

# local environment agency plan

**DOVE**  
**ACTION PLAN**  
**MARCH 2000**



ENVIRONMENT  
AGENCY

# Key Details for the Area

<b>Population</b> (Census Data 1991)	110,000	<b>Consented Discharges</b>		
		Sewage Treatment Works		36
		Sewage & Storm Overflows		156
		Private Sewage Treatment Plants		68
		Industrial Discharges		34
<b>Major Settlements</b>	<b>Population</b>	<b>Waste Management</b>		
Leek	19,801	Landfill sites		14
Cheadle	11,263	Transfer stations		7
Uttoxeter	10,329	Licensed scrap yards		7
Ashbourne (Town Only)	6,340	Exempt scrap yards		5
Tutbury & Hatton	5,729	Civic amenity sites		2
		Waste treatment plants		1
<b>Water Resources</b>		Oil treatment plants		0
Average annual rainfall	868mm	Incinerators		0
Total licensed abstraction	323 MI/d	In house storage facility		1
	135589 MI/a	<b>Integrated Pollution Control (IPC)</b>		
No. Surface abstractions	103	IPC Authorised Processes		8
No. Groundwater abstractions	262			
No. Licensed impoundment's	18	<b>Radioactive Substances (RAS)</b>		
<b>Conservation</b>		Sites with authorisations for accumulation and disposal of radioactive waste		0
Special Areas of Conservation	2	Sites with registrations to hold radioactive materials		10
Special Protection Areas	1			
Sites of Special Scientific Interest	28	<b>Monitored Water Quality</b>		
Sites of Importance to Nature Conservation	645	Length of river in grade (km) 1997 data		
Wildlife Trust Reserves	17	<b>Quality</b>	<b>Grade</b>	<b>Chemistry</b>
RSPB Reserves	1			<b>Biology</b>
Scheduled Ancient Monuments	185	Good	A	97.7
			B	128.2
		Fair	C	38.3
			D	6.3
			E	0
		Poor	F	0
		Bad		0
<b>Fisheries</b>				
Length of designated rivers (km)				
Salmonid (salmon and trout)	137			
Cyprinid (coarse fish) – river	41.5			
Cyprinid (coarse fish) – canal	0			
<b>Flood Defence</b>				
Length of "main" river (km)	186.5			
Length of defended river (km)	11			
No. of flood alleviation schemes	3			

# Foreword

Welcome to the Environment Agency's local action plan for the River Dove catchment area. The plan sets out the work which the Agency and others will do over the next five years to meet the environmental issues and problems that have been identified and can be tackled locally.

The document has been produced after extensive public consultation following the launch of the Dove Consultation Report in May 1999. The comments we received have enabled us to evaluate the issues raised in the original report and refine them into this Action Plan. The plan will be monitored and a series of Annual Reviews will report on the progress being made as well as any new issues that arise.

The work of the Agency is increasingly being implemented through partnerships and many of the issues in this plan reflect the need for co-operation, bringing together the complementary responsibilities, powers and finances of different groups.

I believe that the implementation of this Action Plan will lead to improvements in the environment of the Dove catchment area. If you have any comments or wish to become involved in addressing the issues raised we would like to hear from you.

A handwritten signature in blue ink, appearing to read 'PB Burns', with a long horizontal line extending from the end of the signature.

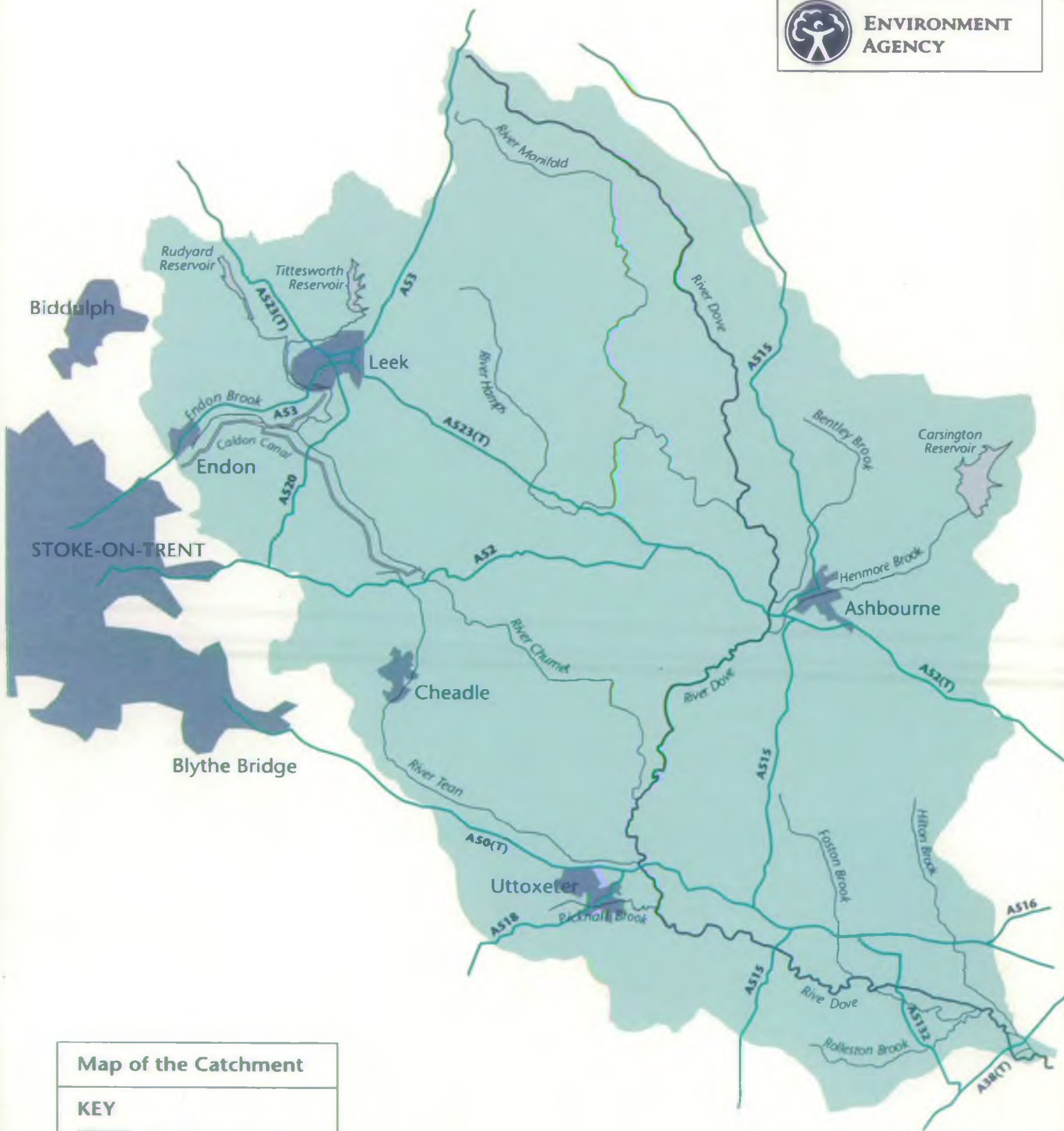
Philip Burns  
Area Manager - Upper Trent



Dove Local Environment  
Agency Plan  
Map 1



ENVIRONMENT  
AGENCY



Map of the Catchment

KEY

- Plan boundary
- Watercourse
- Canal
- Built up area
- A roads



0 10km

# A Vision for the River Dove Catchment Area

The Dove catchment is predominantly rural in character and contains some of the most highly regarded landscapes in England. Part of the plan area lies within the Peak District National Park. Whilst the area has a relatively small population of approximately 110,000, during the busiest time of the year up to 3,000 people per hour can visit parts of the National Park. As in all areas there are increasing demands being put on the landscape by those who live, work and visit the area. This pressure should be addressed alongside the desire to conserve this important landscape for the benefit of future generations.

The Agency's aim for the area is to work in close co-operation with other organisations to improve and enhance the environment, working in partnership with other organisations to deliver an integrated approach to resolve the problems identified in this plan. The Agency also seeks to raise people's understanding of environmental issues, increase awareness of their local environment, influence behaviour and encourage sustainable practices through education.

The Agency has identified seven key objectives for the plan area:

- Maintain and improve the water quality of rivers, canals and groundwater.
- Alleviate flooding by enhancing flood defences that are inadequate and providing additional defences where justifiable.
- Enhance flood warning systems where feasible.
- Promote waste minimisation and recycling and encourage better management of waste products.
- Support biodiversity through the protection and enhancement of species and habitats.

- Ensure proper management of the catchments valuable water resources.
- Restore a population of salmon to the River Trent catchment utilising the River Dove as spawning grounds, whilst ensuring the existing trout and coarse fishery is preserved.

The Actions required to address the issues raised by the consultation process are set out in the activity tables in this document. Each activity aims to achieve one or more of the above objectives. Whilst these objectives complement each other, some degree of compromise may have been necessary to achieve comprehensive tables of proposed actions. The achievement of sustainable development requires long term planning, careful balancing of priorities and the commitment of everyone that uses or manages the environment. The Agency is committed to achieving sustainable development.



Thorpe Cloud at Dovedale

# Vision





# Contents

LOCAL ENVIRONMENT  
AGENCY PLAN

DOVE



Foreword .....	ii
Map .....	iii
Key Details .....	iv
A Vision for the River Dove Catchment .....	v

## 1 Introduction

1.1 The Environment Agency .....	4
1.1.1 The role of other organisations in protecting & improving the environment ..	6
1.2 The Local Environment Agency Plan Process .....	6
1.2.1 LEAPs and other plans .....	6
1.2.2 Agency Statutory Committees .....	6
1.2.3 Area Environment Groups .....	6
1.3 Sustainable Development, Biodiversity and Global Climate Change .....	6
1.3.1 Sustainable Development .....	6
1.3.2 Biodiversity .....	7
1.3.3 Global Climate Change .....	7

## 2 The Dove Plan Area

2.1 Introduction .....	8
2.2 Summary of Uses, Activities and State of the Environment .....	8
2.2.1 Local Administration .....	8
2.2.2 Landscape .....	8
2.2.3 Geology and Topography .....	9
2.2.4 Land Use .....	9
2.2.5 Waste Disposal and Management .....	9
2.2.6 Air Quality .....	10
2.2.7 Water Quality .....	10
2.2.8 Fisheries .....	10
2.2.9 Recreation and Navigation .....	11
2.2.10 Flood Defence .....	11
2.2.11 Water Resources .....	12
2.2.12 Wildlife .....	12
2.2.13 Heritage .....	12

## 3.0 Review of The Public Consultation Process

3.1	Summary of Public Consultation .....	14
3.1.1	Informal Consultation .....	14
3.1.2	Formal Consultation .....	14
3.2	Summary of Responses .....	14
3.3	Further Action .....	15

## 4.0 Actions

4.1	Implementation .....	16
4.1.1	Issues Location Map .....	17
4.2	Action Tables .....	18

## 5.0 Protection through Partnership

5.1	Partnerships .....	40
5.1.1	Local Agenda 21 .....	40
5.1.2	Water Company Asset Management Plans .....	40
5.1.3	Other Partnership Schemes .....	40
5.2	Education .....	40
5.3	Land Use/Planning Guidance .....	41

## 6.0 Future Review and Monitoring

6.1	Future Review and Monitoring .....	42
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### Appendices

Appendix 1	List of organisations and individuals who made written responses to the consultation report. ....	44
Appendix 2	Suggested amendments to the consultation report .....	45
Appendix 3	Duties, powers and interests .....	47
Appendix 4	Planning guidance statements .....	51
Appendix 5	Environment Agency leaflets and information .....	54
Appendix 6	Glossary .....	56

LOCAL ENVIRONMENT  
AGENCY PLAN

DOVE





# 1.0 Introduction

# 1 Introduction

This action plan is the second stage in the Local Environment Agency Plan (LEAP) process for the Dove catchment area as demonstrated in Figure 1. The plan sets out in a series of action tables, a programme of work to be undertaken by the Agency and other partnership organisations over the next five years. It looks at education, planning policy, working partnerships and the role each play within the area as a means of addressing wider, long-term issues. Progress against the plan will be monitored and reported annually.

The River Dove rises on the eastern side of Axe Edge, a high gritstone moor and flows southwards through the Peak District National Park and onwards forming the boundary between Derbyshire and Staffordshire where it joins the River Trent.

The Dove catchment extends to 1,000 square km and includes parts of both Derbyshire and Staffordshire. The market towns of Leek, Cheadle, Ashbourne, Uttoxeter, Hatton, Tutbury, Alstonefield and Cheddleton, alongside several villages can be found within the catchment.

The Agency uses water catchment boundaries for LEAP's because they represent firm environmental boundaries. The map inside the fold out cover shows some of the features that make up the catchment.

## 1.1 The Environment Agency

The Environment Agency is a national government agency, a public body, formed on 1 April 1996. It inherits the many and varied responsibilities of the National Rivers Authority, Her Majesty's Inspectorate of Pollution, The Waste Regulation Authorities and some technical units from the Department of the Environment (now part of the Department of the Environment, Transport and the Regions, DETR).

The Agency has eight regions in England and Wales, sub-divided into twenty-six areas. The Midlands Region comprises four areas: Upper Trent, Lower Trent, Upper Severn, and Lower Severn. The Dove LEAP is one of four LEAPs undertaken in the Upper Trent Area, the other three are: Staffordshire Trent Valley LEAP, West Midlands Tame LEAP, and the Burton, Nuneaton and Tamworth LEAP.

The principle aim of the Environment Agency 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. Pollution prevention and control, education and enforcement,

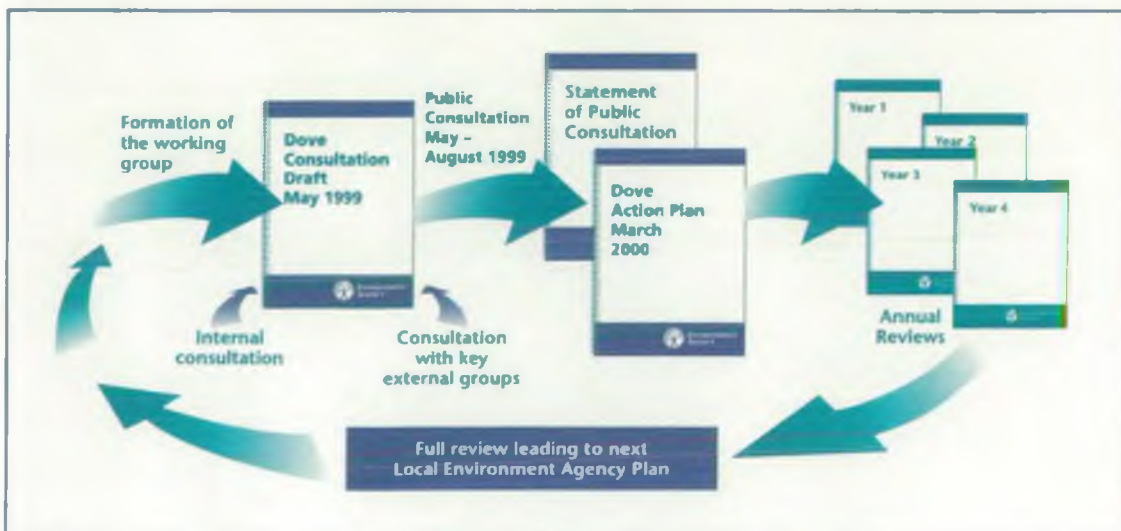


Figure 1: The LEAP process and main outputs in the five-year cycle.



where necessary, will be the key means of achieving this aim.

Most of the Agency's work operates at a local level and this allows an integrated approach to managing the environment. LEAPs translate the Agency's 'Environmental Strategy for the Millennium and Beyond' into practical action. The strategy is based on the need to take an integrated approach to the management of the whole environment and identifies nine environmental themes that are of principal and immediate concern to the Agency.

The strategic nature of the LEAP as a planning tool means that the plan is not designed to reflect fully our routine activities. Our everyday work commits substantial resources to managing the environment, including extensive monitoring and survey operations. The Agency's principal regulatory and environmental management functions are highlighted in the box below:

## Nine Environmental Themes

-  Addressing the causes and effects of climate change
-  Helping to improve air quality
-  Managing our water resources
-  Enhancing biodiversity
-  Managing our freshwater fisheries
-  Conserving the land
-  Managing waste
-  Regulating major industries
-  Delivering integrated river basin management

- Monitor the state of pollution and other aspects of the environment
- Regulate industrial processes with the greatest pollution potential so as to prevent or minimise pollution to the environment as a whole
- Regulate the disposal of radioactive waste and, except on nuclear licensed sites, the keeping and use of radioactive material and accumulation of radioactive waste
- Regulate the treating, keeping, movement and disposal of controlled waste so as to prevent pollution of the environment or harm to human health
- Preserve or improve the quality of rivers through powers to regulate, prevent, mitigate or remedy pollution of water
- Take any necessary action to conserve, redistribute, augment and secure the proper use of water resources
- Exercise a general supervision over all matters relating to flood defence, including powers to take certain flood defence measures as approved by Regional Flood Defence Committees
- Maintain, improve and develop salmon, trout, coarse and eel fisheries
- Provide advice to local authorities' planning offices about planning applications
- Maintain or improve non-marine navigation in some parts of the country
- Regulate the remediation of contaminated land designated as special sites

The Agency is also required to contribute to the conservation of nature and our heritage. In general the Agency has to:

- Have regard to protecting and preserving buildings, sites and objects of archaeological, architectural, engineering or historic interest
- Take into account any effect on the beauty or amenity of any rural or urban areas or on any flora, fauna, features, building, sites or objects
- Have regard to preserving public access to areas of natural beauty and buildings



## 1.1.1 The role of other organisations in protecting and improving the environment

The Environment Agency is not the only organisation involved in managing human activities to protect and improve the environment. We share many of our responsibilities with local authorities, in particular waste management and the regulation of emissions to air. Other bodies who have responsibility for the environment were referred to in the Consultation Draft, (p.4).

## 1.2 The Local Environment Agency Plan Process

LEAPs are non-statutory, integrated action plans. They take a holistic approach to the management of the environment and provide a focus for those who have concerns for the environment in their locality. In the Upper Trent Area four LEAPs have been produced:

**Table 1 The Upper Trent Area LEAP Programme**

Catchment	Start	Consultation Starts	Issue Action Plan	1st Annual Review
Staffordshire Trent Valley	October 1996	June 1999	February 1998	June 1999
West Midlands Tame	May 1997	March 1998	March 1999	May 2000
Dove	August 1998	May 1999	March 2000	May 2001
Burton, Nuneaton & Tamworth	February 1999	November 1999	August 2000	October 2001

### 1.2.1 LEAPs and other plans

Whilst LEAPs are the Environment Agency's plans, their content and development will reflect the shared responsibility that the Agency has with other bodies. The LEAP will compliment and integrate with other organisations plans e.g. Local Development Plans, Local Waste Plans, Local Air Quality Management Plans, Local Biodiversity Plans and Local Agenda 21 Action Plans.

The Agency hopes that public participation in LEAP's will increase local awareness of environmental issues, involve people in their

environment and create a feeling of ownership of our environment.

### 1.2.2 Agency Statutory Committees

In order to ensure openness, objectivity and accountability, the Agency is required by law to consult committees on all aspects of its work. Three statutory committees serve the Midlands Region:

- Regional Environmental Protection Advisory Committee (REPAC)
- Regional Flood Defence Committee (RFDC)
- Regional Fisheries, Ecology and Recreation Advisory Committee (REFRAC)

Membership of the committees consists of local people drawn from public life, including industry, agriculture, local authorities and environment groups.

### 1.2.3 Area Environment Groups

An advisory Area Environment Group (AEG) serves the Upper Trent Area. Membership consists of 20 local people who live or work in the area and who represent a wide spectrum of interests. The group advises the Agency on LEAP's, the delivery of local services and acts as a link between the local community, the Agency and its statutory committees.

## 1.3 Sustainable Development, Biodiversity and Global Climate Change

### 1.3.1 Sustainable Development

The Environment Agency is required and guided by the Government to use its duties and powers in order to help achieve the objective of sustainable development. The most commonly used working definition of sustainable development was established by the Brundtland Commission report 'Our Common Future' (1987):

*"... Development that meets the needs of the present without compromising the ability of future generations to meet their own needs"*





Meeting the principles of sustainable development does not mean less economic development, but recognises the importance of integrating human needs with the environment in which we all live. One of the challenges is to promote ways of encouraging environmentally friendly economic activity, and of discouraging or controlling environmentally damaging activity. The creation of the Agency was, in part, recognition of the need to take a more integrated and long-term view of environmental management at a national level. LEAPs are an important part of this process focusing at the local level.

### 1.3.2 Biodiversity

Biodiversity is commonly used to describe the huge variety of living organisms. The Biodiversity Convention, signed by the Government at the Rio 'Earth Summit' in 1992, seeks to ensure that the full range of animal and plant species are conserved. A national action plan for biodiversity was subsequently published in January 1994.

In pursuance of the Government's commitment to biodiversity conservation, the Agency has significant responsibilities regarding implementation of the Biodiversity Action Plan and will be developing targets for species and habitats of conservation concern. In the Upper Trent Area species including the Water Vole, Great Crested Newt, Crayfish and Black Poplar are of great concern, as are the possible spread of Alder disease, the invasion of Himalayan Balsam and Japanese Knotweed. In the Dove catchment there is evidence to suggest that Otters are returning and that ground-nesting waders are breeding. In addition there are other water-related species and habitats in the area that will require protection and enhancement, and the Agency is committed to protecting the environment on which these species depend.



Otter (*Lutra lutra*)

### 1.3.3 Global Climate Change

The Earth's climate has always been changing, modelling climate change is difficult and whilst predictions vary, it is generally accepted that global temperatures are rising due to the impact of human activity. The Agency is working to address the likely causes of climate change and its resulting impacts.

The Agency is working to achieve the following objectives:

- Help to ensure that the Government's greenhouse gas targets are met
- Develop methods to improve our estimates of the emission of methane into the atmosphere from landfill sites
- Promote tax incentives to reduce energy production from burning fossil fuels
- Set an example by reducing our own energy and fossil fuel consumption
- Invest in research to predict the likely effects of climate change on the environment of England and Wales, and how to manage them
- Provide improved mapping of low-lying coastal areas at risk from sea-level changes
- Develop techniques to identify changes in plant life, using remote sensing techniques, to measure the effects of different weather patterns in sensitive areas
- Contribute our knowledge and expertise to national and international forums dealing with climate change

## 2.0 The Dove Plan Area

The following gives a summary of the area. A detailed description of the area was produced for the Consultation Report and the Environmental Overview. The following chapter provides a brief overview of the main points.

### 2.1 Introduction

The plan covers 1,000 km<sup>2</sup> of the Dove catchment, which rises on the eastern side of Axe Edge and flows southwards to the boundary of the Peak, forming the boundary between Staffordshire and Derbyshire. The plan covers not only the River Dove but also its many tributaries and the Caldon Canal. Dove tributaries include the rivers Manifold, Tean, Hamps and Churnet as well as the Hilton, Henmore, Marchington and Rolleston Brooks.

The valley of the Dove together with that of the Manifold forms part of the Peak District National Park and has a landscape which is highly valued.



Peak District National Park

The resident population of the area was approximately 110,000 in 1991 and is estimated to rise to 115,000 by 2001. The Derbyshire and Staffordshire structure plans

show a requirement for 3,700 additional dwellings between 1991 and 2001. Proposed development land for commercial activity has also been allocated. This allocation is centred on the Cheadle and Ashbourne areas. Major road improvements in the area have been undertaken including the recent completion of the A50 trunk road. Accommodating necessary development with minimum environmental impact is a challenge faced by the land use planning system.



New A50 M1-M6 Link.

### 2.2 Summary of Uses, Activities and State of the Environment

#### 2.2.1 Local Administration

Local administration for the Dove catchment is shared between the County Councils of Staffordshire and Derbyshire and five District Councils: High Peak Borough Council, Derbyshire Dales District Council, South Derbyshire District Council, Staffordshire Moorlands District Council and East Staffordshire District Council, and the Peak District National Park Authority.

#### 2.2.2 Landscape

The landscape of the LEAP area falls mainly into four landscape areas as defined by the



Countryside Agency (CA) and English Nature (EN):

- 52 White Peak
- 53 South West Peak
- 64 Potteries and Churnet Valley
- 68 Needwood and South Derbyshire Claylands

Two further character areas define small sites to the north of Burton and north-east of Ashbourne:

- 50 Derbyshire Peak Fringe and Lower Derwent
- 69 Trent Valley Washland, (CA), Trent Valley and Rises (EN).

### 2.2.3 Geology and Topography

The geology of the Dove catchment can be divided into three distinctive areas. Within each the underlying rocks exert a controlling influence on the local landscape.

Carboniferous Limestones and Namurian Gritstones dominate the northern half of the catchment. These are the oldest exposed rocks in the area, outcropping to form the uplands of the Staffordshire Moorlands and Derbyshire Peak District. A localised area of coal measures strata also occurs around Cheadle, east of Stoke on Trent. Mudstones and marls of Triassic age underlie much of the southern half of the catchment. These give rise to an area of lower, more uniform relief. Between these two contrasting areas lies a narrow central belt of Triassic Sandstones, extending from around Cheadle in the west towards Ashbourne in the east. A further outcrop occurs west of Leek in the Churnet valley.

The topography of the catchment is dominated by the southern extremity of the Pennines and drainage is generally in a southern and eastern direction. The upland valleys tend to be narrow and deep. The lower reaches of the River Dove meander across a wide floodplain before its confluence with the River Trent.

### 2.2.4 Land Use

Agriculture is the dominant land use within the plan area, with over 80% of all

agricultural land being managed grassland. Dairy farming forms the major part of agricultural practice within the catchment. Notable industrial development in the area reflects the local dependence upon agriculture; employment includes milk and meat production, animal by-products and other food manufacturers.

Much of the area is rich in minerals, limestone is quarried extensively, sand and gravel are extracted at several sites and gypsum is also quarried.

Traditional trades such as textile finishing and dyeing still form a major part of the local economy, as do the newer industries of chemical manufacture and engineering.



Aerial View of an Agricultural Landscape

### 2.2.5 Waste Disposal and Management

In Derbyshire, approximately 3 million tonnes of waste was land filled during 1995/6, 83% of which originated within the county. Approximately a third of the waste types deposited were industrial and commercial waste, the remainder mainly comprising construction and inert waste (36%) and household waste (26%).

In Staffordshire, the dominant county within the plan area, the 58 operational landfill sites accepted approximately 3.2 million tonnes of controlled waste, 72% of which originated within the county. However because the Dove LEAP area does not cover the entirety of both counties, the quantity of waste produced in the LEAP area will be significantly less.

There are over 35 licensed waste management facilities within the Dove catchment and landfill remains the predominant route for the disposal of waste.





Landfill

### 2.2.6 Air Quality

Nationally there have been significant improvements in air quality since the infamous London smogs of 1951. Levels of sulphur dioxide and black smoke have fallen considerably. Air quality in the plan area is generally good and has been improving in recent years, encouraged by the 1997 National Air Strategy. The main responsibility for delivery of the Government's strategy lies with local authorities, although the Agency plays a role through its regulation of emissions from major industries.

Within the plan area high concentrations of most pollutants are recorded around urban areas and major roads, for example, the A523 and A50 can be clearly identified by the recorded levels of carbon monoxide (CO) and nitrogen oxides (NOx). Air quality around Blue Circle Works, Cauldon has been identified as a key concern for the area, with the need for modelling and monitoring of the air quality being highlighted in issue 5.

### 2.2.7 Water Quality

#### Surface Waters

The upper reaches of the River Dove and its main tributaries, upstream of the River Churnet, are high quality rural rivers. The

primary land use of sheep farming has however meant that pollution incidents are predominantly caused by the dispersal of sheep dip, resulting in upper reaches of the Dove's aquatic life being adversely affected. (As highlighted by issue 14). Agricultural practice has also led to increased levels of herbicide in Tittesworth reservoir, which provides Stoke with drinking water. (See issue 1).

#### Ground Waters

There are no widespread problems of ground water pollution in the catchment and variations in quality tend to be natural. However, a site investigation undertaken in 1991, prior to a proposed sale of industrial land at Leek, indicated that groundwater contamination had been detected across the site. A series of further investigations identified the presence of hydrocarbons, chlorinated solvents and other organic compounds within the existing site drainage system, and within former landfilled areas on two adjacent industrial sites. Issue 4 identifies a long term monitoring strategy to enable the assessment of the risk to nearby drinking water abstractions at Pool End and Abbey Green.

### 2.2.8 Fisheries

Uniquely within the Trent catchment, the Dove and its tributaries, contain high quality salmonid fisheries; many of which are designated under the EC Freshwater Fisheries Directive. The River Dove has been re-stocked with 150,000 young salmon (issue 11). Brown trout and grayling are the dominant upland species and much of the River Dove is restocked annually with brown and rainbow trout (issue 12).

Fish populations in the middle reaches of the Rivers Churnet and Tean have been adversely affected in the past by the impact of sewage and trade effluents. However, these populations should show signs of recovery with the introduction of tighter consent conditions on some effluent discharges.

The lower reaches generally provide good mixed and coarse fisheries, the lower Dove being noted for its Barbel populations.



### 2.2.9 Recreation and Navigation

The Dove catchment contains some of the most highly regarded landscapes in England; consequently the area is a popular tourist destination with a range of formal and informal recreational activities. The presence of the National Park attracts many millions of visitors per year, it is estimated that during the busiest times of the year up to 3,000 people per hour visit Dovedale, one of the most popular beauty spots (see issue 7). Such high concentrations of people in a relatively small area create a variety of pressures and conflicts both upon the environment and between the respective recreational activities. Potential pressures include erosion and compaction of areas used for walking and cycling.



Erosion problems at Dovedale

The Caldon canal is the only navigable waterway in the catchment. British Waterways raised the canal to "towing" standard in the 1980's. The canal has since become a highly regarded recreational resource for both water sports, such as narrow boating and towpath activities such as walking.



Caldon Canal at Cheddleton

### 2.2.10 Flood Defence

Flood defences to protect both property and agricultural land have been constructed in many parts of the catchment. There are extensive flood banks on the River Dove between Marchington and Egginton as well as on the Endon, Henmore, Picknall, Foston and Hilton Brooks. More flood defences are proposed in the catchment over the next few years (See issues 2 and 6). There are 3 urban flood alleviation schemes.

The severe flooding which affected large areas of central and eastern England and parts of Wales over the 1998 Easter weekend called for urgent action from the Agency on two fronts. To improve flood warning systems and flood defences which had proved deficient in some areas, and to learn the wider lessons of the Easter event.

During the Easter flooding event it was made clear that many people were unaware of either the level of flood risk facing them, or what flood warnings they could expect to receive. When the floods receded many victims were left without help, confused about how to begin the task of cleaning up the damage and anxious about the effects on their health and the safety of essential gas, water and electricity supplies.

The minister Elliot Morley in his Parliamentary statement on the 20th October 1998 highlighted a series of specific targets for the Agency. The following actions have been completed by the Environment Agency since this statement:

- Flood warning dissemination plans checked for errors, omissions and agreed with emergency services.
- In conjunction with MAFF and other operating authorities, supervisory responsibilities have been developed for all flood defence matters.
- Internal management structures have been addressed and action taken to address skills shortages.
- Local Authorities and emergency services approached to assess emergency response arrangements.

- For each river catchment flood warning needs and flood forecasting techniques have been determined.
- Floodplain management is handed over to local planning authorities.
- Flood warning telemetry network updated.
- Increased coverage of automatic flood warning message system.
- National public flood awareness (Floodline) campaign launched in October 1999.

### 2.2.11 Water Resources

The catchment contains important water resources, stored within upland reservoirs and major sandstone and limestone aquifers. Urban and industrial development has made only modest local demands on this resource. Consequently, this provides water resources to adjacent conurbations, such as Stoke and Leicester.

Most of the water is abstracted from surface water supplies; the remainder is obtained from groundwater via aquifers. STW are the largest abstractor with two public water supply reservoirs at Carsington and Tittesworth, and an intake on the River Dove at Egginton which supplies Staunton Harold and Foremark reservoirs in Derbyshire. South Staffordshire Water plc., the other major water supplier, are licensed to abstract groundwater from boreholes in the LEAP area.

Groundwater is also abstracted to supply a number of industrial activities, principally around the Leek area. The export of water out of the catchment results in a net loss of resource, which can create pressure on the environment during droughts.

### 2.2.12 Wildlife

The area supports a wide range of habitats that are of wildlife value, some of which have been designated as Sites of Special Scientific Interest (SSSI's) due to their importance at national level or are locally designated Sites of Importance for Nature Conservation (SINC's). There are 28 SSSI's and 406 water-related SINC's within the catchment. In addition, parts of three

European Habitat Directive sites fall within the catchment. These are a Special Protection Area, the Peak District Moors, designated for its upland ground nesting birds and two Special Areas of conservation, the Peak District Dales and the Peak District Dales Woodland.

Seven species from the 'priority' list of the UK Biodiversity Steering Group report occur within the plan area. The key species in the area are water vole, otter, pipistrelle bat, bittern, reed bunting, great crested newt and white clawed crayfish. The plan area encompasses 17 Wildlife Trust reserves and one RSPB reserve.



Water Vole

### 2.2.13 Heritage

The cultural heritage of the LEAP area is extremely rich and diverse. Human artefacts from 9000BC have been discovered in the Manifold Valley.

The landscapes of the area range from moorlands and steep sided wooded valleys to broad river valleys. A predominantly agricultural land use resulted in the settlement and field patterns that are characteristic of the area; The LEAP area contains 185 Scheduled Ancient Monuments.



LOCAL ENVIRONMENT  
AGENCY PLAN

DOVE



# 3.0 Review of the Public Consultation Process

## 3.1 Summary of Public Consultation

The Environment Agency is committed to full consultation through all stages of the LEAP process. During the compilation of the Dove LEAP Consultation Report and following its publication in May 1999, we undertook extensive consultation with interested parties and the general public.

This section reviews the consultation process and provides a brief summary of some of the comments and our actions in response. A more detailed review of the comments, including individual responses, is given in a separate document entitled 'Statement of Public Consultation', copies of which are available from the Agency's Upper Trent Area office.

### 3.1.1 Informal Consultation

In November 1998 the Agency wrote to 166 key groups, local authorities and other representative bodies, asking for comments on the Agency's initial list of issues and problems affecting the environment in the area. In total 37 organisations responded. All comments from this initial information gathering exercise were considered and where appropriate, were incorporated into the consultation report. Staff from the Agency, with valuable input from the Upper Trent Area's AEG sub-group, developed the report.

### 3.1.2 Formal Consultation

The Dove LEAP Consultation Report was launched on the 4th May 1999. The publication marked the start of a three month consultation period, which ended on the 13th August 1999. During that time the report was promoted by:

- Talks to both public and private organisations

- Display boards at local libraries, and Town Halls throughout the plan area.
- Copies of the report placed on deposit at libraries and public offices.
- Attendance at a number of shows throughout the plan area.
- Press releases.

## 3.2 Summary of Responses

A total of 50 written responses to the consultation exercise were received – 23 letters and 27 questionnaires. The response was encouraging, with those consultees who responded representing a wide cross section of interests. A list of all those who commented is included in Appendix 1. All letters and questionnaires were acknowledged and detailed follow-ups were sent where appropriate.

All comments have been considered and where appropriate and practicable, incorporated into the action plan. During the consultation process and via the responses, many organisations expressed an interest in working in partnership with the Agency towards resolving issues highlighted in the plan. We received many helpful and welcome suggestions. Errors and omissions were also highlighted, and these are summarised in Appendix 2.

The consultation process has given the Agency a more comprehensive understanding of the issues and opinions presented in the LEAP and of public concern in the area. In addition to the issue specific responses, there were a number of important general points raised by the consultation process.

The key message that came across is that the response to the process and the aims of the LEAP are very positive. The Dove LEAP is seen as a move in the right direction for both the Agency and the environment. The questionnaires asked for respondents to



rank the issues that they considered were the most important. Of the responses received the most important issues were:

- Issue 7 – Landscape and Ecology in the Dove Catchment
- Issue 13 – Sustainable River Bank Management
- Issue 15 – Biodiversity in the Dove Catchment
- Issue 16 – Water Quality Objectives, Standards & Directives

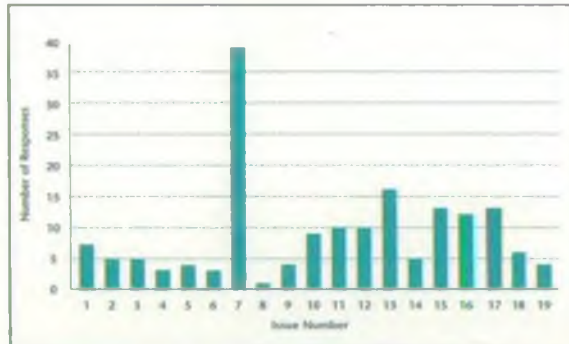


Figure 2: The Number of Responses to Each Issue

The graph demonstrates that the most popular issues (those most frequently referred to in the rankings) were:

- Issue 7 – Landscape and Ecology in the Dove Catchment
- Issue 13 – Sustainable River Bank Management
- Issue 17 – Sustainable Waste Management

The letters and questionnaires raised a number of potential new issues:

- The potential of hydro, solar and wind power.
- Commercial water extraction.
- Reducing water consumption.
- Green Corridors.
- Publicly owned land.
- Flood risk at Marchington.
- Constant water supply to Caldon Canal from Rudyard Reservoir.
- Waste Management Plans.
- Mineral extraction and its environmental impacts.

The Agency has considered the responses received and the new issues raised. No new

issues have been included in the Dove LEAP Action Plan as they are either already incorporated into the Agency's everyday work or the Agency has limited responsibility, or funding available (e.g. implementation of solar power initiatives), for addressing such issues. Others, such as land ownership issues, are outside the remit of the Agency. Where the consultation responses highlight issues that are managed through our everyday workload it helps us to give priority to these aspects during workload planning.

### 3.3 Further Action

A number of changes to the issues, options and proposals have been made as a result of the public consultation. Changes to existing issues are identified in the activity tables in Section 4. The plan reflects a balance between the opinions expressed and the need to ensure a feasible and workable plan.



# 4.0 Actions

## 4 Actions

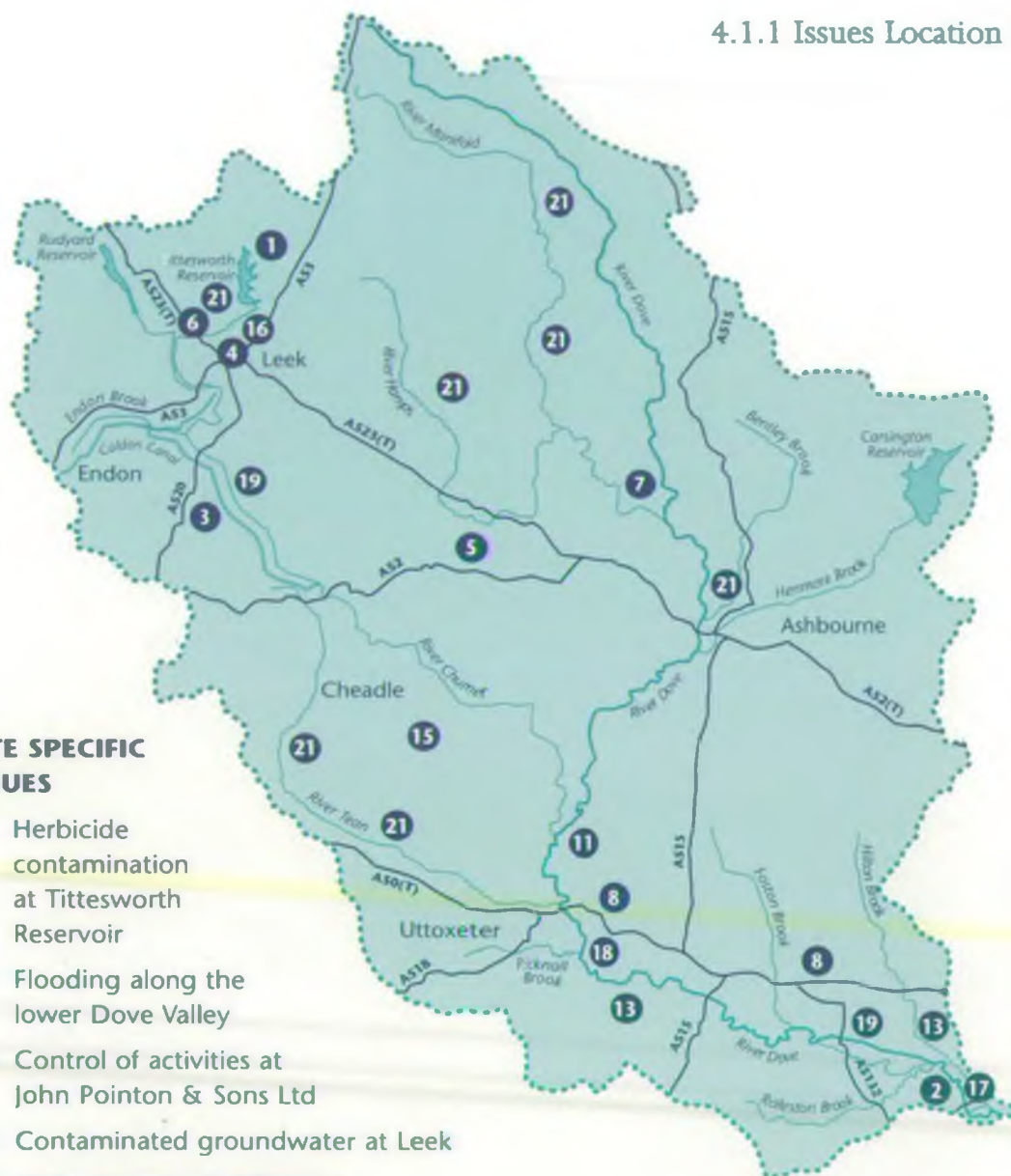
### 4.1 Implementation

Implementation of the plan is based on the 23 key issues set out below. Following the end of the consultation period the Agency has undertaken extensive negotiations with key groups and individuals. Actions to resolve issues are intended to be SMART (Specific, Measurable, Agreed, Realistic and Time based) and as such the plan represents a non-recurring investment by the Agency and others in the plan area.

The consultation process generally supported the issues raised by the Agency. Many of the options have been carried through into the activity tables but some alterations have been made and new approaches taken.

A number of actions will require feasibility studies and an appraisal of options prior to work commencing. In some cases, depending on the outcome of these studies, further action may not be required. The timescales for actions may vary depending on future political change and changes within the economy.

All changes will be highlighted within the annual review (see section 6). To facilitate a more effective monitoring system the issue numbering system has been refined for this Action Plan. All sub-sections identified in the Consultation Draft document have been removed leaving issues in continuous ascending numerical order.



- 1 Herbicide contamination at Tittesworth Reservoir
- 2 Flooding along the lower Dove Valley
- 3 Control of activities at John Pointon & Sons Ltd
- 4 Contaminated groundwater at Leek
- 5 Environmental monitoring – Blue Circle Works, Caudon
- 6 Flooding of River Churnet at Leek

- 7** Impact of tourism on the landscape and ecological habitats of Dovedale
- 8** Developments within floodplain including development along the A50 corridor
- 9** Changes in agricultural land-use
- 10** Loss of habitat diversity in the lower reaches of the Dove catchment
- 11** Reintroduction of salmon to the River Dove
- 12** The genetic integrity of brown trout in the Dove catchment
- 13** Environmental practices at rural industrial estates

- 14** Pollution from sheep dip in the Dove catchment
- 15** Low flows in the Croxden Brook
- 16** Tittesworth Reservoir / Deep Hayes compensation discharge arrangements
- 17** Dove catchment abstraction licensing policy
- 18** Sustainable river bank management

- 19** Water level management plans
- 20** Biodiversity in the Dove catchment
- 21** Water quality objectives, standards and directives
- 22** Sustainable waste management
- 23** Investment by Severn Trent Water Ltd to improve water quality



## 4.2 Action Tables

The issues are presented with a number of actions, a target timetable and the identification of responsible parties. Where possible, costs have been outlined for the period covered by the plan. This does not necessarily reflect the total cost of the schemes and is occasionally an estimate to be more accurately costed later. Unforeseen changes in funding available to the Agency and partner organisations may lead to re-evaluation of projects during the life cycle of the LEAP.

### ABBREVIATIONS

<b>AEG</b>	Area Environment Group
<b>AMP</b>	Asset Management Plan
<b>BACA</b>	British Agro-chemical Association
<b>BAP</b>	Biodiversity Action Plan
<b>BC</b>	Borough Council
<b>CA</b>	Countryside Agency
<b>CC</b>	County Council
<b>CLA</b>	Country Landowners Association
<b>CMP</b>	Catchment Management Plan
<b>DETR</b>	Department of Environment Transport & The Regions
<b>DV</b>	Developers
<b>EA</b>	Environment Agency
<b>EN</b>	English Nature

<b>FWAG</b>	Farming & Wildlife Advisory Group
<b>LA</b>	Local Authority
<b>LPA</b>	Local Planning Authority
<b>MAFF</b>	Ministry of Agriculture, Fisheries and Food
<b>NAAC</b>	National Association of Agricultural Contractors
<b>NT</b>	National Trust
<b>NFU</b>	National Farmers Union
<b>NSA</b>	National Sheep Association
<b>OFWAT</b>	Office of Water Services
<b>PDNPA</b>	Peak District National Park Authority
<b>STW</b>	Severn Trent Water Ltd
<b>WT</b>	Wildlife Trust

### KEY

<	Less than
>	Greater than
●	Action in the year indicated
R	Recurring - no additional costs to annual budgetary provision
U	Unknown costs at this time
*	Only Agency costs identified here. Costs to other organisations unknown
K	£1,000
R*	Only recurring Agency costs identified.
▲	External funding only

## ISSUE 1 Herbicide contamination at Tittesworth Reservoir



**OBJECTIVE** ~ To prevent herbicide pollution of Tittesworth Reservoir and its feeder streams by raising awareness of the issue and promoting best practice.

Tittesworth Reservoir is situated north of Leek. Severn Trent Water Ltd (STW Ltd) abstract water from the reservoir and treat it in an on-site Water Treatment Works (WTW) prior to supplying it as drinking water to the Potteries.

In May 1997, STW Ltd detected elevated levels of herbicides, predominantly Mecoprop, in the raw water from the reservoir. These levels were above the maximum limit for any individual pesticide in

drinking water stipulated in the Water Supply (Water Quality) Regulations 1989, which is 0.1 micrograms/litre. This is equivalent to just five drops of pesticide in an Olympic sized swimming pool.

In order to maintain safe drinking water levels a detailed sampling regime and pollution prevention campaigns are required.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
LEAD	OTHER										
1.1 Continue seasonal chemical sampling of Meer Brook & Reservoir (Additional to the routine monitoring carried out by STW Ltd.)		EA	STW	50	●	●	●	●	●	As required	S. Bowen
1.2 Consider extending the pollution prevention visits to landowners/farmers in the total catchment of the reservoir		EA	STW, NFU, FWAG	U	●	●	●	●	●		S. Bowen

## ISSUE 2 Flooding along the lower Dove valley


**OBJECTIVE** ~ To review and improve flood defences in the lower Dove valley.

The flood banks provided by the Trent River Board in the early 1970's, to protect communities on the lower Dove valley, were severely tested by the December 1991 flood, with breaches in some areas.

Following the Agency's mathematical modelling of the flood flows in early 1996 various uprating works of the defences have taken place at Scropton to ensure the 1 in 100 year design standard. The need for defences at Old Marston Lane, Tutbury/Hatton area has been established and a capital scheme earmarked for construction in 2002/3. As an interim measure a 1 in 10 year protection minor flood bank has been provided.



Flooding Fields

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
LEAD	OTHER										
2.1 Undertake capital works to provide a 1 in 100 year protection to Old Marston Lane at Hatton/Tutbury		EA		180			180				V. Brown P. Coxhill



## ISSUE 3 Control of activities at John Pointon & Sons Ltd (Animal Renderers), Cheddleton

OBJECTIVE ~ To reduce the environmental impact of the operations of the company

When meat and other food products are produced from animals, a proportion of the carcass is not used. These waste materials are collected by renderers. John Pointon and Sons operate a rendering plant at Cheddleton. Here animal by-products are sorted, macerated and fed into automated continuous cookers to give three products: tallow, bonemeal, and condensate.

In the period from autumn 1996 to 1 January 1998, the plant accepted whole cattle carcasses from the Government's 'Over Thirty Month Scheme', which was introduced to restore consumer confidence in British beef. Since 1 January 1998 the plant has ceased to process this material. The plant does, however, continue to process 'Specified Risk Material' (SRM) which includes the heads, spinal columns and thymus of animals slaughtered for human consumption. However, cattle showing clinical signs suggestive of BSE are disposed of under completely separate arrangements, and are not rendered.

Condensate is the aqueous content of the material liberated during the cooking process. It contains a very high level of ammoniacal nitrogen.

The local sewage treatment works does not have sufficient spare treatment capacity to accept all of the condensate produced at the plant. Disposal onto farmland has been the company's preferred option for some time but this practise causes a number of problems:

- Condensate has a distinctive pungent odour and its spreading has given rise to complaints to the Local Authority's Environmental Health Department.
- The material is extremely mobile, having little in the way of solids or fibre to bind it to the land. When spread, it can easily run off causing water pollution incidents. Appropriate enforcement action is being considered in respect of a number of such incidents.
- The Agency considers the condensate to be a waste. This contention is currently being tested through the courts. If the courts find in favour of the Agency, the disposal of condensate would require a Waste

Management Licence under the Environmental Protection Act 1990.

John Pointon and Sons contend that the material is a fertiliser. However the Fertiliser (Mammalian Meat and Bone Meal) Regulations 1998 specify that "No person shall use on agricultural land as a fertiliser any mammalian meat and bone meal or any material derived from or containing mammalian meat and bone meal to any extent."

These Regulations are enforced by Staffordshire County Council and Trading Standard SEAC (Independent Advisors to the Government on Spongiform Encephalopathy). They have considered the general issue of spreading animal rendering condensate on farmland. Because of the presence of mammalian protein in samples of condensate taken they have recommended that the practice should be discontinued as a precautionary measure to protect animal health.

Currently most of the condensate, including all SRM derived condensate produced by the plant, is tankered to sewage treatment works. This is the best interim solution but still has a negative environmental impact due to the long road tankered journeys.

In late 1997, John Pointon and Sons Ltd consulted the Agency about installing an effluent treatment plant to treat liquid effluent generated on site, including all condensate, and discharge it to the River Churnet. A 'Consent to Discharge' was duly applied for. As part of the application, John Pointon and Sons Ltd and the Agency commissioned risk assessments to assess the potential for transmission of BSE into the aquatic environment. Risk assessments showed that the barriers within the treatment system were more than adequate to achieve a negligible level of risk. The Consent to Discharge was issued in July 1998. The Local Authority granted planning permission for the treatment plant in February 2000.

The Rendering industry is scheduled to come within the Integrated Pollution Prevention and Control Directive (IPPC) in 2003, according to the 4th Consultation paper, although this

timetable is still under review by the DETR. This will require the industry to use 'Best Available Techniques' (BAT) to achieve Environmental Improvement. It is thought that the proposed

treatment plant at John Pointon and Sons Ltd will achieve the standard of BAT.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
		LEAD	OTHER								
3.1 Monitor the installation & commissioning of the treatment plant to ensure that consent conditions are met	 	EA	John Pointon & Sons Ltd	R*	●	●	●	●	●	Ongoing	S. Bowen
3.2 Investigate tankering of condensate to more local STW sewage treatment facilities	 	EA, John Pointon & Sons Ltd	STW	R*	●						S. Bowen
3.3 IPPC - All emissions will come under one regulator. B.A.T. on all emissions	 	EA	Las	R*			●	●	●	●	D. Othen S. Bowen
3.4 Enforcement Action - Waste regulation and water pollution	 	EA		R*	●	●	●	●	●	●	S. Bowen

## ISSUE 4 Contaminated land at Leek which is affecting groundwater resources

**OBJECTIVE** - To investigate and understand the contaminated groundwater plume at Leek. To agree remediation objectives and methodology with various site owners that will safeguard both the public water supply sources of Abbey Green and Pool End, and the groundwater resources of the Leek area.

The sandstone aquifer underneath Leek is an important source of drinking water for water supply. Two potable groundwater abstractions, Pool End and Abbey Green, which are operated by Severn Trent Water Limited, are located nearby.




A site investigation undertaken in 1991, prior to a proposed sale of industrial land at Leek, identified groundwater contamination beneath the site. A series of further investigations identified the presence of hydrocarbons, chlorinated solvents and other organic compounds within both land and groundwater. The site is now in the ownership of a number of companies, with differing contamination issues affecting different parts of the overall area.

**Site 1** - The site owners have investigated and replaced existing site drainage to reduce the risk of leakage, and have instigated improved site practices to prevent future contamination arising from current activities.

A trial "pump and treat" scheme has been undertaken to assess the effects that this type of remediation scheme might have on the groundwater pollution plume. A long term monitoring strategy has subsequently been put in place to monitor the migration of the contaminated groundwater. Current monitoring results indicate a generally downward trend in the concentrations of target compounds monitored in groundwater at the site.

**Site 2** - Site investigation has been undertaken to understand the extent and mobility of pollutants present in soil and groundwater, particularly around a formerly landfilled area. The groundwater flow regime in the area has been examined, and numerical modelling has been undertaken to enable an estimate of the risk to nearby potable abstractions at Pool End and Abbey Green to be made.



ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
4.1 Formulate site specific clean-up standards for groundwater		EA	Site Owners	R*	●						K. Johnstone
4.2 Continue with long term monitoring of contaminated groundwater • Instigate remedial work and treatment of contaminated groundwater as required		Site Owners		*	●	●	●	●	●	As required	K. Johnstone
4.3 Pursue further site investigations as necessary		Site Owners		U						As required	K. Johnstone

## ISSUE 5 Environmental monitoring - Blue Circle Works, Cauldon

**OBJECTIVE** ~ To carry out an in-depth assessment of the impact of Blue Circle Cement Works, Cauldon on the local environment, in order to address public concerns and provide a sound basis for future regulation and the Agency’s contributions to the national debate on the use of waste-derived fuels in cement kilns.

The making of cement must be authorised by the Environment Agency under the Integrated Pollution Control provisions of the Environmental Protection Act 1990. The process is regulated by the Agency to ensure that emissions are, wherever possible, prevented or minimised. Any substances that are emitted must be rendered harmless.

After trials in 1994 to ensure that there would be no detrimental effect on the environment, the Environment Agency permitted Blue Circle

Works, Cauldon, to burn scrap tyres in their kilns. The Agency is working in partnership with Blue Circle to ensure that the local ambient levels of emissions are acceptable, through air dispersion modelling to be completed by June 2000.

The Cauldon site is approximately 550 metres from a SAC. As the site is so close, the Agency will in the future have to review the authorisation to ensure that the requirements of the Habitats Directive are met.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
5.1 An agreed programme of air quality monitoring will be implemented to crosscheck the dispersion modelling results.		Blue Circle	EA	▲	●	●					R. Lee



Scrap tyres

# ISSUE 6 River Churnet flooding problems in the Leek area





**OBJECTIVE** – To alleviate flooding relating to the River Churnet affecting 15 residential properties and 9 commercial premises at Leek and a proposed 10 hectare industrial site with outline planning permission at White’s Bridge, Leek. To extend the existing flood warning system on the River Churnet upstream of Basford and enhance the flood forecasting model for the River Churnet to allow for Tittesworth Reservoir discharges.

Following the severe flooding at Leek in October 1998 the Agency carried out an initial feasibility report on possible flood alleviation works at Leek and at Cheddleton. The conclusion of this report recommended proceeding with the two proposed schemes as a combined study, with a view to a capital scheme if justified. The existing flood warning system has been extended from Basford Bridge to Tittesworth reservoir.

At the request of residents the proposed flood bank to protect No.’s 200-204 Abbey Green

Road has been deferred. The inadequacy of the high flow estimation at Basford gauging station has been investigated, and in the future an adjustment will be made for the conveyance of Churnet flood flows in the adjoining Caudon canal.

Liaison is continuing with Severn Trent Water with a view to refining the Tittesworth reservoir outflow estimate for the Agency’s flood flow forecasting model for the River Churnet.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
		LEAD	OTHER								
6.1 Undertake topographical survey and hydrological study of the River Churnet in the Leek area		EA		20	●						V. Brown
6.1.2 Following completion of the survey undertake a hydraulic study in the form of a mathematical model		EA		5	●						V. Brown
6.2 Using the model proceed with a full feasibility study for possible flood alleviation works at Leek and/or Cheddleton		EA		U		●					V. Brown
6.3 If justified by the feasibility report instigate flood protection capital scheme at Leek and/or Cheddleton		EA		U		●					V. Brown



Flooding of the River Churnet at Leek





# ISSUE 7 Impact of tourism on the landscape & ecological habitats of Dovedale

OBJECTIVE ~ To protect and improve the existing landscape and ecology in the Dove catchment

The pressure of tourism is causing damage to scree slopes, river embankments and river terraces at the base of Thorpe Cloud, Dovedale. It is estimated that during the busiest times of the year up to 3,000 people per hour visit Dovedale. Serious erosion is evident on the east bank of the River Dove from the stepping stones downstream to the footbridge at Thorpe Cloud.

The Environment Agency is supporting the National Trust (landowners), Staffordshire County

Council, Peak District National Park Authority, Farming and Wildlife Advisory Group and English Nature, in seeking ways to reduce this problem. Discussions have been held between these organisations to decide the best resolution for this problem, however public discussions will need to be held before any changes are made.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
		LEAD	OTHER								
7.1 Discuss relocation of existing footbridge near car park further upstream, just downstream of existing stepping stones		SCC	NT, PDNPA, EA	U	●	●					A. Crawford
7.2 Improved access across River Dove at Gypsy Bank stepping stones		NT	EA	<10	●	●	●	●	●		A. Crawford



Footpath Erosion in Dovedale

## ISSUE 8 Development within floodplains including development along the new A50 corridor.

**OBJECTIVE** ~ To work in partnership with others to promote sustainable development and best practice policies for development

The A50 M1-M6 link has been identified as a transport corridor and associated developments will clearly change the nature of the local environment. The Agency has a duty to work in partnership with local planning authorities, developers and consultants to achieve the aims of sustainable development. In so doing we will

work closely with others to promote best practice to ensure the design of future development is of minimal detriment to the character, appearance and hydrological nature of the area.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
8.1 Survey and assess landscape and ecological characteristics of the area and analyse the possible damage to the existing environment		LPA	EA	U	●						A. Crawford
8.2 Establish good practice guidelines to strengthen the landscape character and encourage sustainable development		LPA	DV EA	U	●	●	●	●	●		A. Crawford
8.3 Identify actions to be taken to allow new development to be more easily absorbed into the landscape		LPA	EA	U	●	●	●	●	●		A. Crawford
8.4 Publicise the issue		LPA	EA	U	●	●	●	●	●		A. Crawford



A50 Corridor







## ISSUE 9 Changes in Agricultural Land Use

**OBJECTIVE** – To protect and improve the existing landscape and ecology in the Dove catchment

Much of the area remains agricultural: hill farming and pastures in the north, mixed arable and pasture in the south. Changes in agricultural practice are affecting the management and character of the area, with the decline in maintenance of such features as drystone walls and hedgerows and practices such as close ploughing degrading their associated ecosystems.

Landscape Character Assessments are being undertaken by County Councils in conjunction

with local authorities. A variety of organisations have taken a lead on this issue, for example, MAFF and the Farming and Wildlife Advisory Group (FWAG). FWAG is a key organisation in mitigating the negative impacts of changes in agricultural land use through projects such as Landwise Whole Farm Plans. The Agency, through partnership, is able to support organisations via an advisory and awareness raising role.

ACTIONS	THEME	RESPONSIBILITY LEAD OTHER	Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
9.1 Survey and assess the extent of changes and identify target areas	 	MAFF CA, EN	EA FWAG	U	●	●	●	●		A. Crawford
9.2 Promote best practice including the countryside stewardship scheme	 	CA EN	EA FWAG	U	●	●	●	●		A. Crawford



Farming in the Dove Valley

## ISSUE 10 Loss of habitat diversity in the lower reaches of the Dove catchment





**OBJECTIVE** ~ To protect and improve the existing landscape and ecology in the Dove catchment

To the south of the LEAP catchment is an area of low-lying land on alluvial floodplains with a mixed arable/dairy landscape contained by hedgerows. The character of the landscape is strongly affected by modern building methods and post development landscaping. Large scale tree planting schemes have also affected the character of the area. These factors combine to reduce landscape quality and diversity.

River management by land owners and others has resulted in habitat degradation of the lower reaches of the Dove from Rocester to the Trent

confluence. Tree cover and natural features of the river such as exposed river gravels are often lacking. Tree cover is further threatened by the incidence of the Alder disease *Phytophthora*.

Bank stabilisation projects using 'soft engineering methods' have been carried out, in combination with planting projects and work with gravel companies and land owners, to enhance biodiversity. This issue looks at further actions that the Agency can implement to help redress declining habitat diversity.

ACTIONS	THEME	RESPONSIBILITY LEAD	OTHER	Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
10.1 Continue riverside tree planting and fencing programme	 	EA	Land owner	5*	●	●	●	●	●		A. Crawford
10.2 Develop a buffer strip creation programme	 	EA	Land owner	U	●	●	●	●	●		A. Crawford



Tree Planting Scheme at Tabernor



# ISSUE 11 Re-Introduction of salmon to the River Dove

**OBJECTIVE** – To restore a population of salmon to the River Trent catchment, utilising the River Dove for spawning, contributing to an overall strategy for the protection of salmon stocks.



Reintroduction of salmon parr to the River Dove  
The Atlantic Salmon (*Salmo salar*) is a globally threatened species, listed in the Biodiversity Steering Group report. They were prolific in the Trent catchment until increasing pollution destroyed the population in the early part of the 20th Century.

Concerns have been raised by trout angling interests on the river regarding competition between juvenile salmon and brown trout.

Consequently the introduction of salmon parr in 1998 was carried out downstream of Rocester weir. The weir acts as a barrier approximately delineating the game fishing interests between the upper river and mixed / coarse fishing interests in the lower river.

It is intended to continue the annual introduction of salmon parr downstream of Rocester weir. The presence of an anadromous species would provide a net contribution to food resources in the river, through eggs and juveniles, which may enhance existing trout and grayling populations.

The Environment Agency perceives no threat to brown trout populations in the Upper Dove from the return of salmon, and the return of a species lost relatively recently from the catchment would greatly enhance the conservation value of the river.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
		LEAD	OTHER								
11.1 Establish the Trent Salmon Trust		EA	Riparian owners, fishery interests, commercial sponsors	U	●	●	●	●	●		M. Cooper
11.2 Annual stocking of salmon parr		EA	As above	150	30	30	30	30	30	30k per annum until 2010	M. Cooper
11.3 Consider potential smolt entrainment problems		EA	Water abstractors	U							M. Cooper



Leaping Salmon

## ISSUE 12 The genetic integrity of Brown Trout in the Dove catchment

**OBJECTIVE** ~ To develop a policy to protect the existing stocks of native brown trout

Genetic studies have shown that farmed fish, stocked into the River Dove can interbreed with wild trout, altering the genetic composition of the offspring. It is important for genetic diversity that 'pristine' populations remain unaffected by stocked fish, so that their integrity is not compromised.

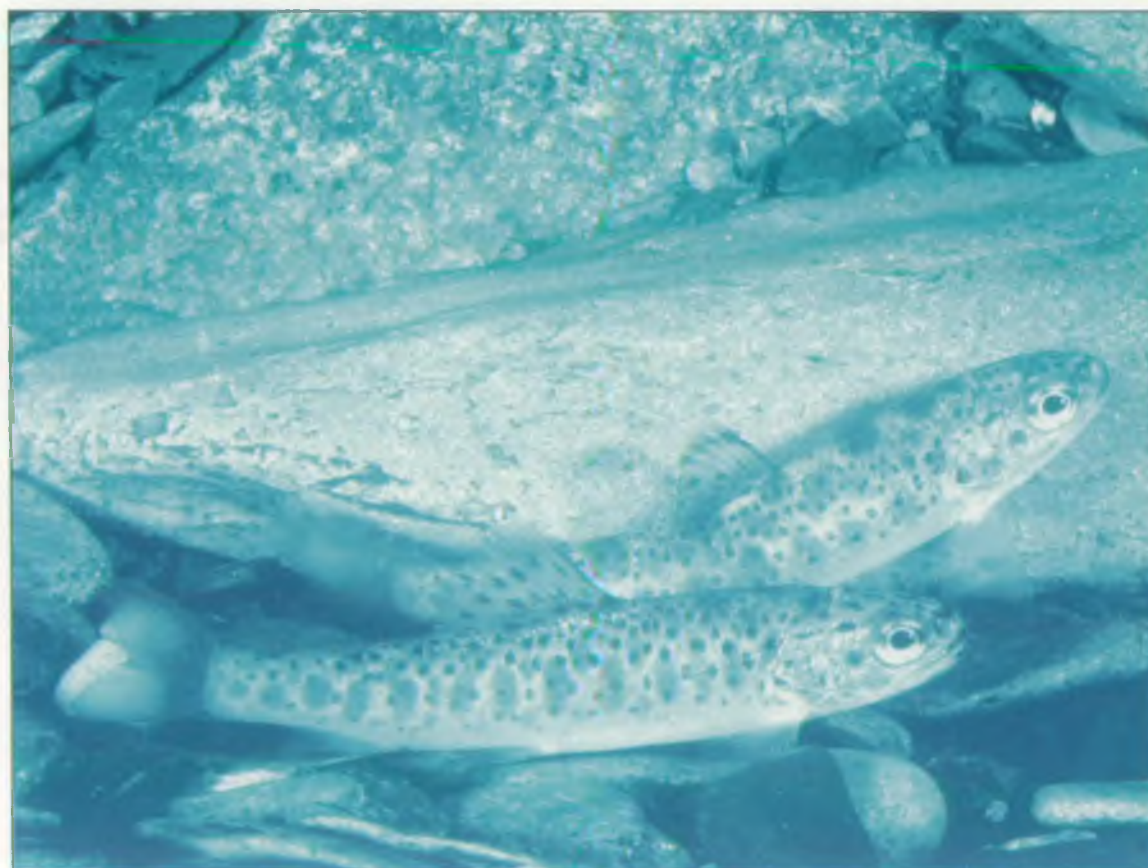
Recent studies have enabled wild trout populations to be identified from their genetic composition. An assessment of the geographic distribution of these populations is currently being undertaken in the Upper Dove catchment. On the basis of these results a policy will be developed, aimed at protecting pristine stocks by controlling the extent of stocking of farmed fish.

LOCAL ENVIRONMENT  
AGENCY PLAN

DOVE



ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
LEAD	OTHER										
12.1 Extend the brown trout assessment		EA		25	5	5	5	5	5	U	R. Sedgwick
12.2 Develop and implement a policy designed to protect native brown trout populations		EA		U							R. Sedgwick



Native Brown Trout



## ISSUE 13 Environmental practices at rural industrial sites





**OBJECTIVE** – To improve environmental practices at rural industrial estates

Rural industrial estates can potentially cause a number of environmental problems. Drainage and sewerage systems are often inadequate and can lead to pollution of ground and surface waters. There can also be problems associated with the viability of waste disposal and recycling collection schemes.

The problems can be compounded by the predominance of small and medium sized enterprises (SMEs) within trading estates and

business parks, as these do not normally have a dedicated environmental adviser. Because of the number of companies involved, it is now recognised that they can have a diffuse but nonetheless major impact on the environment.

The EA in collaboration with Staffordshire University and Business in the Environment, is currently developing a code of good practice for trading estates and business parks.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
13.1 Identify owners of rural industrial estates and promote EA guide of Good Environmental Practice.	 	EA	LAs, Local businesses, Green clubs	R*	●	●	●	●	●		M. Haslam
13.2 Provide support to estate steering groups/site owners that are working to improve environmental good practices including waste minimisation projects	 	Estate owners, LAs, Green Clubs, EA, STW		R*	●	●	●	●	●		M. Haslam S. Bowen

## ISSUE 14 Pollution from sheepdip in the Dove catchment

**OBJECTIVE** – To increase awareness of the effects of sheepdip on the aquatic environment.

Biological monitoring of the upper reaches of the River Dove and its upland tributaries since 1997, has shown a worrying increase in examples of serious toxic pollution with persistent damage to invertebrate life and consequently the fisheries they support.

Farmers have switched to newer pyrethroid-based (SP) sheepdips following concerns about the health hazards posed by traditional organophosphate-based (OP) products. The new SP dips are between a hundred and a thousand times more toxic to aquatic life and can destroy long stretches of watercourses. This has resulted in a large increase in sheepdip pollution incidents nationally.

The Agency has investigated reports of biological deterioration of watercourses in the Dove

catchment and has identified some sources of sheep dip pollution. Prosecutions have followed in the more serious cases and some cases are still pending. A number of pollution prevention visits to inspect sheepdip facilities/usage have been carried out. A targeted programme of biological and chemical monitoring is in place and the Agency's fisheries section has carried out electro-fishing exercises to assess damage to fish stocks.

In the Agency's Sheep dip Strategy published in March 1999, there is a recommendation for working in partnership with farmers and their suppliers to protect the environment and reduce the risk of water pollution. The Agency has worked with the National Association of Agricultural Contractors and the National Sheep Association (NSA - representing sheep farmers)

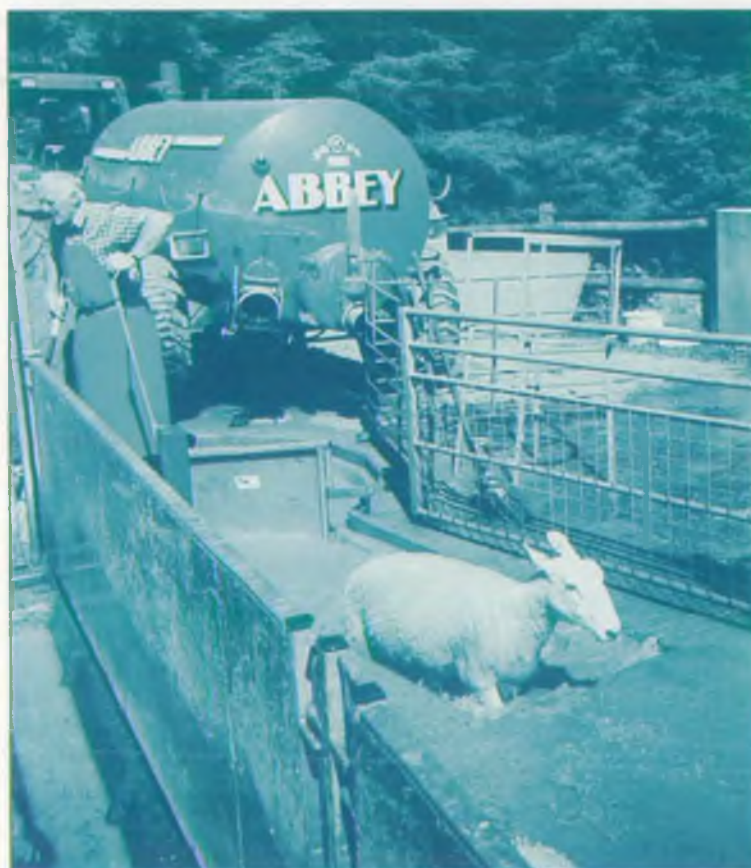
to provide a guide to reducing pollution risks which has been distributed to all its members. Sheep sales and markets have been visited by Agency officers to talk to farmers on a one-to-one basis.

Groundwater regulations, which give effect to the EC Groundwater Directive 80/68/EEC, came into force on 1st April 1999. Any person disposing of sheep-dip (or other substances) onto land requires an authorisation from the Agency.

## LOCAL ENVIRONMENT AGENCY PLAN

DOVE

ACTIONS	THEME	RESPONSIBILITY LEAD OTHER	Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
14.1 Maintain a special programme of biological & chemical surveillance of watercourses at risk from sheepdip		EA	30	●	●	●	●	●	As Needed	G. Fretwell S. Bowen
14.2 Continue to publicise the environmental risks associated with sheepdip use & disposal with special targeting of information to sheep farmers and sheep farming areas		EA	NSA, NAAC, MAFF, NFU, FWAG, BACA, Pesticides Trust.	U	●	●	●	●		M. Haslam S. Bowen
14.3 Undertake sheep farm inspections & carry out risk assessments		EA	R	●						M. Haslam
14.4.1 Issue Groundwater regulation authorisations to applicants		EA	R	●						A. Roe
14.4.2 Monitor compliance with authorisations		EA	R	●	●	●	●	●		S. Bowen
14.4.3 Pursue enforcement action against non-applicants		EA	R	●	●	●	●	●		S. Bowen



Sheep dipping



# ISSUE 15 Low flows in the Croxden Brook





OBJECTIVE ~ To manage a specific water resource problem within the Dove catchment

The Croxden Brook is a tributary of the River Dove, which it joins downstream of Rocester, Staffordshire. The watercourse has a high amenity value to both local residents and visitors. Groundwater is abstracted by STW Ltd at Greatgate for public supply and by Tarmac Ltd at Croxden Quarry for gravel washing.

There have been long standing problems of depleted flows, perceived to be principally due to the abstraction of groundwater. These problems have been exacerbated during the drought years of 1976 and 1989-1997. In response to the problem, survey work has been

undertaken by the Environment Agency in partnership with STW Ltd to identify those sections of watercourse where water is being lost through seepage into the surrounding ground.

The feasibility of a number of options to alleviate the low flows problem have been reviewed as part of Asset Management Plan 3 (AMP3). A short term solution has been proposed involving the water company pumping groundwater into a lined stretch of the Croxden Brook, in order to maintain acceptable flows during critical periods, alongside a programme of hydrogeological reviews and studies within the area.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
		LEAD	OTHER								
15.1 Study flow discharges to the Brook and Stream bed lining	 	STW	EA	*	●	●	●	●	●	As required	A. Dacey
15.2 Undertake additional hydrological review and appraisal of the Croxden Brook area	 	EA		15	●						A. Dacey



Low flows at Croxden brook

## ISSUE 16 Tittesworth Reservoir/Deep Hayes compensation discharge arrangements

OBJECTIVE – To manage a specific water resource problem within the Dove catchment

STW Ltd are required, under the terms of the Staffordshire Potteries Water Board Act 1949, to make compensation water discharges to the River Churnet from their public water supply reservoir at Tittesworth and a compensation reservoir at Deep Hayes. In 1979 Deep Hayes Reservoir was replaced by three smaller reservoirs, in order to comply with the Reservoir Safety Act, and a borehole constructed to supplement the discharge from the catchment. The borehole is licensed, however, the Potteries

Water Board Act needs to be varied before it can be used for compensation purposes.

The required level of compensation discharge, seasonal and geographical, needs to be re-examined in the light of changes that have taken place in the catchment since the present regime was first established. W.S. Atkins Ltd is carrying out a fish habitat and flow survey on the River Churnet between Tittesworth and Consall forge. The data obtained from this survey will be used to determine the most preferable flow regime.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
LEAD	OTHER										
16.1 Review the Tittesworth Reservoir/Deep Hayes compensation discharge arrangements	 	EA	STW	U	●	●	●	●	●		A. Dacey

## ISSUE 17 Dove catchment abstraction licensing policy

OBJECTIVE ~ To manage a specific water resource problem within the Dove catchment

STW Ltd holds a licence to abstract water from the River Dove at Egginton for public water supply purposes. New or varied licences that result in a net loss to the catchment cannot currently be granted due to the requirement to

protect STW Ltd's licence from derogation, that is, reducing in standard or quality.

Negotiations are on going with STW Ltd to agree an amount by which their licence can be reduced.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
LEAD	OTHER										
17.1 Review Dove catchment abstraction policy	 	EA	STW	U	●	●	●	●	●	As required	A. Dacey



# ISSUE 18 Sustainable river bank management

OBJECTIVE ~ To promote sustainable methods of river bank management

The Agency accepts that some erosion control may be necessary in certain circumstances, but would prefer to see methods used which are in keeping with the natural habitat. Riverbank erosion is caused by a number of factors often relating to land use as well as the action of the river. Poor riparian land management practices such as over grazing, poaching by livestock and intensive cultivation to the top of the river bank de-stabilise the bank and exacerbate erosion problems.









The Agency wrote to all riparian owners on the River Dove enclosing the booklet 'Living on the Edge' a guide to the rights and responsibilities of a riverside owner together with an information sheet 'Sustainable River Bank Management'.

The Agency is seeking to promote appropriate bank management by encouraging fencing off of

river banks to reduce grazing pressure, creation of buffer zones between the river and cultivated field and planting of trees and shrubs along the river bank to help stabilise it. To this end there is ongoing liaison with FWAG officers to select reaches of the river Dove suitable for specific targeting for combined Countryside Stewardship schemes.

The Agency is currently implementing a River Dove Bank Erosion Project costing £50K and has selected three sites between Uttoxeter and Tutbury for the implementation of demonstration bank stabilisation measures. These demonstration sites are aimed at encouraging riparian owners to use natural methods of preventing erosion. Birmingham University will collaborate on the research aspect of the project with funding from the Natural Environment Research Council.

## 4 Actions

ACTIONS	THEME	RESPONSIBILITY LEAD	OTHER	Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
18.1 Promote natural methods of bank stabilisation by promoting the Agency's 3 demonstration sites, utilising willow spiling	 	EA	NFU, FWAG, CLA	U*	●						V. Brown
18.2 Promote biodiversity and the protection of the river from pollution	 	EA	NFU, FWAG, CLA	U*	●	●	●	●	●		V. Brown
18.3 The Agency will liaise with Staffordshire & Derbyshire FWAG officers to identify suitable river reaches for possible combined Countryside Stewardship Schemes	 	EA, FWAG		-	●						V. Brown
18.4 Apply a strong presumption against granting consent for tipping inert material for bank erosion measures	  	EA		-						Ongoing	V. Brown



River Bank Erosion

## ISSUE 19 Water level management plans







**OBJECTIVE** ~ To review the requirement for water management plans within the plan area. Seek out any shortfalls and encourage the relevant authorities to take the necessary action.

The 'Conservation Guidelines for Drainage Authorities' (MAFF/DoE/Welsh Office 1991) states that Water Level Management Plans should be produced for all areas of conservation interest where water levels are artificially controlled with priority given to all sites of Special Scientific Interest. Guidance for their production is given in the MAFF booklet "Water Level Management Plans - A Procedural Guide for Operating Authorities 1994 ", with additional guidance notes published in October 1999.

The Upper Trent area of the Agency has produced its eight Water Level Management Plans, (W.L.M.P), relating to main rivers, two of which fall within the Dove catchment. The River

Churnet valley SSSI and the Old River Dove SSSI at Marston-on-Dove have been through the consultation stage and have been finalised and agreed by English Nature. Each plan has a list of actions, which will maintain or enhance the interest on the site as well as gather more information to allow decisions on future management to be made.

With regard to W.L.M.P's for ordinary watercourses it is the responsibility of the local authority if it owns the land or has carried out works affecting the site. If it is not clear who is responsible for a plan the W.L.M.P advisory group set up in 1999 will make investigations.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
		LEAD	OTHER								
19.1 Prepare a plan of action to monitor and maintain the two sites in the LEAP area	 	EA		0.5	●						V. Brown
19.2 Liaise with E.N. & LAs to agree any sites they are responsible for	 	EA, EN		R	●						V. Brown
19.3 Any sites in the LEAP area not assigned to an operating authority refer to the W.L.M.P advisory group	 	EA, EN		R	●						V. Brown

## ISSUE 20 Biodiversity in the Dove catchment

**OBJECTIVE** ~ To maintain and enhance biodiversity within the plan area in accordance with national, regional and local Biodiversity Action Plan objectives

The conservation value of the Dove catchment is high, especially the Upper Dove catchment which is within the Peak National Park. In the



Old River Dove SSSI

lower reaches of the Dove, degradation of habitats has occurred (See issues 7, 8, 9). The Agency is a key partner in delivering the UK Biodiversity Action Plan (BAP), and will be developing targets for species and habitats of conservation concern to contribute to both local and national initiatives, for example, Local Biodiversity Action Plans. The Agency has written its own regional BAP that details objectives and targets for habitat and species conservation.

The Agency also works closely with local BAP initiatives. A BAP has been written for Staffordshire and Mid-Derbyshire and one is



currently being written for the Peak District National Park. Targets for habitat creation are included in all local BAPs including those for which the Agency has responsibility. The habitat creation targets listed in the Action Plan table have been modified from existing local BAPs.

This issue looks at those species for which the Agency has responsibility and also attempts to address the problems caused by invasive plants.












Himalayan Balsam



Giant Hogweed

# Actions4

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
LEAD	OTHER										
20.1 Survey & manage habitats for water voles, otters and great crested newts		EA, WT	EN	7.5	●	●	●	●	●		A. Crawford
20.2 Monitor white clawed crayfish. Consider catchment wide survey of alien species		EA, EN	WT	U	●	●	●				A. Crawford G. Fretwell
20.3 Ensure conservation of wetland (especially blanket bog & wetland meadow supporting breeding waders) sites by considering water quality and supply during regulatory activities		EA, EN		▲	●	●	●	●	●		A. Crawford
20.4 Carry out a survey to determine the extent and speed of invasive plant dispersal and begin control measures		Land owners, LAs	EA, EN	U	●	●	●	●	●		A. Crawford
20.5.1 Monitor alder disease		FA	EN	U	●	●	●	●	●		A. Crawford
20.5.2 Development control work to encourage non-use of alder in new schemes		FA	EN	▲	●	●	●	●	●		A. Crawford
20.5.3 Publicise the problem and increase awareness and reporting back		FA	EN	U	●	●	●	●	●		A. Crawford
20.6.1 Survey and identify locations of black poplar		FA	LA, WT	U	●	●					A. Crawford
20.6.2 Establish propagation programme for black poplar		FA	LA, WT	U	●	●					M. Le Ray

ACTIONS	THEME	RESPONSIBILITY LEAD	OTHER	Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
20.7 Targets for habitat & species conservation: 20.7.1 Increase the total amount of wet woodland by 25 ha		DV, EA	LA, WT	▲	●	●	●	●	●	●	A. Crawford
20.7.2 Create 40 ha of reedbeds		DV, EA	LA, WT	▲	●	●	●	●	●	●	A. Crawford
20.7.3 Create 20 ponds for conservation		DV, EA	LA, WT	▲	●	●	●	●	●	●	A. Crawford
20.7.4 Improve & enhance 20km of river corridor including reinstating backwater features, enhancing the riverbank and treeplanting		DV, EA	LA, WT	▲	●	●	●	●	●	●	A. Crawford

## ISSUE 21 Water quality objectives, standards and directives

**OBJECTIVE** ~ To improve river water quality in the Dove catchment to meet strategic objectives and to make further water quality improvements.

The Environment Agency and predecessor bodies set strategic targets called River Quality Objectives (RQOs) for rivers and canals. RQOs provide a basis for water quality management decisions and are based on a chemical classification scheme called "The River Ecosystem Classification scheme". There are five quality classes, RE1 to RE5, which reflect the chemical quality required to support different types of river ecosystems. There are also statutory targets for some rivers and canals called Water Quality Objectives (WQOs) to implement EC Directives. The relevant EC Directives are the Surface Water Abstraction Directive (75/440/EEC), The

Freshwater Fish Directive (78/659/EEC), The Nitrate Directive (91/676/EEC), The Urban Wastewater Treatment Directive (91/272/EEC) and the Dangerous Substances Directive (76/464/EEC).

Certain river stretches in the catchment have failed to comply with their objectives. This issue addresses those river stretches where there is a significant failure of the River Ecosystem or an EC Directive failure. Investigations will need to be carried out by Environment Protection Staff and Campaigns Officers, to minimise the quality problems on the river

ACTIONS	THEME	RESPONSIBILITY LEAD	OTHER	Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
21.1 Investigate and report reasons for RQO non-compliance and EC directive failures		EA		R	●	●	●	●	●		B. Nielsen S. Bowen
21.2 Review of RQO's		EA		R/U	●	●					B. Nielsen S. Bowen
21.3.1 Continue to review & investigate via local sampling to pinpoint sources of pollution		EA		7	●	●	●	●	●	As required	S. Bowen
21.3.2 Plan and carry out detailed localised investigations		EA		R	●	●	●	●	●	As required	S. Bowen
21.4 Pollution prevention work and campaigns		EA, EN		R	●	●	●	●	●		I. Hassel, R. Gregg, G. Harper



# ISSUE 22 Sustainable Waste Management





OBJECTIVE ~ To reduce the amount of waste produced in the Dove area, to increase the proportion of waste managed through re-use, recycling and waste recovery, and to minimise the risks of immediate and future environmental pollution and harm to human health.



Cans

The most effective environmental solution to excessive amounts of waste is to prevent waste

production or to minimise it at source. Failing that, reuse and recycling should be considered, as both will reduce the demand for primary resources. However, other factors must be considered, such as treatment to enable the re-use of waste or the distance to recycling facilities. These factors could mean that recovery (waste-to-energy or composting) produces the least environmental impacts. Only once all these options have been explored, should waste be disposed of. This issue explores a range of actions, which will encourage sustainable waste management.

ACTIONS	THEME	RESPONSIBILITY LEADOTHER	Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
22.1 Work closely with local authorities, industry and commerce to identify and implement joint initiatives and working arrangements		EA, LAs, Local Businesses, Green Clubs	R*	●	●	●	●	●		M. Haslam
22.2 Provide relevant data collected from waste survey to LAs and other interested bodies to aid them in developing waste strategies and plans		EA	R	●	●					M. Haslam
22.3 Monitor and report on local household, commercial and industrial waste recycling. Indicate trends in the levels of recycling within the Dove catchment		Audit Commission, LAs, EA	R*	●	●	●	●	●		M. Haslam
22.4 Promote the utilisation of methane produced in landfills wherever possible		Waste industry, EA	R*	●	●					S. Bowen

# ISSUE 23 Investment by Severn Trent Water Ltd to improve water quality

OBJECTIVE ~ Improvement of the sewerage system to reduce environmental pollution by regulation and through targeting future investment

In July 1994 announcements were made by the Office of Water Services (OFWAT) about the overall funding arrangements of the private water companies for Asset Management Plan 2 (1995-2000). Asset management plans are strategic plans for programmed investment in

the infrastructure of private water companies, so that they might meet obligations relating to water supply and sewage treatment. In setting prices, the review must take account of the cost of restoring and protecting our environment, where it is affected by STW Ltd. The review,






therefore, gives us the opportunity to achieve realistic funding for the investment in STW Ltd's infrastructure, in order to embrace environmental restoration and improvement.

Top priority for expenditure under AMP2 was given to meeting present and future statutory obligations, both EC and domestic. These include EC Directives on freshwater fisheries, dangerous substances and urban wastewater treatment. A new activated sludge plant and sandfilters are now operating at Checkley sewage treatment works, which was part of AMP2 investment. The next periodic review of water company prices, Asset Management Plan 3 (AMP3) will cover the period 2000-2005.

Environment Protection and Tactical Planning Officers have identified unsatisfactory continuous and intermittent discharges to surface water and groundwater as part of the Agency's National Environment Programme.

In March 1999 the Government announced its support for the Environment programme identified by the Agency in the Dove catchment (as part of the Midlands Region). Discussions have taken place between the Environment Agency and Severn Trent Water Ltd to prioritise the programme of improvements necessary within the AMP3 scheme (2000 - 2005) and a final programme was announced in November 1999.

ACTIONS	THEME	RESPONSIBILITY		Cost (£K)	00/01	01/02	02/03	03/04	04/05	Future	Agency Officer
		LEAD	OTHER								
23.1 Monitor the implementation of AMP3 schemes: 23.1.1 Continuous Discharges • Alstonefield STW Strata borehole/R.Mainfold • Ashbourne STW Bentley brook (R.Dove) • Biggin STW to groundwater • Cheddleton STW, R.Churnet • Froghall STW, R.Churnet • Waterhouses STW R.Hamps • Wetton Septic tank 1 to groundwater • Wetton Septic tank 2 to groundwater		EA	STW Ltd	U	●	●	●	●	●		S. Bowen M. Haslam
23.1.2 Intermittent Discharges • Calton Pumping Station, soakway, to Shacks Clayton • CSO, Old station yard, Leek to R. Churnet • Westwood Hall Farm • CSO, Farm Mill Green Nature reserve, Leek • Wetton STW CSO, discharges to limestone shack • Alstonfield STW – Storm sewage overflow to Strata borehole • Waterhouses STW – CSO to R.Hamps		EA	STW Ltd	U	●	●	●	●	●		S. Bowen M. Haslam
23.2 Assess water quality benefits of completed schemes		EA	STW Ltd	U	●	●	●	●	●		S. Bowen M. Haslam



# 5.0 Protection through Partnership

5

## Partnership

### 5.1 Partnerships

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

Partnerships enable the key objectives and the long term vision of this plan to be realised. Implementation of the plan will involve the joint action of a number of organisations, such as local authorities, businesses, conservation organisations and community groups, as well as actions by the Agency.

#### 5.1.1 Local Agenda 21

Agenda 21 is a global action plan for the 21st century that was produced at the Rio Earth Summit in 1992. Local authorities across the world were seen as the focus for promoting and encouraging local community action and were charged with producing a Local Agenda 21 (LA21) strategy. That brings together economic, environmental, and social concerns into a 'blueprint' for a more sustainable way of life for everyone.

The Environment Agency supports LA21 groups and projects by providing information, expertise and support where possible.

All the local authorities in the Dove LEAP area have produced, or are producing LA21 action plans for their community.

#### 5.1.2 Water Company Asset Management Plans

Major improvements have been made to the quality of our rivers in the past nine years since the privatisation of the water utilities, principally through the large sums of money spent on upgrading sewage treatment works. Improvements to sewage treatment works and the sewerage system are prioritised in the water companies' Asset Management Plans (AMPs). New investment schemes will be included in the third Asset Management Plan (AMP3) to run from the year 2000-2005/10. This has been prepared by the Government and the Agency, in consultation with the water companies, for approval by OFWAT and represents an investment in the order of £6.5 billion nationally.

In the Dove catchment area Issue 15 and 23 highlight the work that is to be carried out as part of the AMP process.

#### 5.1.3 Other Partnership Schemes

Agency partnerships in the LEAP area were referred to in detail in the consultation report. They include:

- Working with regulated businesses to improve the environment through Integrated Pollution Control Improvement Programmes
- Working with Wildlife Trusts, Farming and Wildlife Advisory Groups, local authorities and others on conservation and recreation collaborative projects.

### 5.2 Education

There is a need for a greater level of environmental education by the Agency and a need to raise awareness of environmental issues. It is essential for the delivery of a more sustainable environment in the long term. In many cases a lack of



Environment Agency activity table

information and awareness is one of the factors that leads to environmental damage or neglect, and we need to encourage ownership and responsibility for the local environment.

The production of this LEAP is one step towards increasing the accessibility of information about our local environment. The Agency has a wide range of leaflets and publications (See Appendix 5) which are available from our customer contact team at the Area office. Information is also available at our web site. The web site will also provide links to other sources of environmental information.

- General Enquiry Line:**  
0845 933 3111
  - Upper Trent Area Office:**  
0154 444 141
  - Internet World Wide Web:**  
[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)
  - E-mail Messages:**  
[enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)
  - Floodline:**  
0845 988 1188
  - Emergency Hotline (24 hours):**  
0800 80 70 60
- To report any incidents involving water, land and air.

### 5.3 Land Use / Planning Guidance

Land use is one of the most important influences on the environment. The location of activities can have both positive and negative effects.

Redevelopment and renewal of urban and waste land can do much to repair the damage of the past, while appropriate control over new development can protect sensitive habitats, the variety of wildlife and can minimise or prevent emissions of pollution to air, land and water.

Land use planning is the responsibility of the county, district and unitary planning authorities (and the Peak District National Park Authority in their geographical area), and control of land use change is through the Town and Country Planning Acts and Government Planning Guidance. The Agency is committed to maintaining close working relationships with the local planning authorities to ensure effective links between planning and environmental protection.

LEAPs are non-statutory documents. Regional Planning Guidance makes reference to the need for local authorities to take into account Catchment Management Plans (the forerunner to LEAPs), developed by one of our predecessor bodies the National Rivers Authority, and to integrate policies that take into account the effects of land use on the water environment. It is hoped that future Regional Planning Guidance will take into account the Agency's broader remit.

Appendix 4 contains a series of statements that fit within the framework of Regional Planning Guidance and the Agency hopes local planning authorities will consider these when development plans are reviewed.



# 6.0 Future Review and Monitoring

## 6.1 Future Review and Monitoring

The Agency will be jointly responsible, with other identified organisations and individuals, for implementing this action plan. Progress will be monitored and reported annually by the Agency to all key partners and other interested parties. The first Annual Review is due at the end of May 2001.

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

- Assess environmental changes and highlight new issues as they arise.
- 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 the timing of individual actions.
- Report on other matters, including any legislative and/or classification scheme changes, affecting the LEAP.
- Roll forward the detailed actions.



LOCAL ENVIRONMENT  
AGENCY PLAN

**DOVE**





# APPENDIX 1

## LIST OF ORGANISATIONS AND INDIVIDUALS WHO MADE WRITTEN RESPONSES TO THE CONSULTATION REPORT

A Bridgett  
British Canoe Union  
British Hydropower Association  
Checkley Parish Council  
Clean Rivers Trust  
Clifton Parish Council  
Cllr Stephen Ellis  
Countryside Agency  
Inland Waterways Association  
J. M. Wren  
J.A. Hauge  
J.E.Tipper  
Joshua Wardle Ltd  
MAFF  
Marchington Parish Council  
Mr P. Moyott  
Mrs D. Morsan  
Mrs J.F. Hodder  
Ms Dempsey  
National Farmers Union  
P.H. Sherratt  
Peak District National Park Authority  
Ramblers Association  
S. Peters  
South Derbyshire District Council  
Staffordshire Farming & Wildlife Advisory Group  
Staffordshire Parish Councils Association  
STW  
T. Dyke  
T.S. Locker  
The Hawk & Owl Trust  
Derbyshire Agricultural & Horticultural Society  
Derbyshire Dales District Council  
Derbyshire Farming & Wildlife Advisory Group  
Derbyshire Wildlife Trust  
East Staffordshire Borough Council  
English Heritage  
English Nature  
Forestry Commission

In addition to those listed above, five questionnaires were returned anonymously.

# APPENDIX 2

## SUGGESTED AMENDMENTS TO THE CONSULTATION REPORT

LOCAL ENVIRONMENT  
AGENCY PLAN

DOVE



SECTION	Issue or Sub Section	Error or Omission	Raised By
Chapter 3	Issue 15	There is no mention of bats in Issue 15 although they are included in "key species" in section 24.1.	Chairman of Derbyshire Bat Conservation Group
	Issue 12.3	There is no mention of extraction of water for other commercial uses, particularly in Ashbourne area.	Chairman, Clifton Parish Council
	Issue 7.3	I would like to see the inclusion of what the Agency is going to do in respect of Genetically Modified Agriculture.	Maria Dempsey
	Issue 12	There is no mention of water levels in The Fleam at Tutbury Mill Site.	T Dyke
Chapter 2	Page 20 Section 2.4.2 Para 6	I understand the "Cathedral of the Peak" to be at Tideswell, not Ashbourne	P G Somerfield, East Staffordshire Borough Council
	Page 21 Section 2.4.2 Para 3	The cotton mill at Rocester has not been functioning as such for some time. I assume the reference should be to Mayfield Yarns at Mayfield.	P G Somerfield, East Staffordshire Borough Council
	Page 85 Table 5	The East Staffordshire Local Plan has now been adopted, March 1999	P G Somerfield, East Staffordshire Borough Council
	Page 82, Natural Habitats & Biodiversity	Reference to PPG12 is not strictly true regarding creation of new habitats.	P G Somerfield, East Staffordshire Borough Council
Chapter 2	Page 19 Section 2.4.1	Some of the information in this section is incorrect. The "short" and "middle" list have now been merged and all these species are now considered "priority" species. The criteria for selection was international threat or rapid decline, ie >50% decline in the last 25 years. The long list has now become the list containing "species of conservation concern". The criteria for selection included one or more of the following; threatened endemic, globally threatened, 25% or more of global population in the UK, 25% reduction in range or number over the last 25 years, present in fewer than 15, 10km grid squares in the UK or listed in UK or European legislation. The number of species on these lists has also changed and the current figures are 475 on the priority list and 4000 on the list of species of conservation concern.	Dr Roger Catchpole, English Nature
Chapter 3	Issue 12	There is no mention of abstraction from underground aquifers and monitoring of levels versus surface water loss.	A Tatton, Joshua Wardle Ltd
	Issue 12.1	What is happening already. Add: Alternative water supplies are being investigated which would allow the existing groundwater licenses to be reduced. It is anticipated that proposal for these alternatives will be put forward as part of the next planning review (AMP4).	



SECTION	Issue or Sub Section	Error or Omission	Raised By
Chapter 3	Issue 12.1,1 Options for Action Issue 12.2 What is the problem?	Timescale should read 2000/2002.  Second paragraph should read: The required quantity of compensation discharge, seasonal and geographical, needs to be re-examined ...  What is happening already? Should read: WS Atkins Ltd is carrying out a fish habitat and flow survey ...	John Ratcliffe, Rachel Spence
1	Issue 1.1.3	Add Biodiversity Process - EA/EN/LA/Landowners/Wildlife Trusts Project Officer	Jonathan Webb Staffordshire Biodiversity
	Issue 1.2.4	Add other organisations plans including the UK BAP, Staffs BAP, Derby BAP and the forthcoming Peak Park BAP. Project Officer	Jonathan Webb, Staffordshire Biodiversity
2	Issue 2.4.1 Paragraph 2	No mention of the local BAPs Staffordshire Biodiversity Project Officer	Jonathan Webb,
	Issue 2.4.1 Paragraph 4	A lot of this section is now out of date and some of the information is wrong. There are now two lists included in the UK BAP and not three. ~ The short & middle lists have been combined and are now called "priority species". ~ The long list is now called "species of conservation concern".	Jonathan Webb, Staffordshire Biodiversity Project Officer
3	Issue 15	Other key species and habitats include: River Habitats such as shingle, bare mud, riverbank cliffs. Lapwing                      Snipe Grass snake                  Solitary Bees and Wasps Black Poplar                Wet Woodland Canals, Lakes & Ponds    Lowland Wet Grassland.	Jonathan Webb, Staffordshire Biodiversity Project Officer
4	Issue 4.2.4	Add ... Biodiversity is one of the best ways of measuring sustainable development. At the bottom of the page where the SBAP is mentioned - low land wet grassland has been omitted.	Jonathan Webb, Staffordshire Biodiversity Project Officer
	General	Consultation reports often include a section on the roles of the interested parties in the LEAP process and the concept of partnership. We have been concerned in previous reports that our role has not been adequately described, especially as we have then been associated with a significant number of actions. We would therefore appreciate an adequate description of our role, comparable with that of other involved parties, being included in the reports.	Jonathan Webb, Staffordshire Biodiversity Project Officer

# APPENDIX 3

## DUTIES, POWERS & INTERESTS

The Environment Agency has a wide range of interests in the areas of water management, waste management and pollution prevention and control. Whilst many of these interests are supported by statutory duties and powers, much of our work is advisory, with the relevant powers resting with other bodies such as Local Planning Authorities, for example 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

These are all dealt with by your Local Planning Authority, who will contact us if necessary.

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

The following table summarises our duties, powers and interests and their relationship to land-use planning.

**Water Resources:** The Agency has a duty to conserve, redistribute, augment and secure the proper use of water resources.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Grant or vary water abstraction and impoundment licences on application.</li> <li>• Revoke or vary existing licences to reinstate flows or levels to surface-waters or groundwater which have become depleted as a result of abstraction, and are subject to a liability for compensation.</li> <li>• Secure the proper use of water resources through its role in water resources planning, the assessment for reasonable need for abstractions and promotion of more efficient use of water resources.</li> <li>• Monitor and enforce abstraction and impoundment licence conditions.</li> </ul>	<ul style="list-style-type: none"> <li>• The more efficient use of water by water companies, developers industry, agriculture and the public and the introduction of water-efficiency measures and suitable design and layout of the infrastructure.</li> </ul>	<p>The Agency is committed to water-demand management and will work closely with water companies and developers, local authorities and relevant organisations to promote the efficient use of water. The Agency acknowledges that new resources may be needed in the future and supports a twin track approach of planning for water resource development alongside the promotion of demand-management measures. The Agency seeks to influence planning decisions for new development by encouraging the inclusion of water conservation measures in new properties, particularly in areas where water resources are under stress, and by ensuring the planning authorities allow for the lead time for resource development.</p>

**Flood Defence:** The Agency has a duty to exercise good general supervision over all matters relating to flood defence throughout each catchment.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Control, through Land Drainage consents, development or construction of a structure that would affect the flow of an ordinary watercourse (Water Resources Act 1991, Section 109, Land Drainage Act 1991, Section 23).</li> <li>• Produce flood risk maps for all main rivers under S105 of Water Resources Act 1991.</li> </ul>	<ul style="list-style-type: none"> <li>• Granting of planning permission throughout a catchment but especially flood plains where development can significantly increase flood risk. Local Planning Authorities grant this permission.</li> <li>• Installation of surface water source control measures e.g. flood attenuation structures.</li> </ul>	<p>As a statutory consultee on planning applications within main-river flood plains, the Agency offers advice based on knowledge of flood risk. It also advises on the environmental impacts or proposed flood plain development.</p>



<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Undertake works to main rivers using permissive powers.</li> <li>• Issue flood warning relating to main river to the public, local authorities and the police.</li> </ul>	<ul style="list-style-type: none"> <li>• Supervising the maintenance of ordinary watercourses which is a Local Authority remit, but may impact on main rivers.</li> <li>• Installation of buffer zones which reduce flood risk and have significant environmental benefits.</li> <li>• Urban and rural land use and measures that can reduce flood risk or the need for watercourse maintenance.</li> </ul>	<p>The Agency will encourage best practice, including source control measures and common standards, among Local Authorities and riparian owners to protect and enhance the environment. The Agency works with the civil authorities to prepare flood-warning dissemination plans and supports their endeavours to protect communities at risk.</p>

**Water Quality:** The Agency has a duty to monitor, protect, manage and, where possible, enhance the quality of all controlled waters including rivers, groundwater, lakes, canals, estuaries and coastal waters through the prevention and control of pollution.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Issue discharge consents to control pollution loads in controlled waters.</li> <li>• Regulate discharges to controlled waters in respect of water quality through the issue and enforcement of discharge consents.</li> <li>• Prosecute polluters and recover the costs of clean-up operations.</li> </ul>	<ul style="list-style-type: none"> <li>• The control of runoff from roads and highways. This is a Highway Agency duty.</li> <li>• The greater use of source control measures to reduce pollution by surface-water runoff.</li> <li>• Prevention and education campaigns to reduce pollution incidents.</li> </ul>	<p>The Agency will liaise with Local Authorities, developers, the Highways Agency, industry and agriculture to promote pollution prevention and the adoption of source control measures. As a statutory consultee on planning applications, the Agency will advise Local Planning Authorities on the water quality impact of proposed developments.</p>

**Air Quality:** The Agency has a duty to implement Part 1 of the Environment Protection Act 1990.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Regulate the largest technically complex and potentially most polluting prescribed industrial processes such as refineries, chemical works and power stations including enforcement of, and guidance on, BATNEEC and BPEO.</li> <li>• Have regard to the government's National Air Quality Strategy when setting standards for the releases to air from industrial processes.</li> </ul>	<ul style="list-style-type: none"> <li>• The vast number of smaller industrial processes which are controlled by Local Authorities.</li> <li>• Control over vehicular emissions and transport planning.</li> </ul>	<p>The Agency provides data on IPC processes and advice on planning applications to Local Authorities. The Agency is willing to offer its technical experience to Local Authorities on the control of air pollution.</p> <p>The Agency wishes to liaise with Local Authorities in the production of their Air Quality Management Plans. The Agency will advise and contribute to the government's National Air Quality Strategy.</p>

**Radioactive Substance:** The Agency has a duty under the Radioactive Substances Act 1993 to regulate the use of radioactive materials and the disposal of radioactive waste.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• To issue certificates to users of radioactive materials and disposers of radioactive waste, with an overall objective of protecting members of the public.</li> </ul>	<ul style="list-style-type: none"> <li>• The health effects of radiation.</li> </ul>	<p>The Agency will work with users of the radioactive materials to ensure that radioactive wastes are not unnecessarily created, and that they are safely and appropriately disposed of.</p> <p>The Agency will work with MAFF to ensure that the disposal of radioactive waste creates no unacceptable effects on the food chain.</p> <p>The Agency will work with the Nuclear Installations Inspectorate to ensure adequate protection of workers and the public at nuclear sites. The Agency will work with the HSE on worker protection issues at non-nuclear sites.</p>



**Waste Management:** The Agency has a duty to regulate the management of waste, including the treatment, storage, transport and disposal of controlled waste, to prevent pollution of the environment, harm to public health or detriment to local amenities.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Vary waste management licence conditions.</li> <li>• Suspend and revoke licences.</li> <li>• Investigate and prosecute illegal waste management operations.</li> </ul>	<ul style="list-style-type: none"> <li>• The siting and granting of planning permission for waste management facilities. This is conducted by the waste industry and Local Planning Authorities. The Agency, as a statutory consultee on planning applications, can advise on such matters.</li> </ul>	<p>The Agency will work with waste producers, the waste management industry and local authorities to reduce the amount of waste produced, increase reuse and recycling and improve standards of disposal.</p>

**Contaminated Land:** The Agency has a duty to develop an integrated approach to the prevention and control of land contaminated ensuring that remediation is proportionate to risks and cost-effective in terms of the economy and environment.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Regulate the remediation of contaminated land designed as special sites.</li> <li>• Prevent future land contamination by means of its IPC, Water Quality and other statutory powers.</li> <li>• Report on the state of contaminated land.</li> </ul>	<ul style="list-style-type: none"> <li>• Securing with others, including Local Authorities, landowners and developers, the safe remediation of contaminated land.</li> </ul>	<p>The Agency supports land remediation and will promote this with developers, Local Authorities and other stakeholders.</p>

**Conservation:** The Agency will further conservation, wherever possible, when carrying out water-management functions; have regard to conservation when carrying out pollution control functions; and promote the conservation of flora and fauna which are dependent on an aquatic environment.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• The Agency has no direct conservation powers, but uses its powers with regard to water management and pollution control to exploit opportunities for furthering and promoting conservation.</li> </ul>	<ul style="list-style-type: none"> <li>• The conservation impacts of new development. These are controlled by Local Planning Authorities.</li> <li>• Protection of specific sites or species, which is a function of English Nature. The Agency does, however, provide advice to Local Authorities and developers to protect the integrity of such sites or species.</li> <li>• Implementation of the UK Biodiversity Plan.</li> </ul>	<p>The Agency supports action to sustain or improve natural and man-made assets so that they are made available for the benefit of present and future generations. Many development schemes have significant implications for conservation. The Agency will work with developers, Local Authorities, conservation bodies and landowners to conserve and enhance biodiversity.</p>

**Landscape:** The Agency will further landscape conservation and enhancement when carrying out water management functions; have regard to the landscape when carrying out pollution control functions; and promote the conservation and enhancement of the natural beauty of rivers and associated land.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• The Agency must further the conservation and enhancement of natural beauty when exercising its water management powers and have regard to the landscape in exercising its pollution control powers.</li> </ul>	<ul style="list-style-type: none"> <li>• The landscape impact of new development, particularly within river corridors. This is controlled by Local Planning Authorities.</li> </ul>	<p>The Agency produces River Landscape Assessments and Design Guidelines which it uses when working with Local Authorities and developers to conserve and enhance diverse river landscapes.</p>

**Archaeology:** The Agency has a duty to consider the impact of all of its regulatory, operational and advising activities upon archaeology and heritage, and implement mitigation and enhancement measures where appropriate.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• The Agency must promote its archaeological objectives through the exercise of its water management and pollution control powers and duties.</li> </ul>	<ul style="list-style-type: none"> <li>• Direct protection or management of sites or archaeological or heritage interest. This is carried out by local planning authorities, County Archaeologists and English Heritage.</li> </ul>	<p>The Agency will liaise with those organisations, which have direct control over archaeological and heritage issues to assist in the conservation and enhancement of these interests.</p>



**Fisheries:** The Agency has a duty to maintain, improve and develop salmon, trout, freshwater and eel fisheries.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Regulate fisheries by a system of licensing.</li> <li>• Make and enforce fisheries bylaws to prevent illegal fishing.</li> <li>• Promote the free passage of fish and consent fish passes.</li> <li>• Monitor fisheries and enforce measures to prevent fish-entrainment in abstractions.</li> </ul>	<ul style="list-style-type: none"> <li>• Promote its fisheries duty by means of land drainage consents, water abstraction applications and discharge applications.</li> <li>• The determination of planning applications which could affect fisheries.</li> </ul>	<p>Many development schemes have significant implications for fisheries. The Agency will work with anglers, riparian owners, developers and Local Authorities to protect fisheries.</p>

**Recreation:** The Agency has a duty to promote rivers and water space for recreational use.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• The Agency contributes towards its recreation duty through the exercise of its statutory powers and duties in water management.</li> </ul>	<ul style="list-style-type: none"> <li>• Promotion of water sports. This is done by the English Sports Council and other sports bodies.</li> </ul>	<p>The Agency will work with the Countryside Commission, the English Sports Council, British Waterways and other recreational and amenity organisations to optimise recreational use of the water environment.</p>

**Navigation:** The Agency has a duty to maintain and improve navigation.

<i>The Agency has powers to:</i>	<i>The Agency has an interest (but no powers in):</i>	<i>Partnership</i>
<ul style="list-style-type: none"> <li>• Maintain river navigation.</li> <li>• Maintain and operate locks and associated weirs and sluices whilst providing access to these sites.</li> <li>• Provide services such as moorings and pump out facilities.</li> <li>• Maintain navigation by a system of licensing.</li> </ul>	<ul style="list-style-type: none"> <li>• The management and operation of British Waterways navigations and other navigations within the region.</li> </ul>	<p>The Agency will work with British Waterways, navigation authorities and navigation users to improve navigations generally as valuable environmental, recreational, commercial and heritage resources.</p>

# APPENDIX 4

## PLANNING GUIDANCE STATEMENTS

### Sustainable Development

In developing regional, structure, unitary minerals and local plans local authorities should undertake appropriate environmental assessment and work to the sustainable development principles outlined below:

- **Strategic Environmental Assessment (SEA):** Appropriate levels and locations of development can only satisfactorily be identified after the environmental characteristics of the region have been assessed. SEA which seeks to evaluate alternative locations for development, as well as SEA of plans, policies and strategies can make an important contribution to the pursuit of sustainable development.
- **Environment Assessment (EA):** This process is an important mechanism for ensuring that the environmental impacts of projects are identified prior to a decision being taken. The Agency welcomes the opportunity to provide advice particularly at the scoping and evaluation stages.
- **Precautionary Principle:** The Agency adopts and promotes the precautionary principle. If there are potentially significant risks of damage to the environment but scientific knowledge is not conclusive then the precautionary principle dictates that development should not go ahead.
- **Polluter Pays Principle:** A significant amount of environmental pollution and resource depletion occurs because those who are responsible do not have to bear the costs. Where environmental damage is threatened or caused then the costs of any necessary environmental protection measures should be borne by those responsible and not by society at large; giving incentives to reduce potential environmental threats.
- **Environmental Capital:** The concept of environmental capital should be applied in decision making, in order to minimise development which has an irreversible impact on the quality of the natural environment. The Agency has recently produced guidance on how environmental capital can be taken into account in the preparation of development plans.

### Waste Minimisation and Energy Conservation

Waste minimisation and energy conservation are important contributions to sustainable development. Local Authorities should seek to develop a pattern of development which takes these principles into account. In particular local planning authorities should:

- Generally discourage low density development.
- Promote the development of buildings using local and recycled materials.
- Concentrate principal employment and community facilities.
- Incorporate recycling facilities into housing and employment sites.
- Promote the use for infrastructure projects, of recycled aggregates and other used materials.
- Locate new development along established public transport routes.
- Encourage energy saving buildings and energy sensitive siting, orientation and layouts.

### Urban Run-off and Sustainable Urban Drainage

Developments that pose an unacceptable risk of pollution of surface waters, either directly or via the surface water sewerage system, should not normally be permitted.

Planning authorities should ensure that all new industrial and commercial developments have an adequate means of foul and surface water drainage. Hardstandings, roadways and storage areas must be properly drained with oil interceptors or other pollution prevention measures as required. All above ground oil tanks, chemical stores and sources of polluting material must be bunded or otherwise contained and the containment properly maintained for the life of the facility.

Surface water run-off should (as far as is practicable) be treated at source on all new developments through the use of swales, wetlands, soakaways, permeable pavements and roadways etc. This is to promote aquifer recharge, improve water quality and the maintenance of the natural regime of flows in watercourses.



## Biodiversity

Local Planning Authorities should aim to protect and enhance the variety of flora and fauna within its own boundaries. Development that adversely affects a SSSI or National Nature Reserve (NNR) should normally be refused and then should be a presumption against the development of Sites of Importance to Nature Conservation (SINC).

All new development should preserve and enhance existing elements of nature conservation importance. New and existing development should offer the opportunity to create new areas of habitat by the use of appropriate design and species in landscaping. The use of native species should be encouraged and layouts should incorporate low maintenance semi-natural areas.

## Development near to Waste Landfill Sites and the Operation of Waste Transfer Stations

### Waste Landfill Sites

Planning permission should not be granted for the deposit of biodegradable waste within 250m of any development unless measures can be taken to monitor and control landfill gas. In any event permission should not be given for the deposit of biodegradable waste within 50m of development. Without correct management, the migration of landfill gas can give rise to the risk of explosion in buildings, underground services or voids. It also presents a risk of asphyxiation.

Where a proposed development might be at risk from migrating landfill gas, the Agency can advise on the work required to protect property. Applications for residential development within 50m of a known gassing landfill should be refused unless the developer can clearly show how it will be protected.

Methane generated in a landfill site must be controlled in order to minimise its impact on the environment. Collecting it and using it as a fuel has two benefits, the avoidance of pollution and the generating energy. There should be a presumption against the passive venting of landfill gas unless it can be shown that methane oxidation is reducing methane emissions to a low level. Planning applications to utilise landfill gas for the generation of energy should generally be encouraged.

### Waste Transfer Stations

Waste transfer stations can have an adverse impact on the amenity of nearby properties through dust, noise and smell and can cause considerable pollution to rivers and streams from run-off. Planning permission for waste transfer

stations accepting over 100 tonnes of biodegradable waste a day should only be permitted if the sites are operated under cover except where waste is deposited into closed containers for prompt disposal elsewhere.

## Development of Contaminated Land

The development of land contaminated by previous uses can pose a threat to the environment and to human health by the remobilisation of pollutants.

Developments which pose an unacceptable risk to the environment should not normally be permitted.

When development is permitted the planning authority should ensure that, before development commences, the site has been thoroughly investigated and an appropriate remediation strategy developed. Where the site is known or strongly suspected to be contaminated to a significant degree, the LPA should ensure that site investigations are undertaken before the determination of any planning application. Where the site is known or suspected of being slightly contaminated the LPA should use planning conditions to ensure that the site investigation is carried out before development commences.

To achieve satisfactory development, which does not cause pollution of the environment, the planning authority should consult the Agency. They should ensure that the applicant provides the appropriate information to allow the Agency to determine the need for a site investigation, the extent and nature of contamination, and the effectiveness of any remediation measures.

## Water Resources

Development which poses an unacceptable risk of pollution of surface waters or groundwater resources should not normally be permitted. Where development is permitted in areas where the groundwater is vulnerable, the planning authority should ensure that appropriate pollution control measures are included to prevent an unacceptable risk of pollution of the water resource.

## Floodplain Protection

The floodplains of rivers and watercourses need to be safeguarded from development to protect existing developments from increased risk of flooding. For further guidance please see the "Policy and Practice for the Protection of Floodplains" - Environment Agency 1997. As well as protecting existing flood plain areas, new



development must not increase levels of surface water run off which in itself can lead to increased flooding in times of heavy rain. Source control techniques should be where appropriate to balance flows and where possible, through redevelopment and renewal to reduce the level of urban run-off.

### Minerals

Minerals are a finite resource and should be exploited only where necessary. The practice of re-use and recycling of existing minerals should be a priority and fully developed before additional sites for extraction are permitted.

The operation of mineral sites must not lead to pollution of groundwater or nearby watercourses or affect local water resources through de-watering. Mineral operators should explore means of transporting minerals other than by road.

Restoration should provide a better environment and enhanced access for local people. The Agency generally encourages the provision of wetlands and open waters.

### Integrated Pollution control (IPC) / Radioactive Substances (RAS)

The Environment Protection Act 1990 gives the Agency responsibility for authorising and regulating potentially polluting industrial processes and the storage and use of radioactive materials. In accordance with the advice contained in Planning Policy Guidance Note 23 (PPG23) - Planning and Pollution Control; Local authorities are required to consult the Agency on certain types of development (mainly those that house, cater for or attract people) which are proposed within 500m of an IPC/RAS site.



# APPENDIX 5

## ENVIRONMENT AGENCY LEAFLETS AND INFORMATION

Listed below is a selection of leaflets available from the Environment Agency. It is intended as a guide to the type of information available rather than as a complete list, as new leaflets are being produced. It does not include policy documents or technical reports.

### General Information

- A Guide to Information Available to the Public
- Guardians of the Environment
- 0800 Leaflet (Emergency Hotline)
- Customer Charter
- Corporate Plan Summary 1998/1999
- Complaint and Commendation Procedure
- Worldwide Web-Agency site information leaflet
- An Environmental Strategy for the Millennium and Beyond
- Partnership in Environment Protection
- Recruitment Information

### Education

- Activity Fun Book
- The Living Water
- Green Shoots
- Animal Mask

### Water Quality/Pollution Prevention

- Blue Green Algae
- Identifying Freshwater Life
- "How to Avoid" Pollution Series:
  - River Pollution      Home Pollution
  - Silt Pollution        Farm Pollution
  - Silage Pollution    Solvent Pollution
  - Chemical Pollution
- Making the Right Connection
  - Avoiding Water Pollution
- Designs that Prevent Pollution – Nature's Way
  - sustainable urban drainage (video)
- Farm Waste Management Plans
- Farm Waste Regulations
- The Oil Care Code: a number of leaflets

- Pollution Prevention Guidelines (PPGs)
- Building a Cleaner Future, including video and poster
- Water Pollution Incidents in England and Wales – 1996 Report Summary
- Recovering the Cost of Pollution
- Accreditation Scheme for Spill Response Contractors
- Discharge to Controlled Water 1997-1998 Annual Charges
- Recommendations for Statutory Water Quality Objectives – the Worcestershire Stour Catchment
- Assessing Water Quality
- The Use of Licences to prevent pollution
- A Guide to Groundwater Vulnerability Maps
- Managing Maize
- Masonry Bunds for Oil Storage Tanks
- Pollution Prevention Pays

### Integrated Pollution Control IPC/Radioactive Substances (RAS)

- Integrated Pollution Control Fees and Charges 1998/99
- Radioactive devices must be registered with the Environment Agency
- Charging Scheme for Radioactive Substances Act Regulation 1997/98
- Best Practical Environmental Option Assessment
- Integrated Pollution Control and You

### Waste

- What a Waste!
- Special Waste Regulations 1996 - How they affect you
- Classification of Special Waste
- Use of the Consignment Note
- Obtaining and Sending Consignment Notes
- Waste Regulation and You
- The Registration of Waste Carriers
- New Packaging Regulations
  - How do they affect you



- Clinical Waste
- Duty of Care
- Producer Responsibility Obligations 1997  
(1st Ed, July 1997)
- Producer Responsibility Obligations  
(Packaging Waste) Regs 1997
- The Agency's Contribution to Sustainable  
Development Waste Minimisation

## Regional and Area Facts

- Midlands Region Map
- Area Maps and Fact Sheets
  - Upper Severn
  - Lower Severn
  - Upper Trent
  - Lower Trent
- Our Midlands Environment
- Severn Bore and Trent Aegir 1999
- Environmental Issues in the Midlands

## Fisheries Conservation and Recreation

- Anglers and the Agency
- Rivers and Wetlands - Best Practice Guidelines
- Buyer Beware - Your Guide to Stocking Fish
- Fisheries News
- Mink
- Understanding Buffer Strips
- Control of Invasive Plants near Watercourses
- Restoration of Salmon on the River Trent
- Have Fun, Have a Care  
(Water Recreation Information)
- Recreation Sites (Midlands)
- Enjoy your Garden - Care for our Environment
- Rod Fishing Bylaws
- The Severn Way
- Phytophora Disease of Alder

Please contact Jo Elsy the Customer Contact Team Leader at the Area office for further information and to obtain these and other leaflets (subject to stock availability).



# APPENDIX 6

## GLOSSARY

Abstraction	The removal of water from any source, either permanently or temporarily.
Abstraction Licence	An authorisation granted by the Agency to allow the removal of water from a source of supply. Statutory; section 38 Water Resources Act 1991.
Agenda 21	A comprehensive programme of worldwide action to achieve a more sustainable pattern of development for the next century. UK Government adopted the declaration at the UN Conference on Environment and Development (the Earth Summit) held in Rio de Janeiro in 1992.
Ameliorate	Cause something to become better.
Ammonia	A chemical compound found in water often as a result of pollution by sewage and farm effluents. It is widely used to determine water quality. Ammonia can be toxic to fish.
AONB	Area of Outstanding Natural Beauty. Nationally important areas with high quality landscapes.
Aquatic	Pertaining to the water environment.
Aquifer	A water bearing-stratum situated below ground level. The water contained in aquifers is known as groundwater.
Asset Management Plan	Water Companies Strategic Business Plans - initiated (e.g. AMP2) by OFWAT as part of the periodic review of water company charges. Sets out the investment priorities for water resources, sewerage improvement and sewage treatment.
Attenuation	Dilute or slow the spread of contamination or the speed of flow.
Augmentation	The addition of water to a watercourse under artificial control. Usually to "top up" low flows in summer by either groundwater pumping or via reservoir release.
Base Flow	The flow of a river derived from groundwater sources.
Benzene	Air pollutant from fossil fuels released by vehicular traffic and by industry, carcinogenic. A target pollutant in the UK National Air Quality Strategy.
Biodiversity	The diversity of animal and plant life.
Borehole	A well sunk into a water bearing rock from which water will be pumped.
Brownfield	Land which has been previously developed for industrial, commercial or residential purposes and requires redevelopment.
Buffer Zone	Strip of land 10-100m wide, alongside rivers which is removed from agricultural, use, managed to provide appropriate habitat types and to reduce levels of nitrates and pesticides in water.
1,3 Butadiene	A gas derived mainly from the combustion of petrol and other materials. A carcinogen and a target pollutant in the UK National Air Quality Strategy.
Carbon dioxide (CO <sub>2</sub> )	Gas present in the atmosphere and formed during respiration, the decomposition and combustion of organic compounds (e.g. fossil fuels, wood etc). A greenhouse gas.
Carbon monoxide (CO)	A gas formed by the incomplete combustion of carbon fuels. At very high exposures prolonged exposure to CO can be life threatening. A target pollutant in the UK National Air Quality Strategy.
Catchment	The total area from which a single river collects surface run-off.
Coarse Fish	Freshwater fish other than salmon and trout.
Confluence	The point at which two rivers meet.
Controlled Waters	All rivers, canals, lakes, groundwater's, estuaries and coastal waters to 3 nautical miles from the shore, including bed and channel which may for the time being be dry.
CSO	Combined Sewer Overflow.
Culvert	Channel carrying water across or under a road, canal etc.



Cyprinid Fish	Coarse fish belonging to the carp family, like roach, dace and bream.
Dangerous Substances	Substances defined by the European Commission as in need of special control because of their toxicity, bio-accumulation and persistence. The substances are classified as List I or List II according to the Dangerous Substances Directive.
Demand Management	The management of the total quantity of water abstracted from a source of supply using measures to control waste and consumption.
Derogate	To depreciate or diminish - used in abstraction licensing where a proposed new licence would reduce resources to an existing authorised abstraction.
Diffuse Pollution	Pollution from widespread activities with no one discrete source.
Discharge Consent	A licence granted by the Agency to discharge effluent of specified quality and volume. Statutory; Schedule 10 Water Resources Act 1991.
Dry Weather Flow	For sewage works, this is calculated by adding estimates of the domestic sewage discharge (which is the population multiplied by the per capita consumption) plus any industrial discharges plus infiltration into the sewer. For rivers, this is calculated as the average of flows during the driest seven consecutive days in each year for the period of record.
EC/EU Directive	A type of legislation issued by the European Union, which is binding on Member States in terms of the results to be achieved but which leaves to Member States the choice of methods.
Ecosystem	A functioning, interacting system composed of one or more living organisms and their effective environment, in a biological, chemical and physical sense.
Effluent	Liquid waste from industrial, agricultural or sewage plants.
Energy Recovery	Recovering energy from waste, usually through incineration.
EQS	Environmental Quality Standard. That concentration of a substance which must not be exceeded if a specific use of the aquatic environment is to be maintained.
Fauna	Animal life
Floodplain	Land adjacent to a watercourse that is subject to flooding.
Flora	Plant life.
Gauging Station	A site where the flow of a river is measured.
Greenbelt	A designation used by planning authorities on land adjacent to towns or cities, defined for the purpose of restricting the outward expansion of the urban area and to protect the countryside.
Greenfield	Land not previously developed.
GQA	General Quality Assessment. A national water quality assessment scheme.
Groundwater	Water which saturates a porous soil or rock substratum (or aquifer). Water held in storage below ground level.
Groundwater Units	Administrative sub-divisions of aquifers, defined on geological and hydrological criteria, which form the basis for groundwater resource management and licensing policy decisions.
Habitat	The locality or environment in which a plant or animal species lives.
Hard Engineering	River bank re-profiling for flood defence purposes using concrete, stone, metal and other hard materials.
Hydrology	The study of water on or below the earth's surface.
Hydrometry	The measurement of water.
Hydrogeology	Branch of geology concerned with water within the earth's crust.
Incinerators	Site and buildings used for the burning of waste often produce energy.
Insecticide	Substances used to destroy or repel insects.
Internal Drainage Board	An organisation with responsibility for land drainage in a particular area. Not Environment Agency.
Invertebrate fauna	Animals which lack a back bone - used for biological classification. Especially macro-invertebrates (animals of sufficient size to be retained in a net with a specified mesh size).



IPC Integrated Pollution Control	An approach to pollution control in the UK which recognises the need to look at the environment as a whole, so that solutions to particular pollution problems take account of potential effects upon all environmental media. Relates to industrial and commercial processes with a significant pollution potential. Controlled by the Agency defined under the Environmental Protection Act 1990 (Part A).
Landfill	Site used for waste disposal into/onto land.
Leachate	Liquid formed when water reacts with, or leaches from, waste material.
LEAP	Local Environment Agency Plan.
Leaching	Removal of soluble substances by action of water percolating through soil, waste or rock.
MAFF	Ministry of Agriculture, Fisheries and Food.
Nitrogen dioxide (NO <sub>2</sub> )	NO <sub>2</sub> and NO are both oxides of nitrogen (NO <sub>x</sub> ) produced by traffic and industry
Nitric oxide (NO)	NO <sub>2</sub> can have an adverse effect on human health, increasing the symptoms associated with respiratory illness. NO <sub>2</sub> is a target pollutant in the UK National
Oxides of nitrogen (NO <sub>x</sub> )	Air Quality Strategy.
Nutrient	A chemical essential for life.
OFWAT	Office of Water Industry's Regulator of Water Service Companies.
Percolation	The movement of water through soil pores and rock crevices.
Permeability	The ease with which liquids (or gases) can pass through rocks or a layer of soil.
Permissive powers	Powers which confer on the Agency the right to do things but not the duty to do them.
Pesticides	Substances used to kill pests, weeds, insects, fungi, rodent's etc which can have significant harmful environmental effects.
Piscivorous	Feeding on fish.
Porosity	The volume of water, which can be held within a rock or soil, expressed as the ratio of the volume of the voids to the total volume of the material.
Potable Water	Water of a quality suitable for drinking.
Prescribed Flow	A flow set to protect lawful downstream users and the aquatic environment.
RAMSAR	Wetland site of International Importance that is designated under the Ramsar* convention (*a town in Iran where the international convention originally agreed in 1975 to stem the progressive encroachment on, and loss of, wetland).
Raw Water	Water in its natural state; before treatment.
Raw Water Transfer	The transfer of water from one resource to another in order to meet or anticipate demand. It is usually part of a scheme such as a reservoir or pipeline.
Reach	A length of river.
Recharge	Water which percolates downward from the surface into groundwater.
Recycling	Using a material again.
Renewable Energy	Energy produced from resources which are unlimited or can be rapidly replenished e.g. Wind, water, sunlight, wave power or waste.
Residual Flow	The flow remaining in a watercourse after abstractions have taken place.
Revetment	A retaining wall.
Riparian	Of, or on, land adjacent to the river.
River Corridor	A stretch of river, its banks, and a varying amount of adjacent land that is affected by the presence of the river.
RQO	River Quality Objective.
Salmonid Fish	Game fish of the Salmon family, for example, trout and salmon.
SAC	Special Area of Conservation. This designation will protect important species and habitats, as defined under the EC Directive on Conservation of Habitats and Species.
Sewage	Liquid waste from homes, businesses etc which is normally collected and conveyed in sewers for treatment and/or discharge to the environment.



Sewerage	Means of conveying foul or surface water.	
SINC	Site of Importance for Nature Conservation. These are non statutory nature conservation sites of county or regional importance. Designated by County Wildlife Trusts and in some cases EN and Local Authorities.	
Siltation	At low velocities water will deposit the material being carried in suspension. The slower the velocity the finer the material deposited. A deposit of clays and silt is very difficult to remove naturally as it required turbulent and high velocities.	
Slurry	Animal waste in liquid form.	
Soakaway	System for allowing water or effluent to soak into ground, commonly used in conjunction with septic tanks.	
Soft Engineering (Rivers)	River bank works using earth, grass, tree planting, reeds and other natural (soft) materials.	
SPA	Special Protection Areas. Areas of importance for birds.	
Special Landscape Areas	Areas of high quality landscape designated by Staffordshire County Council.	
Spray Irrigation	The watering of crops by spraying. Can have a high impact on water resources.	
SSSI	Site of Special Scientific Interest. The best examples of the national heritage of wildlife habitats, geological features and landforms, designated by English nature and the Countryside Council for Wales. Statutory; notified under the Wildlife and Countryside Act 1981.	
Sulphur dioxide (SO <sub>2</sub> )	A gas which dissolves in water to give an acidic solution. It is an irritant when inhaled and may cause breathing difficulties. Emissions of SO2 can lead to acid rain, affecting ecosystems and water quality. A target pollutant in the UK National Air Quality Strategy.	
Surface Water	Water which flows or is stored on the ground surface.	
Sustainable development	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.	
Telemetry	River levels, rainfall, temperatures and wind run are recorded on data loggers connected to the telephone network. Information from the recording sites can be automatically accessed from a central point.	
Trade Effluent	Any effluent, except domestic sewage produced in the course of trade or industry, including agriculture, horticulture and research. Surface water run-off which is significantly contaminated by site activities constitutes trade effluent.	
Transfer Station	Waste disposal facility where waste is collected prior to transport to final disposal point.	
Underground Strata	A term used to signify geology under the surface soil layer. If groundwater exists, or if water is being discharged to the ground, the geology underneath the soil layer is known in the various Acts of Parliament as underground strata.	
Waste Minimisation	Reducing the amount of waste that is produced.	
Water Resources	The amount of water in an area available for use.	
Water Table	The natural level of underground water.	
Wetland	An area of low lying land where the water table is at or near the surface for most of the time, leading to characteristic habitats.	
Winter Storage Reservoir	Reservoirs built by farmers to store water during the winter months when it is "plentiful" for re-use during the summer.	
1:10 Year Drought/Flood	A drought/flood event with a statistical probability of occurring once in a ten year period (other periods may be specified in a similar way).	
UNITS	ppb (µ/m <sup>3</sup> )	parts per billion micro (10 <sup>-6</sup> ) grammes per cubic metre
Length	10mm	1cm (equivalent to 0.394 inches)
	100cm	1m (equivalent to 39.37 inches)
	1,000m	1km (equivalent to 0.621 miles)
	10,000m <sup>2</sup>	1ha (equivalent to 2.47 acres)
Area	1,000l/s	1m <sup>3</sup> /s (equivalent to 35.31 cusecs)
	1,000m <sup>3</sup> /d	11.6 l/s (equivalent to 0.41 cusecs)
	MI/d	Megalitres per day
	1MI/d	11.6l/s



## 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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