk and the economic justification, with opportunities for environmental benefits also being maximised. A significant level of maintenance is required on all defences, to ensure that they continue to offer the required standard of protection they were designed for. As the management and maintenance of rivers and flood defences is a costly business and requires specialised resources, the Agency is developing a system to efficiently prioritise its operations.

*We Will: Develop new methods to survey, maintain and manage flood defences.*

*Undertake a programme of works to improve the standard of protection and provide effective defences in flood risk areas, (see table a, in Appendix 4).*

Over the last 50 years a system of flood banks, washlands, and regulators has been designed and developed to reduce the risk of flooding downstream of Rotherham, particularly for the parts of north Doncaster that suffered severe flooding in 1947. Some of these defence structures are now reaching the end of their design life, and will require rebuilding to maintain their effectiveness. One such structure is the Crimpsall sluices at Doncaster, which is to be replaced by a rock chute weir, providing a significant improvement for fish migration (see section 4.7), as well as flood protection. Other proposed works include ensuring that controlled washlands comply with the Reservoirs Act, and renovation of access bridges and pumping stations under the Agency's responsibility.

*We Will: Undertake an assessment of the condition of existing flood defence structures and develop a programme of refurbishment (see table b, in Appendix 4).*

#### **The flood forecasting and warning service 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 main 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 in order that measures to minimise damage can be taken.

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

#### **The environment is threatened by pollution incidents from industry and agriculture.**

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. Some industrial wastes (food waste, blood and guts from abattoirs, paper waste sludge) can have beneficial soil-conditioning and fertilising effects when spread on land and as such are exempt from normal licensing requirements (see section 4.10). These wastes however, are

also potentially polluting.

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 the area problem sites have been addressed and will be subject to review, however a number of further potential problem areas have been identified as requiring pollution prevention work.

#### *Additional Actions:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.1	Undertake Pollution Prevention and Waste Producer visits on:		Agency	1998-2002	
4.8.2	1 Farms in the Hardwick Beck catchment.	Improve 3.9 km of Hardwick Beck.			£2 k
4.8.3	2 Farms in the Cawthorne Dyke catchment.	Improvement to Cawthorne Dyke.	Farmers	} } } 1999 }	£6 k
4.8.4	3 Farms in the Banks Bottom Dyke catchment.	Improvement to Banks Bottom Dyke.			
4.8.5	2 Langthwaite Grange Industrial Estate.	Reduce significant water quality incidents and encourage sustainable waste management techniques.	Industry		£4 k
4.8.6	3 M62 Trading Estate, Goole.				£8 k
4.8.7	4 Barbot Hall Ind. Est.				£2 k

**Rivers can have limited biodiversity and restricted uses as a result of discharges from sewage treatment works and unsatisfactory combined sewer overflows.**

The Agency will look for schemes to be included in Yorkshire Water Services third Asset Management Plan (AMP3) to ensure that further improvements to the water environment are achieved and maintained. Rivers have already benefitted from the additional investment by Yorkshire Water in sewage treatment but a substantial number of works require further improvement to meet the needs of the rivers and their users.

*We Will: Participate in the investment programme discussion between Water Services PLCs, OFWAT, to agree the significant investment in sewerage and sewage treatment for the period 2000 - 2005 (AMP3). Monitor improvements agreed under the AMP2 programme for the period 1995 - 2000. (See table in Appendix 5).*

**Additional Actions:**

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.8	<p>Carry out investigations into shortfalls in Water Quality and plan remedial action at:</p> <ol style="list-style-type: none"> <li>1. Cubley Brook</li> <li>2. Blackburn Brook</li> <li>3. River Mass</li> <li>4. Brookside Beck</li> <li>5. Shire Brook</li> <li>6. River Doe Lea</li> <li>7. Muster Brook</li> <li>8. Holme Brook/Linacre Beck</li> <li>9. The Moss</li> <li>10. Rockley Dyke</li> <li>11. House Carr Dyke</li> </ol>	<p>Improve Water Quality and amenity.</p> <p>Improve 4.8 km.</p> <p>Improve 7.2 km.</p> <p>Improve 6.3 km.</p> <p>Improve 2.6 km.</p> <p>Improve 8.5 km.</p> <p>Improve 4.3 km.</p>	<p>Agency</p>	<p>1998-2003</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p> <p>Ongoing</p>	<p>£2 k</p> <p>£4 k</p> <p>£2 k</p> <p>£2 k</p> <p>£4 k</p> <p>£4 k</p> <p>£2 k</p> <p>£4 k</p> <p>£2 k</p> <p>£2 k</p>
4.8.9	<p>Assess the impact of coloured discharge from Clayton West STW.</p>	<p>Improved amenity in River Dearne.</p>	<p>Yorkshire Water Services</p> <p><i>Dawsons Fur Fabrics Agency</i></p>	<p>1998/99</p>	<p>£1 k</p>

The biodiversity of the environment can be restricted by the toxic effects of industrial effluents that are not controllable by simple chemical limits.

Water quality problems can be the result of long-term persistent pollutants present in river sediments. High levels of dioxins, have been found in the fine sediments of the rivers Doe Lea, Rother and Don. The Agency has undertaken extensive monitoring and evaluation of the most environmentally acceptable method of dealing with this problem. Dioxins and other contaminants can affect the options available for the safe disposal of highly contaminated dredgings. Any such removal, whether for navigation or environmental purposes, needs careful monitoring and control.

*We Will: Work with others to secure best practicable environmental option for dealing with contaminated sediments in the Don Navigation.*

A wide range of complex mixtures of chemicals are found in some effluents discharged to the environment within this area. Stringent controls on discharges to controlled waters already exist under the Water Resources Act 1991 and, for prescribed (Part A) industrial processes under the Environmental Protection Act 1990. The Agency can use these powers to achieve further improvements which could benefit the environment, subject to this being technically and economically feasible. This can also include control of discharges from Sewage Treatment Works which receive complex trade effluents (additional to the Yorkshire Water controls already in place); and direct control, where possible, of trade effluents discharged to sewer.

We Will: *Improve the Water Quality currently affected by Trade Effluent Discharges at:*  
*Berrymans* *British Steel Rotherham*  
*Fort James* *BSC Brinsworth*

### Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
	Investigate shortfalls in water quality due to contaminants and plan remedial action for:		Agency Industry Yorkshire Water Services	1998/99	
4.8.10	1 River Rother Danesmoor & Tupton STW	Reduced zinc concentrations and protection of ecology.			£4 k
4.8.11	2 Holmewood Brook Holmewood Industrial Est	Reduced zinc concentrations and protection of ecology.			£4 k
4.8.12	3 Longcourse Dyke	Reduced risk to River Doe Lea.			£2 k
4.8.13	4 River Dearne	Reduced levels of Eulan.			£12 k
4.8.14	5 Barnsley Canal/Cudworth Dyke	Reduced levels of ammonia.			£3 k

Recreational facilities and access could be improved and features of archaeological and heritage interest must be protected and conserved.

The improving environment of the area has once again raised awareness of its potential as a source of recreational opportunity. As owners of land on and adjacent to the rivers of the system, the Agency can provide opportunities for increased recreational use by collaborating closely with other organisations. Strong links have already been forged with local organisations involved in conservation work in order to promote collaborative improvements. The increasing public perception of a need for restoration of the environment presents even greater opportunities.

*We Will: Work with Sheffield City Council on the development of their Countryside Strategy, and with Countryside Commission and other partners on the development of the Dearne 2020 Vision.*

### Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.15	Continued involvement in access developments and collaboration: e.g.	Increased access to and use of riverside areas.	Recreation Groups Agency, Local Authorities, Riparian Owners, South Yorkshire Forest Environment Trust		
	1 Five Weirs Walk, Upper Don and Sheaf walks, through Sheffield.			1999-2000	£10 k
	2 Trans-Pennine Trail.			1999-2000	£5 k
	3 South Yorkshire Forest.			1998/99	£10 k

Improving access, leasing fishing rights and developing facilities are all issues which are actively being addressed with particular emphasis being placed on the need for disabled access and use. Throughout the area there are sites of archaeological and heritage interest which are worthy of protection. The rivers' link to the industrial development of the area is of particular importance and many opportunities exist through collaboration with other organisations for the Agency to assist in the protection or restoration of such sites.

### Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.16	Assess the distribution of Public Rights Of Way in relation to degraded waters.	Contribute to restoration of access and use of riverside areas.	Local Highways Authority <i>Agency</i>	1999-2000	£1 k
4.8.17	Identify opportunities to develop river corridor access for all, through collaborative projects: e.g. 1 Assess the viability of a conservation corridor on Agency owned land from Doncaster to Goole.  2 developing the ecological & recreational potential of Agency owned washland and riverbank.  At Kilnhurst Sprotborough Adwick	Increased access to and use of riverside areas.	Agency  <i>Riparian Owners Local Authorities, Interest Groups</i>	1998-2003	£4 k

There have been a number of proposals to restore navigation, or redevelop waterways, while at the same time some of the existing facilities associated with navigation may be under utilised. Restoration schemes include the Chesterfield Canal, the Dearne & Dove Canal and the Barnsley canal. Early consultation is essential with regard to these schemes as it can be difficult to balance the requirements of canal operators with the needs of the environment and the rights of other water users.

### Additional Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.18	Ensure that environmental quality and the interests of all legitimate water users are protected when canal restoration projects are undertaken,  1 Chesterfield Canal  2 New Rother Navigation  Also: Barnsley Canal, Dearne & Dove Canal.	Successful balance between navigational, economic and environmental needs achieved.  Improved recreational access and navigation.	Canal Restoration Groups  <i>Agency, Local Authorities, British Waterways</i>  Derbyshire County Council Chesterfield Canal Society Rotherham MBC	1998-2003	to be determined

**The health and diversity of wetland and river ecology including fisheries is influenced by the management of abstractions, releases from reservoirs, and water levels.**

Wetland areas at Sprotborough Flash, and Denaby Ings are Sites of Special Scientific Interest and are valuable assets to be protected for a sustainable future. Water Level Management Plans (WLMP) were for these sites that also serve a valuable function for flood alleviation. Conservation areas are being created in wetland areas such as at the Earth Centre at Denaby, Old Moor on the River Dearne, Woodhouse Mill Washlands and Kilnhurst, and must also be preserved for flood alleviation purposes, and similarly require integrated management.

*We Will: Formulate in consultation with riparian owners and conservation interest groups, Water Level Management Plans for Sites of Special Scientific Interest to promote greater understanding of water environment and to balance the needs of flood defence, agriculture & ecology.*

*Plans have been developed for Sprotborough Ings & Denaby Ings.*

#### **Additional Action:**

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.8.19	Investigate the potential to extend WLMP approach to all watercourses/bodies as a tool for restoration of nature conservation interest.	Protection of wetland and aquatic species and habitats.	Agency  <i>Riparian Owners, Local Authorities, Internal Drainage Boards</i>	1998-2003	to be determined

## **4.9 CONSERVING THE LAND**

The Town and Country Planning system is the responsibility of local authorities, and we will do our best to influence the system by providing advice and guidance on the potential impacts of housing, industrial and other developments, on the environment and deter 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 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.

**Contaminated land poses a pollution risk to the environment and has a potential to cause significant harm to human health, property and local amenity value.**

The Environment Act 1995 conveys powers and duties on local authorities and the Agency for dealing with contaminated land and provides the opportunity to collaborate with others, to improve these sites, enhance the environment and provide sites for development and job creation.

The area has a legacy of contaminated land, resulting particularly from coal mining and coke production, chemicals and steel production. Appreciable lengths of river and areas of major and minor aquifer have been seriously polluted by this contamination. In the last few years some of the main stakeholders in contaminated land have undertaken a programme of prioritisation and reclamation of their sites, eg English Partnerships and British Gas PLC (former gasworks sites).

*The Agency is the principal consultee on:*

- i the reclamation by English Partnerships and other partners of ex-British Coal contaminated sites at; Askern, Beighton, Bentley, Brodsworth, Grimethorpe, Hickleton, Roundwood and Smithywood collieries,*  
  
*and other ex-British Coal sites at; Ackton, Broomhill, Wharncliffe, Bolton-on-Deane, Goldthorpe and Wath.*
- ii the reclamation by English Partnerships, Tawnywood and Fitzwise Ltd of the Avenue Coal Products site, Wingerworth.*
- iii the remediation by RJB Mining Ltd of sites at Orgreave and Houghton Main.*

**Additional Action:**

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.9.1	Assess the impact of spoil heaps and plan remediate action:  Dodworth Colliery  Rabbit Ings Colliery  Skelmanthorpe Colliery	Improved water quality and increased diversity of ecology & habitats.	Agency  Barnsley MBC  Wakefield MDC  Dawsons Fur Fabrics	1998/99	£1 k

**Species and habitats, particularly where they are rare or declining, require conservation, enhancement and rehabilitation to promote the development of a healthy and diverse ecosystem.**

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.

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
4.9.2	Identify opportunities to reinstate more traditional management of floodplain as wet grassland etc and prepare action plans where appropriate e.g. Lower Don	Habitat creation and enhancement to benefit wildlife and people	Agency  <i>Farming &amp; Wildlife Advisory Group, Landowners, Local Authorities, Wildlife Trusts</i>	1999-2001	£1 k
4.9.3	Develop wider more valuable river corridors through creation of buffer zones and sensitive land management:  1 support Farming & Wildlife Advisory Group (FWAG)	Habitat creation and enhancement to benefit wildlife and people	  <b>FWAG</b> <i>Agency</i>	1999-2003	£75 k
4.9.4	2 encourage take up of Countryside Stewardship Scheme and other grants.		<b>MAFF</b> <i>Agency</i>	1999-2003	£5 k
4.9.5	3 where current overgrazing is exacerbating erosion of waterside and valuable habitats implement a programme of education & awareness.	Protection and enhancement of valuable habitats	Agency  <i>Riparian Owners, FWAG, others</i>	1998-2003	£3 k
4.9.6	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  <i>Anglers, Riparian Owners</i>	1999-2003	£4 k
4.9.7	Develop and implement site management plans to sustain and enhance conservation potential for all suitable Agency land holdings.  Eg River Dearne Study	Habitat creation, to benefit wildlife and people	Agency  <i>Tenants, FWAG, Wildlife Trusts, others</i>	1998-2003  1998-99	to be determined  £25 k

**Washland areas may be more effectively used for storage of flood waters and as sites for nature conservation.**

A system of washlands has been engineered to reduce the highest flood peaks from the Rivers Rother, Dearne and Don. The Agency intends to have the system analysed using computer modelling technology, with a view to improving our operations and the effectiveness of the system. This analysis will improve our holistic approach to flood alleviation and flood forecasting in the river system, and will assist in developing sustainable long term solutions for flood alleviation. Any washland system review would also consider the impacts of changes on the environment, and the potential for creation of wetland features. Many of these washlands are valuable sites for nature conservation or offer potential for wetland rehabilitation (see section 4.6). They also present opportunities to develop recreational and amenity interests(see section 4.8).

*We Will: Review the River Don washland system by a modelling study, to reduce flooding risk and optimise filling of controlled washlands.*

Further surveys are required to identify areas of floodplain that may be affected by pressures of new development. The Agency is undertaking a programme of surveys on certain watercourses identified by local authorities for planning purposes, however such work is very costly and will be subject to availability of funds.

*We Will: Provide flood plain surveys to local planning authorities.*

**Future development could impact adversely on the environment unless the Agency maximises its influence on the land use planning system in liaison with local planning authorities.**

Development that takes account of the environment can reduce the risk of pollution, for example preventing the inappropriate storage of chemicals on industrial sites 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.

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.

*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
4.9.8	Where development or remedial works involve channel alterations or re-construction, maximise opportunities to enhance the redevelopment and maintenance of aquatic habitats, e.g.  Orgreave, Sheffield. Avenue Site, Chesterfield. Houghton Main site on the Dearne System.	Adding environmental benefits to development schemes through planning procedures can assist with the remediation of damaged habitats. Restoration of fish habitat and re-establishment of indigenous populations, and creation of new habitats.	<b>Developers Agency</b>  <i>Local Authorities Planners</i>	1998-2000	£3 k
4.9.9	Establish a forum to promote greater use of Sustainable Drainage systems	Best practices encouraged to achieve environmentally sustainable development.	<b>Agency</b>  <i>Local Authorities Yorkshire Water Services, IDBs</i>	1998-2000	£8 k
4.9.10	Provide information on best environmental practices to developers and others to promote sustainability in development.	-	<b>Agency</b>  <i>Local Authorities</i>	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 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 the development plans. Local authorities also have powers to deal with litter and flytipping.

**Sustainable waste management practices as identified in the National Waste Management Strategy should be implemented.**

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: Pursue joint initiatives with the licence holder to improve operations at Glapwell landfill site to achieve long term site stability and minimise the environmental impact.*

*We Will: Review waste management licences to ensure a high standard of protection for people and the environment.*

It is difficult to put an accurate figure on the types and quantities of industrial and commercial waste arising in the area. The Agency has identified an urgent need for better information which can be used as a basis for future decision-making and to assess performance against national targets. The Agency will 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 Action:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.1	Improve the accuracy of waste input/output figures at licensed/ exempt sites.	Determination of 'need' for waste disposal facilities based on accurate data.	Agency	1998/99	£1 k

**The environment is threatened by pollution incidents from industry and agriculture. Poorly controlled land spreading of waste poses a particular risk which has increased as a result of legislative changes.**

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:* In collaboration with Sheffield CC, assess the scale, nature & impact of paper pulp spreading activities in the Sheffield area. Ensure activities follow best practice, achieve environmentally acceptable operation at lowest cost and minimise the environmental risk of land spreading, while maximising public satisfaction and economic disposal.

*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.

### Additional Actions:

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.2	Expand existing initiatives to increase awareness of:  1 the Duty of Care and carrier registration regulations  2 waste management licensing requirements	Compliance with Duty Of Care regulations  Increase the knowledge of small scale skip traders	Agency  Industry	1999-2000	£10 k
4.10.3	Pursue joint initiative with licence holder to secure the Beighton landfill site.	Achieve long term site stability	Agency  Site Operators	1998-2000	£2 k

**Overall energy and water use could be reduced by waste minimisation.**

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 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. The 1997 Packaging Waste Regulations also encourages companies to cut down on the amount of packaging they handle, as reducing their obligated packaging will reduce the company's costs.

The potential for composting the biodegradable fraction of domestic waste is recognised by each of the local authorities, and there are several targets in the national waste strategy specific to composting. A number of local authorities in the area now provide subsidised compost bins to householders to encourage home composting, and Sheffield City Council is looking into setting up a central composting facility.

*Additional Action:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.4	Identify where waste prevention recycling or minimisation could be encouraged and develop initiatives to promote this.	Increase in waste minimisation and recycling.	Agency <i>Local Authorities</i>	1999-2003	£5 k

**Illegal tipping of waste is widespread throughout the area is unsightly and may cause environmental pollution.**

Illegal tipping, or 'fly-tipping', occurs at a many locations around the area. The types of materials vary, consisting mainly of household and builders' waste, but can include industrial and commercial wastes such as tyres, garage wastes and chemical drums. It is often difficult to identify and find the culprits and in many cases the tipping is cleared at considerable expense by the local authority or the landowners.

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

*We Will: Work with Doncaster MBC to evaluate all available options to resolve the Hampole tyre dump in order to minimise the environmental risks.*

*Additional Actions:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.10.5	Assess the scale, nature & impact of cable burning activities in the Doncaster area with a view to targeting sources of cable.	Reduction in number of reported incidents and minimisation of environmental risks.	Agency <i>Donc MBC Contractors</i>	1998-2000	to be determined
	1 re-establish external contact group.			1998	£1 k
	2 draft Action Plan in place.			1999	
4.10.6  4.10.7	Develop collaborative partnerships with local authorities to:	Efficient resource allocation to secure improvements in operational standards.	Agency <i>Local Authorities</i>	1998-2003	to be determined
	1 improve standards at Licensed scrapyards			1999-2000	£1 k
	2 discourage fly tipping at major fly tipping locations:  3 sites to be agreed with local authorities and surveillance undertaken.			1999	£7 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.

**Industry and the environment would benefit from expansion of the current Don waste minimisation project and pursuance of the aims and practice of the 3Es programme within the area (3Es: Emissions, Efficiency and Economics).**

Local Authorities regulate releases to air from thousands of industrial premises under Part I of the Environmental Protection Act 1990. These the industrial processes that have a lesser potential to pollute than those the Agency regulates. 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).

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

Many linked problems of waste creation and transport, fuel use and air pollution, recycling and environmentally friendly operation can be tackled by a systematic study of alternatives to existing methods of working and operation. A waste minimisation initiative developed the Agency, and being used by some companies to optimise their processes is the 3 Es project (Emissions, Efficiency and Economics). 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.

*Additional Action:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.11.1	Assess the potential for extending the existing 3 E's methodology and other waste minimisation techniques to appropriate companies in the area.	Maximise the opportunities to reduce waste and provide financial and environmental benefits.	Agency Industry	1998-2003	£3 k

A similar approach to IPC will be introduced throughout the European Union under the 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.

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

*Additional Action:*

Ref	Action	Benefits	Lead (Others)	Timescale	Costs
4.11.2	Undertake consultation on the IPPC directive, with those who will be affected by the changes.	Ensure improved environmental control and consistency within the European Union.	Agency Local Authorities Others	1998-2003	£5 k

**Rivers can have limited biodiversity and restricted uses as a result of discharges from sewage treatment works and unsatisfactory combined sewer overflows.**

The Urban Waste Water Treatment Directive sets target standards for discharges of domestic sewage and similar industrial discharges of a specified size. The Agency will ensure compliance with these standards.

*We Will: Regulate implementation of the Urban Waste Water Treatment Directive (UWWTD) and monitor associated improvement programmes at the following Sewage Treatment Works:*

<i>Adwick Le Street</i>	<i>Denaby</i>	<i>Sandall</i>
<i>Aldwarke</i>	<i>Dronfield</i>	<i>South Elmsall</i>
<i>Bentley Arksey Lane</i>	<i>Goole</i>	<i>Staveley</i>
<i>Blackburn Meadows</i>	<i>Holbrook</i>	<i>Swinton</i>
<i>Bolton up on Dearne</i>	<i>Long Lane</i>	<i>Thorne</i>
<i>Clayton West</i>	<i>Mexborough</i>	<i>Wath Upon Dearne</i>
<i>Darton</i>	<i>Old Whittington</i>	<i>Worsborough</i>
		<i>Wombwell</i>

## **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 of the environment, 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.

### 5.2.1 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 water environment when preparing development plans and determining planning applications.

A close working relationship is required with local 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

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.

Controlled waste is managed or disposed of through a variety of facilities including landfills, transfer stations, householders waste recycling centres, treatment plants, incinerators, scrap yards and recycling process plants. These facilities normally require planning permission and the Agency is consulted by Local Planning Authorities on 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.

### 5.2.3 Air Quality

The Agency regulates discharges to air, water and land from the most 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. However, these sites represent only part of the total industrial base.

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 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.

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 the 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 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 Sustainable Development Strategy will be published by the end of 1998.

In collaboration with Groundwork Dearne Valley, Barnsley MBC, Yorkshire Water PLC, leisure users from the local community, English Partnerships and others, the Agency is working towards opening of the north bank of the River Dearne between Bolton and Adwick, for access and fishing. As well as providing through access, and conditions for improving fisheries on the river, the project aims at returning the 'Dearne Way' long distance walk to a more substantially riverside route.

Similarly, adjacent to the River Don near Swinton, the Agency is actively collaborating over the amenity/conservation development of its Kilnhurst Ings washland site. Partners include Groundwork Dearne Valley, Rotherham MBC (who now manage conservation under a Countryside Stewardship arrangement), British Steel, and an alliance of local angling organisations.

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.

## 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 South Yorkshire Area Environment Group will have an important part to play in the review.

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 'additional action' against. AEG members will be asked to score these 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 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
- \* to reduce the risk from flooding by providing effective defences and efficient 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.

**SUMMARY INDEX OF STRATEGIES AND PLANS FOR THE AREA**

This list is not intended to be exhaustive, but goes some way to indicate the complexity of plans and strategies that are currently in place for the South Yorkshire and North East Derbyshire area.

<b><u>TITLE</u></b>	<b><u>CONTACT POINT</u></b>
<b>South Yorkshire/NE Derbyshire LEAP</b>	<b>Environment Agency</b>
<b>Unitary Development Plans:</b>	
Barnsley	Barnsley MBC
Doncaster	Doncaster MBC
Rotherham	Rotherham MBC
Sheffield	Sheffield City Council
Wakefield	Wakefield MDC
<b>Chesterfield Borough Local Plan</b>	<b>Chesterfield Borough Council</b>
<b>Derbyshire County Structure Plan (approved)</b>	<b>Derbyshire County Council</b>
<b>Derby and Derbyshire Joint Structure Plan</b>	<b>Derbyshire County Council and Derby City Council</b>
<b>NE Derbyshire Local Plan</b>	<b>NE Derbyshire District Council</b>
<b>Peak District National Park Plan</b>	<b>Peak District National Park</b>
<b>Green Belt Local Plans:</b>	
NE Derbyshire	Derbyshire County Council
Rotherham MBC	Rotherham MBC
Sheffield City Council	Sheffield City Council
<b>East Derbyshire Woodland Project</b>	<b>Derbyshire County Council</b>
<b>Rother Wildlife Strategy</b>	<b>Derbyshire County Council</b>
<b>Three Valleys Countryside Management Project</b>	<b>Derbyshire County Council</b>
<b>Sheffield Countryside Strategy</b>	<b>Sheffield City Council</b>
<b>South Yorkshire Forest Strategy</b>	<b>South Yorkshire Forest Partnership</b>
<b>Yorkshire Water Asset Management Plan (Capital Programme)</b>	<b>Yorkshire Water PLC</b>
<b>Chesterfield Canal Recreational Strategy</b>	<b>Derbyshire County Council</b>
<b>Trans Pennine Trail</b>	<b>Barnsley MBC</b>
<b>Greenwatch Environmental Strategy</b>	<b>Derbyshire County Council</b>
<b>Derbyshire Countryside Strategy</b>	<b>Derbyshire County Council</b>
<b>Chesterfield Canal Preservation &amp; Restoration Strategy</b>	<b>Rotherham MBC</b>
<b>Rotherham Environmental Corridor</b>	<b>Rotherham MBC and British Waterways</b>
<b>Countryside Study Review Document</b>	<b>Rotherham MBC</b>

**ORGANISATIONS WHO RESPONDED TO CONSULTATION****ADAS**

Avesta Sheffield

Barnsley Metropolitan Borough Council

British Steel Engineering

Chesterfield Canal Society

Derbyshire County Council

Derbyshire Wildlife Trust

Dibb Lupton Alsop

Don Fisheries Consultative Association

Doncaster Metropolitan Borough Council

Dronfield Civic Society

English Nature

Farming and Wildlife Advisory Group (FWAG)

Friends of the Earth (Sheffield)

Global Environmental

Government Office for Yorkshire &amp; Humberside

Inland Waterways Association

Ministry of Agriculture Fisheries and Food (MAFF)

North East Derbyshire District Council

River Rother Wildlife Strategy Steering Group

Rotherham Metropolitan Borough Council

Royal Society for the Protection of Birds (RSPB)

Sheffield City Council

Sheffield Wildlife Trust

South Yorkshire Forest Partnership

Yorkshire Water Services

Yorkshire Wildlife Trust

**QUESTIONNAIRES RETURNED:**

Forgemasters Steel &amp; Engineering

Gowdall Parish Council

Inland Waterways Association

Peak District National Park Authority

Salmon &amp; Trout Association

Yorkshire Wildlife Trust

Dr J Shillcock

The South Yorkshire Area Environment Group (Chair Ms C Griffiths) has been consulted and involved in all stages of the development of the plan.

**SUMMARY FLOOD DEFENCE PROGRAMME OF WORKS****Table a.**

<b><u>Fluvial Defences:</u></b>		<b>Estimated Cost £</b>
Stainforth (River Don)	In progress - 1998/99	£100 k
Arksey (River Don)	2002/03	£500 k
Ea Beck	In progress - 2001/02	£3530 k
Sheffield (River Don)	2006/07	£300 k
Blackburn Brook	2004/05 - 2005/06	£600 k
Darton (River Dearne)	2005/06	£300 k
Chesterfield (River Rother)	2007/08	£300 k
Dronfield (River Drone)	In progress - 2000/01	£1312 k
<b><u>Tidal Defences:</u></b>		
Old Goole	2004/05	£850 k
Old Goole to Dutch River Bridge	2004/05 - 2006/07	£1700 k
Dutch River Bridge to Rawcliffe Bridge	2006/07 - 2007/08	£2000 k

**Table b.**

<b>Renew ageing flood defence structures such as regulators, tidal outfalls, flood banks and flood walls:</b>		<b>Estimated Cost £</b>
Crimpsall Sluices (River Don)	1998/99 - 1999/2000	£445k
Sykehouse Barrier Bank	2003/04	£250k
Bolton Ings Regulator (River Dearne)	2003/04	£500k
Woodhouse Mill Regulator (River Rother)	2003/04	£500k
Wentbridge bank subsidence (River Went)	1998/99	£100k

**ASSET MANAGEMENT PLAN (AMP) DETAILS****AMP2 - National Environmental Programme (NEP) for 1995 - 2000**

ACTION	BENEFITS	Works Completion Dates
Liaise with Yorkshire Water and provide environmental information to progress schemes to improve Water Quality currently affected by discharges of sewage effluent from:		
Ackworth STW	To improve 6.1 km of the River Went to comply with EC Fisheries directive.	Dec 2000
Bolsover STW	Improvement to 3.7 Km Doe Lea	Dec 2000
Carleton STW	To improve 3.2Km of the Little Went to comply with EC Fisheries directive.	Dec 2000
Clayton West STW Installation of screens and improved flow handling schemes(phase 1)	Improvement of 1.1km downstream of works.	phase 1 Works Completed
Addition of two biological filters at (phase 2)	Improvement of 1.1km downstream of works	Phase 2 June 2000
Crow Edge STW	Improvement to 2.6 Km Sledbrook Dyke	Works Completed
Danesmoor STW	To improve 6.6 km of River Rother.	June 2000
Dodworth STW	Improvement to 1.1 Km River Dove	Works Completed
Ingbirchworth STW	Improvement to 1 Km Scout Dyke	Works Completed
Lundwood STW	Improvement to 21.5 Km River Dearne	Works Completed
Sandall STW	To improve 14.5 km of River Don.	Dec 2000
S. Elmsall STW	To improve 15.5Km of the Ea Beck.	June 2000
Wath Upon Dearne STW	Improvement of R. Dearne downstream of works.	Works Completed.
Woodhouse Mill STW	Improvements of 10.1km of the River Rother.	June 2000
Worsborough STW	Improvement to 2 Km of River Dearne	Works Completed
Wrangbrook STW	To improve 0.8Km of the River Skell.	June 2000
To improve Water Quality currently affected by discharges from Combined Sewer Overflows (CSO's) in the Don, Dearne & Rother Catchments:		
Barnsley Central CSO's Grimethorpe, Cudworth CSO's Wath CSOs	R. Dearne Cudworth Dyke Park Dyke	
Doncaster Kearsley Brook Bawtry Rd, Sandy Ln PS	Kearsley Brook	
Sheffield Birley CSOs phase 2 Archer Rd CSO's Chesterfield Rd CSO Rushdale Rd CSO's  Millhouses CSO's  Sylvester Gardens CSO's	Shire Brook Graves Park Beck Graves Park Beck Meersbrook  R. Sheaf : WQ, Amenity & Fisheries improvement 3.2 km of Porter Brook	Sept 1998 Sept 1999 Sept 1999 Oct 1998 Construction to be completed Apr 1998 - Mar 1999  Apr 1998 - Nov 1999

## AMP3 - Environment Agency NEP draft Programme for 2000 - 2005

It should be stressed that all 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.

ACTION	BENEFITS	TIMESCALE
<b>Liaise with Yorkshire Water and provide environmental information to progress schemes to improve Water Quality currently affected by discharges of sewage effluent from:</b>		
Adwick STW	To Improve 1.2 Km Goosepool Drain affected by ammonia	2005
Carleton STW	To improve 3.2 km of the Little Went.	2005
Cudworth STW	To improve 1 km of Cudworth Dyke	2005
Dronfield STW	To improve River Drone. Note that River Drone already polluted by abandoned minewater.	2005
Fitzwilliam STW	To Improve 0.6 Km Hesle Beck	2005
Great Houghton STW	To improve 4 km of Thurnscoe Dyke.	2005
Grimethorpe STW	To improve of 4.4 Km of Grimethorpe dyke	2005
Langsett STW	To improve 2.3 km of the Little Don to comply with EC Fisheries directive.	2005
Stocksbridge STW	To improve 8 Km River Don	2005
Wath Upon Dearne STW	To Improve 1.8 Km of R. Dearne	2005
<b>To improve Water Quality currently affected by discharges from Combined Sewer Overflows (CSO's) in the Don, Dearne &amp; Rother Catchments in the following Drainage Area Zones:</b>		
Barnsley 306 Grimethorpe: Cudworth CSOs (13 CSO's)	R. Dearne, R. Dove, Cudworth Dyke, Smallbridge Dyke & Ferrybridge Dyke	2000 -2005
Chesterfield 703 Chesterfield West (2 CSO's)	R. Hipper	2000 -2005
Rotherham 747 Marsh Street (2) 748 Masbrough Kimberworth (7 CSOs) 758 Long Lane (3)	R. Rother HolmesTail Goit, R.Mas & R.Don R.Rother	2000 -2005
Sheffield 601 Owlter lane (11) 602 Darnall (23) 614 Stocksbridge (4)	Bagley Brook & Firth park Stream Car Brook & R.Don R. Little Don	2000 -2005
North East Derbyshire 722 Clay Cross (8) 725 Killamarsh (1)	R.Rother & tribs SW Sewer	2000 -2005

## Glossary

<b>Abstraction</b>	The removal of water from any source, either permanently or temporarily.
<b>Abstraction Licence</b>	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.
<b>Agenda 21</b>	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.
<b>Aquatic</b>	Pertaining to the water environment.
<b>Aquifer</b>	A water bearing-stratum situated below ground level. The water contained in aquifers is known as groundwater.
<b>Asset Management Plan (AMP)</b>	Water Companies' Strategic Business Plans - initiated (eg AMP 2) by OFWAT as part of the periodic review of water company charges.
<b>Biodiversity</b>	Diversity of animal and plant life.
<b>Borehole</b>	Well sunk into a water bearing rock.
<b>Buffer Zone</b>	Strip of land 10-100m wide, alongside rivers which is removed from intensive agricultural use and managed to provide appropriate habitat types.
<b>Catchment</b>	The total area from which a single river system collects surface run-off.
<b>Coarse Fish</b>	Freshwater fish other than salmon and trout.
<b>Combined Sewer Overflow (CSO)</b>	An overflow structure which permits a discharge from the sewerage system during wet weather.
<b>Culvert</b>	Drain or covered channel carrying water across or under a road, canal etc.
<b>Cyprinid fish</b>	Coarse fish belonging to the carp family, eg. Roach, Dace and Bream.
<b>EC/EU Directive</b>	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.
<b>Effluent</b>	Liquid waste from Industry, agriculture or sewage treatment plants.
<b>Fauna/Flora</b>	Animal life/ Plant life.
<b>Floodplain</b>	This includes all land adjacent to a watercourse over which water flows or would flow but for flood defences in times of flood.
<b>Groundwater</b>	Water which saturates a porous soil or rock substratum (or aquifer). Water held in storage below ground level.
<b>Integrated Pollution Control (IPC)</b>	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.
<b>Integrated Pollution Prevention &amp; Control (IPPC)</b>	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.
<b>Landfill</b>	Site used for waste disposal into/onto land.
<b>Main River</b>	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.
<b>Nitrate Sensitive Areas (NSA)</b>	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.

<b>Nitrate Vulnerable Zone (NVZ)</b>	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.
<b>Ordinary watercourse</b>	A watercourse that does not form part of a Main River.
<b>Pesticides</b>	Substances used to kill pests, weeds, insects, fungi, rodents etc.
<b>Reach</b>	A length of a river.
<b>River Corridor</b>	The continuous area of river, river banks and immediately adjacent land alongside a river and its tributaries.
<b>Salmonid Fish</b>	Game fish eg. trout and salmon.
<b>Sewage</b>	Liquid waste from cities, towns and villages which is normally collected and conveyed in sewers for treatment and/or discharge to the environment.
<b>Sewerage</b>	Means of conveying foul or surface water.
<b>Site of Special Scientific Interest (SSSI)</b>	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.
<b>Special Protection Area (SPA)</b>	Internationally important sites designated under the EEC Wild Birds Directive.
<b>Surface Water</b>	Water collecting on and running off the surface of the ground.
<b>Sustainable Development</b>	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
<b>Waste Minimisation</b>	The reduction of waste and pollution at source by increasing the efficiency of production processes and the nature and formulation of products.
<b>Winter Storage Reservoir</b>	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.

#### ENVIRONMENT AGENCY GENERAL ENQUIRY LINE

**0645 333 111**

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

#### ENVIRONMENT AGENCY EMERGENCY HOTLINE

**0800 80 70 60**



**ENVIRONMENT  
AGENCY**



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