

# local environment agency plan

## Middle Severn

First Annual Review

January 1999



ENVIRONMENT  
AGENCY

# **Middle Severn Local Environment Agency Plan (LEAP)**

## **Previous LEAP Documents**

Middle Severn LEAP Consultation Report  
April 1997 (*now out of stock*)

Middle Severn LEAP Consultation Report Summary  
April 1997

Middle Severn LEAP Action Plan  
November 1997

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## FOREWORD

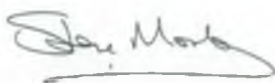
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The Environment Agency has responsibility for protecting and enhancing the whole environment through the promotion of sustainable development. One way of achieving this aim is through the production of Local Environment Agency Plans (LEAPs), which provide a framework for protecting and improving our local environment.

This is the first Annual Review of the Middle Severn LEAP. Its purpose is to highlight the progress that has been made by the Agency and others during the past year, in tackling the issues and problems identified in the Consultation Report and the Action Plan.

I am pleased to report that good progress has been made this year, reflecting the commitment of all those involved in the plan. In particular, I am delighted that so many of the achievements have been in partnership with others, with a number of new partnership and collaborative initiatives set up this year in the Middle Severn area. As the demand upon limited funds continues to increase, it is even more vital that the momentum of environmental improvement is kept going through partnerships and collaborative ventures.

I look forward to continuing to work together with our partners towards safeguarding and enhancing our environment in the coming year.



**Steve Morley**  
**Area Manager - Upper Severn**

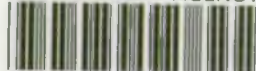


ENVIRONMENT AGENCY

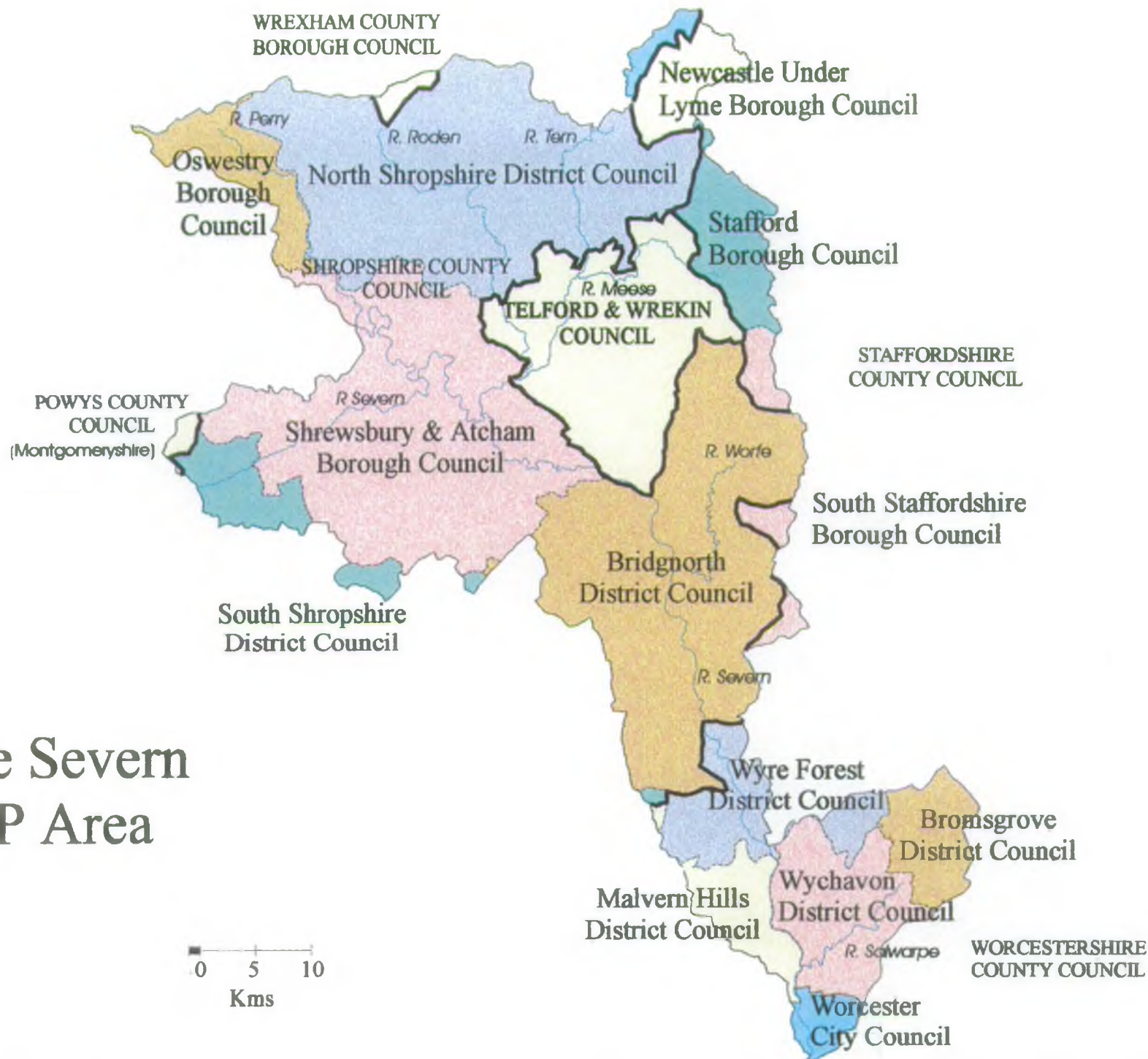
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# Middle Severn LEAP Area



## EXECUTIVE SUMMARY

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This Annual Review summarises the progress made in achieving targets to improve the local environment in the Middle Severn area in the year since publication of the Action Plan in November 1997. Good progress has been made by many parties responsible for carrying out the actions that were planned for the year, either as individual organisations or in collaborative projects.

Of the 88 actions planned for the year, progress has been made on all but 7, and 12 have been completed.

A number of key partnerships and collaborative initiatives are under way. These include:

- the River Strine wetlands initiative, with the Royal Society for the Protection of Birds (RSPB), Farming and Rural Conservation Agency (FRCA) and Farming and Wildlife Advisory Group (FWAG);
- expansion of the waste minimisation initiative in partnership with Business Links, local authorities and the private sector;
- a scheme to improve the River Worfe by flow augmentation, in partnership with Severn Trent Water Ltd;
- a scheme to investigate polluting inputs from abandoned metalliferous mines to the Minsterley Brook, in partnership with Shropshire County Council and Wardell Armstrong consultants;
- a project on recycling rainwater on new housing development in partnership with Telford & Wrekin Council and developers;
- creation of fishing opportunities on the River Tern at Walcot, in partnership with British Sugar;
- improvement of fishing facilities on the River Severn at Shrewsbury, in partnership with Shrewsbury & Atcham Borough Council;
- creation of a disabled conservation area and sensory garden at Albrighton Moat in partnership with Tarmac and RAF Cosford.

These partnerships, and others, have been with a wide range of organisations, from local authorities and utility companies to local businesses.

Also of note has been the completion of the Severn Way footpath. This was officially opened in March 1998, and is another example of an initiative depending very much on partnership, goodwill, and working closely with other organisations. Good progress has also been made on developing a computer model of the West Midlands Aquifer, which will enable us to better manage water resources in the area, and on the Shropshire Groundwater Scheme, which will help ensure we can maintain River Severn flows in dry periods.

This has been achieved against the background of some of the worst floods in 30 years occurring in the Severn valley, with many properties being significantly affected.

The tables in Section 4.0 form an integral part of this review, and should be referred to for a summary of progress on each action.

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## 1.0 VISION FOR THE MIDDLE SEVERN AREA

**The Environment Agency's vision for the Middle Severn area is:**

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

The Middle Severn area lies mainly within the counties of Shropshire and Worcestershire, and includes Telford & Wrekin, covering an area of 2,634 square kilometres. It is an area renowned for its landscape, beauty and natural resources. Expectation is of a clean, unspoilt countryside with good quality rivers and plentiful water supplies. There are sites of high conservation value with rare flora and fauna. Soil types are suitable for mixed farming and the area is important for agriculture. At the heart of the area is Ironbridge Gorge, which is a designated World Heritage Site and recognised as the birthplace of industry.

One common thread through the locality is the River Severn, providing good quality water and a recreational facility. The river's 120 kilometre journey within the plan area is through a rural, largely agricultural landscape. Historically, the river has acted as a focus for industry and settlement and urban centres such as Shrewsbury, Bridgnorth, Bewdley, Stourport and Worcester lie on its banks. These centres, together with Bromsgrove, Droitwich and new expanding towns like Telford, are the work place and home of over 500,000 people. It is the diversity and natural beauty of this local environment that provides a constant variety for the visiting and resident population alike.

Increasing industrial, agricultural and domestic demands have resulted in a loss of wildlife and habitat, threats to our water resources and low flows in rivers. The Agency's challenge is to protect and manage our natural resources within its environmental capacity and to work with others to preserve and realise the potential of the area.

**To achieve this vision we will:**

- \* Seek to ensure that development in the area is environmentally sustainable.
- \* Educate and raise awareness of the environment and environmental issues.
- \* Protect and improve the landscape, conservation and recreation value of our environment.
- \* Promote waste minimisation, encourage the achievement of national waste management targets where appropriate, and ensure the effective regulation of waste.
- \* Manage our water resources in an environmentally sustainable way, balancing abstraction with the needs of the water environment and its legitimate users.
- \* Protect and improve the quality of water in rivers and canals.

Some of these objectives have common goals, others may require a degree of compromise between differing demands on the resources of the area. To achieve our objectives we need to work in partnership with Local Authorities, industry, environmental groups and many other organisations and individuals who share the interests of the area. Together, through commitment and enthusiastic co-operation, we can ensure the shared vision of the Middle Severn area becomes reality.

## **2.0 INTRODUCTION**

### **2.1 Local Environment Agency Plans**

For the Agency to fulfil its role and responsibilities, it needs to manage the environment effectively and to work in partnership with others. Local environment planning is an important tool in this process. The plans are non-statutory, integrated action plans based on local river catchments. They provide a focus for those concerned with the future of the local area. The timetable for achieving LEAP coverage for all the catchments in England and Wales is by the end of 1999.

LEAPs will help contribute to the principle of sustainable development through integrated environmental management and improvement. They will also play a key role in:

- \* Promoting openness and accountability
- \* Developing liaison and partnership with key groups
- \* Educating the public on local environmental issues
- \* Prioritising issues and establishing an action plan for managing and improving the local area over the next 5 years

#### **2.1.1 The Middle Severn LEAP**

The Middle Severn LEAP Consultation Report was produced in April 1997. This outlined environmental issues within the area, and options for their solution. Following a three month period of consultation, the Action Plan was published in November 1997. This includes a five year programme of actions for improvements to the local environment, and outlines areas of work and investment proposed by the Environment Agency and others.

An important part of the LEAP process is to monitor the Action Plan to ensure that targets are achieved and actions completed, and that the plan continues to address relevant issues in an appropriate manner. This first Annual Review summarises the progress made since publication of the Action Plan in November 1997, and reports on the period December 1997 to November 1998 inclusive. This document is, therefore, part of an ongoing process for the Middle Severn area.

The action tables in Section 4.0 have been reproduced as they appeared in the Action Plan. Notes on progress are included in the final column of each table.

### **2.2 A Brief Description of the Middle Severn Area**

The Middle Severn plan area lies mainly within the Counties of Shropshire and Worcestershire. It also includes Telford & Wrekin unitary authority, and smaller parts of Staffordshire, Wrexham County Borough and Powys County, and covers an area of 2,634 square kilometres. The area is valued for its rich natural beauty and areas of unspoilt

countryside.

The area is one of contrasts with two distinct domains: the flatter landscape of the Shropshire Plain in the north and the more undulating, wooded Severn valley to the south, the two areas being separated by the Ironbridge Gorge. The rural nature of the area is reflected by the fact that only around 5% of the area is urban.

The area is also geologically varied, ranging from the craggy scree hills of the Stiperstones to the isolated Wrekin Hill rising from the rolling plain below. The River Severn and its principal tributaries, the Perry, Tern, Worfe and Salwarpe offer good quality waters which support high class fisheries and a diversity of wildlife, including kingfishers, dippers, dragonflies, voles and otters. The rivers are valued for environmental, local amenity and recreational purposes.

Historically the River Severn has been important for settlement and as a transport route for industry. Wroxeter was once a major Roman City, with Shrewsbury and Worcester being medieval centres and sites of monastic settlements. The plentiful supplies of water, coal, iron ore and limestone essential in initiating the industrial revolution were all to be found in or near the Ironbridge Gorge. The canals also played a major part in the development of the area. Today most of this early industry has vanished with only industrial ruins and museums remaining. Ironbridge Gorge was designated a World Heritage site in 1986.

Over the years, however, increasing industrial, agricultural and domestic demands have impacted on the area. Since the sixteenth century various areas have been the subject of land drainage and agricultural improvements. In addition some environmental management practices and engineering improvement works which were carried out over twenty years ago and were thought appropriate at the time have now been recognised for their shortcomings.

This has led to a loss and degradation of river corridor and a decline in flora and fauna in areas, for example near the Rivers Perry, Tern and Strine, whilst rivers like the Worfe have been subject to the effects of over-abstraction of groundwater, which has resulted in unacceptably low flows.

Parts of Shrewsbury, Ironbridge, Bridgnorth, Bewdley and Worcester are at risk of flooding from the River Severn, and there is pressure to further develop the floodplain. Urban development pressures have impacted on many towns, which has had a major impact on land use within the area. Future pressure for increased housing development is likely to be an issue in rural areas. These pressures and land use changes impact on our natural resources, transport routes, flood defences and on the local residents and wildlife.

## **2.3 Update on events in the Middle Severn area**

### **Flood Events**

The River Severn has seen a succession of flood events in 1998, with two significant floods in January, one in March and two in October. The wet summer months restricted formal regulation of the flow of the river from Clywedog reservoir to only one day. The worst floods for thirty years occurred in the Severn valley at the end of October. The equivalent of one and

half times the normal October rainfall fell in a seven-day spell over the Severn catchment, particularly over the Welsh mountains, resulting in widespread flooding in Shrewsbury, Bridgnorth, Bewdley and Worcester. At the end of it all, the Agency and its staff deservedly won widespread praise for timely and accurate warnings, and for all their efforts in helping the many people who had to endure the misery and upheavals.

*"The Environment Agency has been tremendous through the past week. It has been a comfort knowing they have been in the town ready to help us at any time. Their warnings and estimates of flood levels have been spot on."*

Mrs Penny Griffiths  
Dog Lane, Bewdley

The southernmost limit of the Middle Severn plan area was also hit by floods at Easter. An Action Plan was published in November, addressing recommendations made following the "Bye Report" into the Easter Floods. The Agency is already making good progress with actions that will lead to improved operations and public understanding.

On the Barbourne Brook in Worcester (one of the worst hit areas at Easter) the Agency has finished a survey of flood levels in the flooded properties and set up interim flood warning systems for properties at risk while a detailed study of all options is carried out. New monitoring equipment has been installed to give automated early warning of flood risk and to improve the flood warning to Barbourne. A study is also being undertaken into the possibility of flood alleviation work for Barbourne.

Owners and occupiers of property at risk of flooding in Bewdley have been given the opportunity to be included on the Agency's Automatic Voice Messaging (AVM) flood warning system. Many have now been formally added to the AVM system, and we have written to the remaining people to be sure they are clear about the initiative.

### **Abstraction licensing**

In accordance with the policy for the Midlands Region, most abstraction licences issued are now subject to a time limit. Flow restriction conditions have also been introduced for new River Severn abstraction licences.

### **Landspreading activities**

The Agency and the Department of Environment, Transport and the Regions (DETR) engaged consultants to review landspread wastes and landspreading activities. Following publication of this document, the Agency is to produce internal guidance to promote consistency in the regulation of this activity. This should improve inspection and understanding of the subject. Also, following a pilot study into regulation of spreading sewage sludge on land, it is likely that the Agency will carry out more regulation of this activity. The Middle Severn area has recently been used as part of a pilot study (national study) of sewage sludge spreading under 'The Sludge (Use in Agriculture) Regulations 1989.'

### **Community Pride**

The Community Pride project was launched for Shropshire in March. This annual competition provides local groups with the opportunity to get involved in community based environmental

improvement projects. The Agency provides financial sponsorship, and advice and guidance where appropriate.

### **Local government reorganisation**

Local government reorganisation on 1 April 1998 has affected a number of the local authorities within the LEAP area. Telford & Wrekin Council became a new unitary authority on 1 April 1998. On the same date Hereford & Worcester County Council became two authorities - Worcestershire County Council and the new unitary authority of Herefordshire Council. The updated status of Local Development Plans is shown in Appendix 2.

## **3.0 SUMMARY OF PROGRESS**

Of 88 actions planned for this year, progress has been made on all but 7 actions (2.3, 3.1, 5.7, 14.1, 15.1, 17.1, 20.2), and 12 actions were completed. 2 actions (7.1, 22.2(iii)) have been brought forward a year. Many of the actions have involved organisations working in collaboration with others.

For details of progress for each action, please refer to the 'progress' column in the tables in Section 4.0.

### **3.1 Notable achievements and disappointments**

#### **Notable achievements:**

- The Agency has met with all the main landspreading contractors to discuss their operations/activities (Issue 1).
- The River Strine wetlands initiative, with the Royal Society for the Protection of Birds (RSPB), Farming and Rural Conservation Agency (FRCA), and Farming and Wildlife Advisory Group (FWAG), has commenced (Issue 8).
- A joint Agency/FWAG seminar on the impacts of agricultural practices on wildlife and their mitigation, was held in June (Issue 8).
- A partnership has been set up between Shropshire County Council, Wardell Armstrong (Consultants) and the Agency to investigate polluting inputs from abandoned metalliferous mines to the Minsterley Brook (Issue 9.3).
- Good progress has been made by Entec on the West Midlands Aquifer modelling contract. Following completion of Phase 1 studies to collect and interpret data, the project is now focussing on development of the groundwater model. This will be used to examine a range of water resource management options for the area, underpinning the water industry AMP3 environmental improvement programme (Issue 10).
- The scheme to improve the River Worfe by flow augmentation, using Severn Trent Water's Sherrifhales borehole, is ready for trials next year (partnership with Severn Trent Water Ltd.) (Issue 10)

- Shropshire Groundwater Scheme Phases 4 and 5 received approval from DETR. Good progress has been made on Phase 4 abstraction boreholes, Phase 5 observation boreholes, and the pipeline and civils contracts. (Issue 10).
- A new project is being undertaken in partnership with Telford & Wrekin Council and local developers on the possibility of recycling rainwater on new properties in the Council's area. This might help relieve pressure on the over-abstracted aquifer in the area (Issue 10).
- Illegal abstraction on the Hadley Brook has been brought under control (Issue 10).
- There has been increased abstraction licence enforcement activity in the area. (Issue 10)
- A weekly irrigation bulletin, prepared by Water Resources staff and distributed to farmers through the National Farmers Union, has been launched (Issue 10).
- Six winter storage reservoir abstraction licences have been issued, and there are several other applications under consideration (Issue 10).
- Negotiations have commenced with British Waterways with a view to preventing contamination of Aqualate Mere (Issue 11).
- The Severn Way footpath, 220 miles long from source to estuary, was completed in 1998. It was officially opened at a ceremony in Worcester in March. (Issue 19).
- River Tern at Walcot – a partnership has been set up with British Sugar to create fishing opportunities (Issue 19).
- River Severn at Shrewsbury – a partnership has been set up with Shrewsbury & Atcham Borough Council to improve fishing facilities (Issue 19).
- Disabled facilities have been provided at Albrighton Moat, Upton Warren and Walcot (Issue 19).
- The waste minimisation initiative has been expanded to cover Shropshire, Worcestershire and the Marches in the Middle Severn area (Issue 20).
- Business in Environment Support Scheme for Telford (BESST) was launched at the January meeting of Telford & Wrekin Local Agenda 21 – local businesses sign up and make commitment to improving environmental performance (Issue 20).
- Good progress has been made by local authorities in promoting home composting (Issue 20).

**There have been some disappointments:**

- Landspreading inspection numbers have been low due to a reprioritisation of

resources. Inspections of exempt activities such as landspreading are given a lower priority over inspection of licensed facilities (Issue 1).

- There have been further breaches of the River Quality Objectives for the Cound Brook (Issue 9.1).

### 3.2 New issues/actions

As a result of this review, several **new actions** have been introduced this year:

**new action 9.2.5** – to protect the River Quality Objective (RQO), promote the inclusion of funding under AMP3 for possible improvement work at the following Sewage Treatment Works (STWs): Albrighton, Baschurch, Bomere Heath, Edgmond, Loggerheads village, Minsterley and Ombersley.

**new action 9.2.6** - to protect the quality of the Prees Brook – promote the funding under AMP3 for possible improvement work at Prees, Golfhouse Lane STW.

**new action 9.3.3** - to prevent possible breaches of the EC Fisheries Directive, ensure funding is available under AMP3 for possible improvement work at the following STWs: - Baschurch, Conover, Dorrington, Minsterley and Shawbury.

**new action 9.4.1** – reassessment of Pipe Strine RQO, currently RE2.

**new action 10.7** – alleviation of low flows in the Lonco Brook. There is likely to be an improvement of flows in the Lonco Brook during winter months as a result of action being taken to reduce phosphate levels in Aqualate Mere SSSI. The Shropshire Union Canal is known to contain water with high phosphate concentrations originating from treated effluent discharges from Barnhurst STW north west of Wolverhampton. Canal water currently enters Aqualate Mere via a weir overflow and through a leak in the dry dock at Norbury junction. In order to solve this problem, the Agency, in partnership with British Waterways and English Nature, is investigating the possibility of stopping or reducing these overflows. This would have the beneficial effect of improving flows in the Lonco Brook during winter months by causing canal water to overflow at Knighton (also see action 11.2).

**new action 18.3** – investigate feasibility of flood alleviation for Beechwood Park, Barbourne Brook, Worcester.

## 4.0 ACTIONS UPDATE

The following tables have been taken from the Action Plan, and updated to show progress on the 22 Issues in the LEAP, and any changes that have occurred. Progress for each action is summarised in the column on the right hand side. Where actions are shown in **bold**, this indicates they have been added at this Annual Review stage. Revised costs are also shown in bold.

### Key

- < less than.
- Action in the year indicated (cost figures given if known).
- R Recurring - no additional costs to annual budgetary provision.
- U Unknown costs at this time.
- U(i) Individual costs will be identified and agreed during negotiations.
- U(ii) Capital costs will be identified during investigations or surveys.
- + Action added as a result of consultation.
- K £1,000

### Notes on abbreviations

AMP	Asset Management Plan <sup>1</sup>	NVZ	Nitrate Vulnerable Zone
CC	County Council	RA	Ramblers' Association
BW	British Waterways	SABC	Shrewsbury & Atcham Borough Council
DC	District Council	SAC	Special Area of Conservation
DETR	Department of the Environment, Transport and the Regions	SC	Sports Council
EN	English Nature	SCC	Shropshire County Council
EP	English Partnerships	SSSI	Site of Special Scientific Interest
FA	Forestry Authority	STW	Sewage Treatment Works
FWAG	Farming and Wildlife Advisory Group	STW Ltd	Severn Trent Water Ltd
LA	Local Authority	TBG	Tidy Britain Group
MAFF	Ministry of Agriculture, Fisheries and Food	WCC	Worcester City Council
NSA	Nitrate Sensitive Area	WMRC	West Midlands Rowing Council
		WT	Wildlife Trust

### Note<sup>1</sup> AMP3 (Asset Management Plan No 3)

Every five years the Water Industry Companies have to agree its investment programme with the Director General of OFWAT. We are now in the third review, which will cover the period 2000 to 2005, and the Agency is anxious to ensure full consideration is given to securing environmental improvements.

### New actions

As indicated previously, this is an ongoing plan and following this year's review several new actions have been included, reflecting changes and/or addressing potential new problem areas. The 6 new actions are shown in bold in the tables, and are: 9.2.5, 9.2.6, 9.3.3, 9.4.1, 10.7 and 18.3 (also see page 8).

## Issue 1: Agricultural pollution and the land spreading of controlled waste

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
1.1 Inspect land spreading activities as a priority. Provide advice to industry, contractors and farmers on best practice.	Environment Agency	Industry, STW Ltd Contractors Farmers FWAG	R	■	■	■	■	■		Inspections currently being done on an ad hoc basis to fit in with 75% inspection frequencies of licensed sites (ideally 3 visits/6 months on average). Other priorities have not allowed resources to be deployed to this activity. Meeting/s held with Farming and Wildlife Advisory Group (FWAG) to assess opportunities for collaborative/supportive working
1.2 Monitor water quality effects of measures taken by farmers in NSAs <sup>1</sup> and NVZs <sup>2</sup> in the area.	Environment Agency	MAFF Farmers	R	■	■	■	■	■		Monitoring of NSAs is continuing. Enforcement of NVZs delayed until January 1999.
1.3 Report on above water quality and actual changes to land use/fertiliser use in NSAs and NVZs.	MAFF Environment Agency		U					■		No action planned for this reporting year.

<sup>1</sup>Nitrate Sensitive Areas (NSA)

An area where nitrate concentrations in sources of public drinking water exceed, or are at risk of exceeding the limit of 50 mg/l laid down in the 1980 EC Drinking Water Directive, and where voluntary, compensated agricultural measures have been introduced as a means of reducing those levels.

<sup>2</sup>Nitrate Vulnerable Zone (NVZ)

An area where nitrate concentrations in sources of public drinking water exceed, or are at risk of exceeding the limit of 50 mg/l laid down in the 1991 EC Nitrate Directive, and where compulsory, uncompensated agricultural measures came into force on 19 December 1998 as a means of reducing those levels.

## Issue 2: The disposal of sewage in rural areas

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
2.1 Negotiate improvements to village drainage systems in Vennington and Lynéal.	Environment Agency	STW Ltd	R	■	■	■				<p>Severn Trent Water (STW Ltd) have investigated the removal of farm contamination of the Vennington village drainage system with a view to the installation of a proper sewerage and sewage treatment system in 1999. It has been established that Lynéal village drainage system is not the responsibility of STW Ltd. Future progress uncertain.</p> <p>The Agency is in discussion with STW Ltd regarding improvements at Hartlebury.</p> <p>The Agency's attempts to pursue the matter through the Parish Council have been unsuccessful. The situation is being reassessed.</p> <p>Negotiations ongoing. Section 101A application (Water Industry Act 1991) to STW Ltd. by Parish Council has been approved. Sewerage scheme to be drafted.</p>
2.2 Negotiate sewerage improvements at Hartlebury.	Environment Agency STW Ltd	LA	R	■	■	■				
2.3+ Negotiate sewerage improvements at Maer village.	Environment Agency	STW Ltd Parish Council Owner/ occupiers	R	■	■	■				
2.4+ Negotiate sewerage improvements at Waters Upton (north side of village).	Parish Council	STW Ltd Owner/ occupiers	R	■	■	■				

Note: It is part of the Environment Agency's routine work to establish the impact of inadequate rural sewerage facilities within the area, specific problems will be included as future actions as appropriate.

## Issue 3: The impact of contaminated sites

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
3.1 Investigate the potential for pollution from Betton Abbots landfill site, including any potential impact on nearby Betton Pool SSSI.	Environment Agency	Shropshire Waste Management	U(i)	■	■	■	■			No impact detected on Betton Pool SSSI. No progress to date, investigation continuing, to be carried forward to 1999/2001.
3.2 Investigate the risk of pollution from Overlay Hill, Telford (risk assessment).	Environment Agency	owner	20	5	15	■	■	■		The Agency is currently installing dedicated sampling pumps in 7 monitoring boreholes and letting a contract for groundwater sampling. Supplementary Credit Approval (SCA, Government loan) bid being prepared for risk assessment. Delay on investment (slippage of 2 years), but anticipated commencing Spring 1999.
3.3 Continue groundwater remediation at Bridgnorth to Agency satisfaction.	owner		U(ii)	■	■	■	■	■		The decontamination works for the main petrol loss are virtually completed. Remedial work for small pocket of contamination still ongoing.
3.4+ Investigate potential problem of minewater drainage in the general Telford area.	Telford & Wrekin Council Environment Agency		U(i)	■	■	■				Initial Environment Agency desktop study of the problem is due for completion by March 1999.

### Issue 4: Monitoring of Ironbridge Power Station air emissions

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
4.1 Undertake dispersion modelling to estimate concentration of pollutants in air.	Eastern Merchant Generation <sup>1</sup> / Environment Agency		Nil to Agency		■					Progressing satisfactorily, completion by the end of 1998/99.
4.2 Measure the concentration of pollutants in air local to station.	"		Nil to Agency		■	■				Progressing satisfactorily. Likely to continue into 1999/2000.
4.3 Identify the main areas where emissions have greatest impact and measure the concentration of pollutants.	"		Nil to Agency		■	■				Progressing satisfactorily. Likely to continue into 1999/2000.
4.4+ Assess potential impacts of emissions on SACs, SSSIs and other sites of conservation importance.	Environment Agency		10		5	5				Guidelines anticipated as an output from the National Habitats Directive Seminar November 1998.

Note<sup>1</sup> Part of company's requirement under authorisation and additional work being conducted by company to gain information on dispersion and effects of their discharge.

## Issue 5: The impact of urban pollution and development

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
5.1 Identify unsatisfactory combined sewer overflows that will form part of AMP 3 programme.	Environment Agency	STW Ltd	R	■	■					Final list of unsatisfactory Combined Sewer Overflows (CSOs) to be included within the AMP3 programme is being determined.
5.2 Investigate the cause and effects of the discoloured discharge from Rushmoor STW.	STW Ltd	Environment Agency	U(i)	■	■	■	■			Investigation continuing.
5.3 Target inspections of industrial units draining to the Battlefield Brook, Shrewsbury.	Environment Agency	STW Ltd Industry	2	■	■					Site inspections of industrial units draining to the Battlefield Brook completed. Monitoring of stream quality ongoing, early results indicate significant improvements.
5.4 Liaise with LAs to persuade them to enforce maintenance of ordinary watercourses to an acceptable standard: i) Battlefield Brook.	Environment Agency	LAs  SABC	R	■	■	■	■	■		A 'clean-up' of the Battlefield Brook took place in April, involving the Agency, SABC, Tesco, the Probation Service, local councillors and volunteers. Tree maintenance work and further clean-up work planned for January 1999.
5.5 Identify areas where litter is a particular problem and liaise with TBG and LAs to develop a strategy for litter control.	Environment Agency TBG/LAs		R	■	■					Preliminary discussions have been held within the Agency and with the Tidy Britain Group on how to take this action forward. <sup>1</sup> Also see 5.4 above.
5.6 Monitor improvements to drainage and investigate remaining sources of pollution from industrial units on the Honeyman's Brook, Droitwich.	Environment Agency	STW Ltd LA	10	2	2	2	2	2		Investigations have demonstrated that pollution problems are mainly due to historic oil contamination of ground. A permanent oil interceptor is planned for the site.
5.7+ Assess potential impacts of new boat moorings on swan sanctuary, R Severn at Worcester.	Environment Agency	WCC Civic Society	R	■	■					Awaiting firm development proposals by WCC.

Note<sup>1</sup> Both the Agency and Local Authorities have powers to take action against flytippers. A national Memorandum of Understanding between the Environment Agency and the Local Government Association has been established in order to promote a lasting framework for consultation and co-operation and to make the best use of limited resources. Specialist protocols are being developed to underpin this framework and one on flytipping has been agreed. The flytipping protocol outlines the Agency's level of response to incidents of flytipping. The response is broadly based on a risk approach with the Agency becoming involved when hazardous waste is flytipped or where the waste is flytipped in a sensitive location.

### Issue 6: Caravan site development in the floodplain

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
6.1 Set up roadshows and additional consultation with LAs to press for policies to be included in Development Plans to protect flood plain from caravan site development. (also see 22.1)	Environment Agency	LAs	R	■	■					Roadshows have been held with relevant staff from Wyre Forest District Council, North Shropshire District Council and Oswestry Borough Council. Good progress has been made with LAs on flood protection policies, for example negotiations over flood protection policies in Shrewsbury & Atcham Local Plan.

### Issue 7: Decline in eel fisheries

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
7.1 Construct elver passes on navigation weirs along the R. Severn and at other appropriate weirs on tributary streams.	Environment Agency		15			5	5	5		Eel/elver passes restored at Walcot Sluices, River Tern.

## Issue 8: Degradation of wetland and riverine habitats

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
8.1 Identify and implement wetland creation opportunities as part of the Severn Valley Wetland strategy.	Environment Agency	EN, WTs owners, Water Co FWAG	100	20	20	20	20	20		Grimley Brick Pit SSSI wetland project implemented in partnership with EN and landowner. Pool creation at Shrawley in partnership with Shropshire County Council.
8.2 Develop and implement management strategy for Shropshire Meres and Mosses (e.g. Wem Moss, Brown Moss).	EN	Environment Agency LAs	75	15	15	15	15	15		Strategy presented at Meres and Mosses Seminar November 1998. Reedbed enhancement and scrape creation at Aqualate Mere SSSI targeting Biodiversity species.
8.3+ Establish forum with English Nature to investigate polluting impacts on the Meres and Mosses, including septic tanks at Fenns and Whixall Mosses (SAC).	Environment Agency EN	owners	R		■					Annual liaison meeting established with EN as part of Agency/EN concordat.
8.4 Carry out habitat rehabilitation work on degraded rivers, including the R. Perry, R. Tern and R. Strine.	Environment Agency		100	25	20	20	20	15		Instream habitat improvements for trout and coarse fish at Walcot, R. Tern. Mill race/offstream fry refuge on R. Perry, Milford. Scrape creation at Wall farm, R. Strine. Environmental weed cutting specification implemented on Rivers Strine, Tern and Perry.
8.5 Create 'Buffer Strips' on degraded rivers by fencing in conjunction with above works, and through Countryside Stewardship schemes.	Environment Agency MAFF	FWAG	25	5	5	5	5	5		River Strine wetlands initiative started in partnership with RSPB, FRCA and FWAG, aimed at targeting agri-environment packages towards wetlands and buffer zones.
8.6+ Identify opportunities for wetland creation in Worfe catchment following reductions in abstractions.	Environment Agency	owners EN, WTs	R		■	■	■			Potential sites identified in upper part of catchment. Middle/lower reaches to be investigated January – March 1999.
8.7+ Develop 'River Corridor' project group to identify and target rehabilitation of degraded rivers.	Environment Agency FWAG	EN, WTs owners LAs	R		■	■				River Strine wetlands initiative established. Agency/FWAG seminar held in June 1998.

Also refer to Issue 11.

## Issue 9: Failure to comply with Water Quality Objectives and EC Standards

### Issue 9.1: Failures requiring investigation by the Environment Agency

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
9.1.1 River Severn, Cressage and Bever: Assess reason for failure to meet quality target.	Environment Agency		R	■	■					No exceedances of RQO standards since 1995. No further work deemed necessary.
9.1.2 River Perry, Gobowen: Target farm inspections.	Environment Agency	Farmers	2	■	■					Work in progress. Additional sampling also instigated. Farm visit programme scheduled for early 1999.
9.1.3 Stoke Brook, Stoke-on-Tern: Monitor to ensure anticipated improvements in quality occur.	Environment Agency		1	■	■					Some improvement in quality since the industrial pollution source was found and eliminated in June 1996. Stoke on Tern STW has been included as a candidate for AMP3 investment, to try and ensure future compliance with the RQO.
9.1.4 River Worfe, Stableford: Investigate quality target failure.	Environment Agency		2	■	■					Stretch now compliant with the RQO. Low flow was the probable cause of the previous failure.
9.1.5 Barbourne Brook, Worcester:	Environment Agency									
i) Assess need for further farm inspections upstream of Blackpole	Environment Agency	Farmers	}	■	■					Successful prosecution of one farmer. Situation being monitored.
ii) Continue leachate extraction from landfill	Environment Agency	WCC	} 5	■	■	■	■	■	2 boreholes in use, effectiveness under assessment	Further borehole installed. However, problems experienced with the pumping mechanism. Agency in discussion with Worcester City Council (WCC) to ensure the situation is resolved.
iii) Continue water quality monitoring.	Environment Agency		10	2	2	2	2	2		Agency/WCC have installed additional monitoring/extraction at the north end of the site.
9.1.6 Cound Brook: Assess work required to achieve quality target.	Environment Agency		1/R	■	■	■				Further breaches of the RQO during early 1998. Report produced, the conclusion of which was that agricultural run off was the probable cause. Following an assessment of the work load implications, the following remedial action is planned for 1999: 1) increased monitoring, 2) programme of farm inspections.

## Issue 9.2: Failures involving Sewage Treatment Works

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
9.2.1 Wesley Brook, Shifnal STW: Assess what improvements are necessary.	Environment Agency LA	STW Ltd	R	■	■	■				Following assessment by the Agency, Shifnal STW included as a candidate for AMP3 programme.
9.2.2 River Tern, Market Drayton: Assess effects of sewer overflows and seek improvements.	Environment Agency	STW Ltd	R	■	■	■				Planned expansion of Market Drayton STW to overcome premature operation of storm overflow. In addition, Market Drayton STW is included as a candidate for the AMP3 programme since consent conditions may have to be tightened to ensure that the River Tern meets the EC Fisheries Directive and its River Quality Objectives.
9.2.3 River Salwarpe catchment:										
i) Implement planned improvements to Droitwich and Stoke Prior STWs	STW Ltd	Environment Agency LA	U(ii)	■	■	■				Droitwich STW included as a candidate for the AMP3 programme. Stoke Prior STW work to be completed under the AMP2 programme.
ii) Negotiate improvements to Bromsgrove and Stoke Prior STWs	Environment Agency	STW Ltd	R	■	■	■				Stoke Prior STW – see above. Bromsgrove STW included as a candidate for the AMP3 programme.
iii) Seek to tighten discharge consent limits at a Bromsgrove industrial site.	Environment Agency	Industry	U(ii)	■	■	■				Discharge limits on IPC Authorisation have been tightened.
9.2.4 Lakehouse Dingle, Hampton Loade: Assess need for future investment at Alveley STW.	Environment Agency	STW Ltd	R	■	■	■				Following assessment by the Agency, Alveley STW included as a candidate for AMP3 programme.
9.2.5 To protect the RQO, promote the inclusion of funding under AMP3 for possible improvement work at the following STWs: Albrighton, Baschurch, Bomere Heath, Edmond, Loggerheads Village, Minsterley, Ombersley.	Environment Agency	STW Ltd	R		■	■				New action.

**Issue 9.2: Failures involving Sewage Treatment Works (continued)**

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
9.2.6 To protect the quality of the Prees Brook, promote the inclusion of funding under AMP3 for possible improvement work at Prees, Golfhouse Lane STW.	Environment Agency	STW Ltd	R		■	■				New action.

**Issue 9.3: Failure to meet EC Directive Standards**

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
9.3.1 River Severn, Shrewsbury: Investigate cause of exceedance of EC limit for cadmium.	Environment Agency		R	■	■					Investigation has shown that the exceedances were due to the method of sampling. New sampling method is being used, since when there have been no exceedances for cadmium.
9.3.2 Assess impact of inputs from adits to Minsterley Brook.	Environment Agency		2		■	■				Wardell Armstrong Consultants, in conjunction with Shropshire County Council and the Agency, are carrying out work to assess the polluting inputs in order to prioritise any future land reclamation schemes.
9.3.3 To prevent possible breaches of EC Fisheries Directive, ensure funding is available under AMP3 for possible improvement work at the following STWs: Baschurch, Conover, Dorrington, Minsterley, Shawbury.	Environment Agency		R		■	■				New action.

Note: All sites that are subject to RC directives are monitored as part of the Environment Agency's routine work. Any failures to comply with these standards automatically trigger an increase in monitoring to identify the cause of failure.

### Issue 9.4: Potential revision of quality targets and derogations

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
9.4.1 Examine water quality data and land use changes to determine appropriate sustainable targets:										
a) Soulton Brook, currently RE2.	Environment Agency		R			■	■			Water quality data being collected to allow for reassessment of River Quality Objectives in 1999/2000.
b) Mad Brook, Haldane, currently RE2.	Environment Agency		R			■	■			" "
c) Elmbridge Brook, Droitwich, currently RE2.	Environment Agency		R			■	■			" "
d) Pipe Strine, currently RE2.	Environment Agency		R			■	■			New action.
9.4.2 River Meese: derogate for effects of algae. <sup>1</sup>	Environment Agency		R			■	■			No action planned for this reporting year.

Note<sup>1</sup> 9.4.2 - The cause of algal blooms in the River Meese and potential sources of high nutrient water entering Aqualate Mere are being investigated by the Agency as part of the duty under the Urban Waste Water Treatment Directive (91/271/EEC)

## Issue 10: Impacts of water abstraction

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
10.1 Groundwater modelling of Kidderminster/ Stourbridge/ Wombourne and Cosford/Worfield aquifers.	Environment Agency		c170	60	80	30	■			Part One of the Report received.
10.2+ Investigate short term options to restore flows to affected reaches and implement viable schemes.	Environment Agency STW Ltd		<500	c50	c450					Progress is being made, in partnership with Severn Trent Water Ltd., towards providing compensation releases from Sherrifhales borehole to the River Worfe. To date, STW Ltd. have laid a pipeline from the pumping station to the river, and test releases are to commence soon.
10.3 Reduce groundwater abstractions from sensitive areas e.g. Cosford aquifer through AMP3 periodic review. <sup>1</sup>	STW Ltd/ Environment Agency		U					■		Negotiations continuing with Water Company. Memorandum of Understanding with regard to reducing abstraction in the Worfe valley to be part of the Uckington licence. Partnership project commenced with Telford & Wrekin Council and developers on recycling of rainwater on new housing development in Council's area (see p7).
10.4 Encourage conjunctive use of local sources within Worfe catchment to reduce seasonal over abstraction of surface water for spray irrigation. <sup>1</sup>	Environment Agency Farmers		R	■	■	■	■	■		Borehole licence issued to a local farmer in return for him giving up 'licence of right' licence for abstraction from the River Worfe.
10.5 Encourage winter abstraction and storage e.g. R Worfe, Perry, Cound, other smaller brooks.	Environment Agency Farmers		R	■	■	■	■	■		6 winter storage licences have been issued in the LEAP area, with several more applications under consideration.
10.6 Construct new gauging station on Cound Brook.	Environment Agency		143 (13 prior to April 1997)	130						Gauging station has been completed.
10.7 Alleviate low flows in the Looce Brook.	Environment Agency	BW EN	U		■	■	■	■		New action. Discussions with BW have started this year (see Action 11.2).

Note<sup>1</sup> Will be considered as part of modelling options.

### Issue 11: Protection of existing high quality riverine and other wetland habitats

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
11.1 Review all relevant Agency consents at SACs (EC Habitats Directive).	Environment Agency		R	■	■					Review underway on Fens and Whixhall Moss.
11.2+ Investigate source of nutrient enrichment entering Aqualate Mere (SSSI) and undertake remedial action if appropriate.	Environment Agency		R	■	■					Investigations have demonstrated that a high proportion of phosphate levels entering Aqualate Mere are from the Wood Brook. The feasibility of remedial measures is being investigated with British Waterways (see Action 10.7 above).
11.3 Prepare Water Level Management Plans for Aqualate Mere, Fernhill Pastures, Marton Pool and RueWood Pastures.	Environment Agency EN owners		5	5						Completed.
11.4 Seek additional EC fisheries designations on Sheinton, Cound, Mor, Borle, Coal, Minsterley and Claverley Brooks.	Environment Agency		R	■						Submissions made to DETR. However, at present the government does not propose any further EC fisheries designation.

Also refer to Issue 8.

Note: The Old River Bed SSSI at Shrewsbury may be at risk from the proposed Shrewsbury north west relief road. Currently this road development is unlikely to take place during the plan 5 year period, but if brought forward, the Agency will aim to ensure the long term security of the SSSI by seeking appropriate environmental protection measures in the design and construction stages of the works. Other road schemes, such as the proposed Hodnet bypass, which could impact on important wetland sites will need similar consideration. The Agency is reviewing its policy on the reduction of Giant Hogweed and other invasive weeds in the catchment and will include an action in future plans if appropriate.

## Issue 12: Protection of Biodiversity

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
12.1 Determine the present distribution and status of water vole, otter, crayfish, freshwater pearl mussel and depressed river mussel, and develop targets for the protection of these species.	Environment Agency	EN WTs	10	2	2	2	2	2		Crayfish and otter surveys undertaken on River Worfe. Crayfish observed on Cound Brook. Previous records of Pearl Mussel in this catchment have now been established as mis-identification.
12.2+ Monitor the otter populations through the River Severn Otter Project.	Environment Agency	WTs EN LAs	10	2	2	2	2	2		Ongoing. Financial support for otter project until March 1999.
12.3+ Create new otter habitat in conjunction with river maintenance works and habitat improvement schemes.	Environment Agency		10	2	2	2	2	2		Otter holts created on islands along the River Severn and on the Cound Brook.
12.4 Investigate status of shad and assess suitability of habitat upstream of Diglis as spawning area.	Environment Agency		2			1	1			No action planned for this reporting year.
12.5+ Seek protection for remaining native crayfish populations in the catchment area.	Environment Agency MAFF	FA	R	■	■					No change in MAFF position on 'no go' areas for introduction of non-native crayfish. Advice against introductions given by Agency staff.
12.6 Assess the distribution of alder disease to support Forestry Authority studies.	Environment Agency	LAs FA	2	1	1					Further problems identified in River Worfe and River Salwarpe catchments. R&D project established with Forestry Commission on Hadley Brook.
12.7 Determine the distribution, types and scope for regeneration of Black Poplars and undertake planting schemes.	Environment Agency		20	10	5	5				Propagation and planting strategy drawn up for the area.
12.8 Implement Barn Owl nest box scheme on River Perry.	Environment Agency		3		1	1	1			Nest boxes installed on River Perry May 1998.

### Issue 13: Protection of high quality Coarse and Game Fisheries

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
13.1 Review Fisheries Byelaws to control fish removals from watercourses.	Environment Agency	MAFF	R	■						Proposals made as part of National Byelaw Review. Currently under consideration.
13.2 Monitor impacts of pike and zander on other fish stocks in the middle reaches of the River Severn.	Environment Agency	Angling clubs	5	1	1	1	1	1		Survey work on middle Severn detected no changes in fish populations following earlier pike removals.
13.3 Maintain and improve security provisions at vulnerable locations near weirs on the River Severn.	Environment Agency		5	1	1	1	1	1		Ongoing maintenance work.
13.4 Seek funding and plan for future installation of salmon passes on the River Severn navigation weirs and weirs on tributary streams.	Environment Agency		R		■					Bid made for Capital Modernisation Funding in 1999/2000.
13.5 Review byelaws and voluntary restrictions on salmon fishing methods.	Environment Agency	MAFF	R	■	■					Regional and National Byelaw proposals presently in consultation process.
13.6 Seek funding and re-establishment of Shrewsbury salmon counter.	Environment Agency		25						25	No work planned for this reporting year.
13.7 Review and implement S30 trout stocking policy.	Environment Agency		R	■	■					Policy agreed. Implementation 1998/99.

In addition to the above actions, the Agency will through its routine work have regard to:

Effects of flow variations on angling relating to major water supply abstractions from the River Severn.

Protection of fisheries requirements in the middle reaches of the river and its tributaries in reviewing the River Severn flow operating rules (also see Issue 21).

Low flow problems - certain watercourses in the area suffer from low flow problems, which have an adverse impact on native brown trout populations (also see Issue 10).

### Issue 14: The protection of high quality water resources

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
14.1 Undertake programme of pollution prevention site inspections in catchment and around water supply boreholes.	Environment Agency	Industry Farmers	20	4	4	4	4	4	5 year rolling programme	Work delayed during 1998 due to farm visits associated with sheep dip problems in area of upper reaches of River Severn. Programme to be caught up during 1999.
14.2 Assess the possibility of installing additional surface water pollution monitoring equipment in the catchment.	Environment Agency		1			■	■			No work planned for this reporting year.
14.3 Ensure that pesticides from the wool industry in Telford do not affect the River Severn.	Environment Agency	STW Ltd Brintons	1		■					Coalport STW consent has been tightened to ensure that any discharge from Brintons, into the South Telford sewerage system, does not affect the River Severn. This action will not be included in the next Annual Review, although routine monitoring of discharges to River Severn will continue.

### Issue 15: Water temperature impact of Shropshire Groundwater Scheme on the aquatic habitat

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
15.1 Investigate the extent and impact of temperature changes in receiving watercourses.	Environment Agency		U(ii)	■	■	■	■	■	Costing and timing dependent on year by year use of scheme.	Shropshire Groundwater Scheme not operated during 1998, therefore no further investigation possible this year.

### Issue 16: Threats to the Farley Brook, Much Wenlock

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
16.1 Monitor the disposal of liquid waste stored on industrial site. <sup>1</sup>	SCC Environment Agency Site owners	Biffa Waste EP	Was 1000 disposal cost (SCC). See progress column	■	■	■	■			Under review. Of 5 underground storage wells, 2 have now been emptied at a cost of £2 million. Due to costs currently need additional funding from English Partnerships. Likely to continue into 2000/01.
16.2 Assess current and future flows from Much Wenlock STW and their impact on the brook.	Environment Agency	STW Ltd	1	■	■					Much Wenlock STW included as possible candidate for the AMP3 programme. Further investigational work on the sewerage system is planned by STW Ltd for 1999. The Agency is installing a gauge in the Farley Brook upstream of STW in May 1999, to obtain accurate flow measurement.

### Issue 17: Stability in the Ironbridge Gorge Area

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
17.1 Monitor the geological stability of the area.	Inter-Agency Group	Environment Agency	U	■	■	■	■	■		No meetings of inter-agency group.

## Issue 18: Flood alleviation schemes

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
18.1 Evaluate hydrometric data and reassess need for flood alleviation scheme for the Diglis area of Worcester.	Environment Agency		R	■	■					The floods have enabled the evaluation to take place. Negotiations to resolve the need for a flood alleviation scheme have resulted in approval for the Agency to joint-fund with the house owners a scheme to raise floor levels in the Diglis Avenue properties.
18.2 Re-visit flood alleviation scheme for Bewdley.	Environment Agency		10		■	■				Following the floods in October, consultation will take place on the need to re-visit the flood alleviation scheme.
18.3 Investigate feasibility of flood alleviation scheme for Beechwood Park, Barbourne Brook, Worcester.	Environment Agency		U			■				New action. Feasibility study initiated.

## Issue 19: Opportunities for amenity, recreation and navigation

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
19.1 Seek opportunities for increased recreational and amenity use of rivers in urban areas (e.g. Worcester and Shrewsbury).	Environment Agency LAs SC	land owners	25	5	5	5	5	5		Severn Way completed. Partnership project with Shrewsbury & Atcham Borough Council to improve angler access to the River Severn, Shrewsbury.
19.2 Establish an Agency view on potential increased navigational use of the River Severn.	Environment Agency	BW	2		2					Area Environment Group (AEG) sub group set up to advise the Agency, November 1998.
19.3 Undertake baseline River Habitat Surveys of middle reaches of the R. Severn in relation to potential future river uses e.g. SNRT navigation proposals.	Environment Agency		2	2						Completed 1997.
19.4 Implement marketing and promotion strategy for the Severn Way footpath.	Environment Agency CCs	RA	15	10	5					Ongoing. Completion of Walkers Guide delayed until March 1999. £10k funding for Guide donated by ICI.
19.5 Seek opportunities for better access to and use of watercourses by disabled persons (e.g. Telford, Albrighton and Shrewsbury).	Environment Agency LAs Sports Council	land owners	30	10	5	5	5	5		Disabled angler platforms and wheely boat at Upton Warren. Disabled angler access provisions on River Tern, Walcot. Disabled conservation area and sensory garden completed at Albrighton Moat in partnership with Tarmac and RAF Cosford.
19.6 Seek opportunities for further development of stillwater fishing opportunities near urban areas.	Environment Agency	Angling clubs	40		10	10	10	10		Development of junior angler facilities at Mousecroft Pool, Shrewsbury. Creation of stillwater fishery at Walcot with British Sugar.
19.7 Update and reprint the River Severn canoe guide.	Environment Agency	Drummond Outdoor	4		4					Due for completion February 1999.
19.8+ Produce rowing information for River Severn.	Environment Agency	WMRC	2			2				No action planned for this reporting year.

Further significant initiatives relating to recreational use of watercourses are being pursued by other bodies, including proposals to restore the Droitwich Canal navigation by the Droitwich Canals Trust (and restoration of the towpath to potentially provide cycle route), and the development of a rowing/canoeing centre on the River Severn at Worcester by the Sports Council. Opportunities also exist for restoration of other canals such as the Shrewsbury Canal and

the Coalport Canal system in the Ironbridge Gorge. Although the Agency currently has no plans for financial involvement in these schemes, we will support these restorations provided it can be demonstrated that these developments are sustainable.

## Issue 20: Sustainable Waste Management

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
20.1 Expand the Waste Minimisation Initiative to cover the plan area.	Environment Agency	Partners	<65	<65	■	■	■	■		There are now 3 waste Minimisation Groups operating in different parts of the LEAP area: Shropshire Waste Minimisation Group, Worcestershire Waste Minimisation Group, and the Marches Waste Minimisation Group.
20.2+ Investigate potential local markets for composted material.	Wrekin Council	Environment Agency	R	■	■	■				No significant progress as yet. Likely to carry on into 1999/2000.
20.3+ Promote home composting and raise public awareness of the need for sustainable waste management.	LAs	Environment Agency	U		■	■	■	■		Examples of progress on <b>home composting</b> include - North Shropshire DC have distributed 500 bins to the public and produced a leaflet distributed at shows; Wyre Forest DC have held a one day sale of composters/water butts at discounted rate and promoted recycling/re-use in schools; Malvern Hills DC and Wychavon DC sell and promote composting bins at low cost to the public throughout the year, schools and groups visited etc.; Bromsgrove DC - gave talks/displays on waste minimisation, promoted home composting; Telford & Wrekin Council has provided subsidised composters to householders (3,500 this year under LA21, currently preparing bid for funding of 1-2 central sales to achieve 12,500 bins sold in total for summer 1999). Herefordshire and Worcestershire have proposed a <b>waste management strategy</b> for the next 25 years, including kerbside collection of sorted waste, materials recycling facilities and implementation of energy-to- waste plants, in order to reach high levels of recycling/recovery. For Shropshire, consultants have carried out a study to propose means of adopting a 25 year waste strategy similar to Herefordshire and Worcestershire. If adopted it will include a 3 phase plan, with short, medium and long term actions.

## Issue 21: River Severn Control Rules

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
21.1 Review and reassess Control Rules.	Environment Agency	Major users of the River Severn	45	5	5	15	10	5	Monitor impacts and effects. Expenditure 5 (outside 5 year plan).	This work is ongoing and is being co-ordinated by our Regional Office.

## Issue 22: Floodplain management

Actions	Responsibility		Total Cost (£k)	1997/98	1998/99	1999/2000	2000/01	2001/02	Future	Progress
	Lead	Other								
22.1 Set up roadshows and additional consultation with LAs to persuade them that long term strategic withdrawal from the flood plain is the only sustainable option.	Environment Agency	LAs	R	■	■					Roadshows have been held with relevant staff from Wyre Forest District Council, North Shropshire District Council and Oswestry Borough Council. Good progress has been made with LAs on flood protection policies, for example negotiations over flood protection policies in Shrewsbury & Atcham Local Plan.
22.2+ Floodwarning: i) Collate database of flood risk property, Bewdley to Stourport.	Environment Agency		<5		■					Completed.
ii) Consult 'at risk' property owners on possible warning dissemination methods.	Environment Agency		R		■					Completed.
iii) Implement flood warning scheme, Bewdley to Stourport.	Environment Agency		<5			■				Completed, scheme brought forward.

In addition to the above, the Agency will address this issue through its routine activities, in particular by pressing for the policies in the Agency's 'Policy and Practice for the Protection of Floodplains' to be included in Development Plans, via roadshows and consultation with LAs.

## **5.0 FUTURE REVIEWS**

We will review progress again next year and aim to publish our second Annual Review of the Middle Severn LEAP in January 2000.

## APPENDIX 1

### Summary of the Environment Agency's routine activities in the Middle Severn area

The strategic nature of the LEAP as a long-term planning tool, directing manpower and financial resources to resolving environmental problems, means that the plan is not designed to reflect fully on routine activity within the LEAP area. Our everyday work, of which examples are given below, commits substantial resources to managing the environment.

Enforcement and routine monitoring work are important in achieving the Agency's objective to protect and improve the environment. These operations and regulatory responsibilities form the basis of our work. Our routine activities include:

- regulation of discharges to controlled waters through the issue and enforcement of discharge consents, responding to pollution incidents, prosecuting polluters, sampling water quality, carrying out surveys, setting water quality targets, and protecting groundwater quality;
- regulation of industrial processes with the greatest pollution potential;
- regulation of the disposal, keeping and use of radioactive waste;
- regulation of the keeping, treating, movement and disposal of controlled waste;
- regulation of the remediation of contaminated land designated as special sites;
- the responsibility for water resources includes licence determination, charging, policing and enforcement.
- fisheries - fish surveys, fish rescues, restocking, regulation of fisheries by licences;
- flood defence activities include regulation (including issuing of land drainage consents), enforcement, maintenance and improvement works, and issuing of flood warnings;
- the Agency works closely with local planning authorities through its planning liaison function, commenting on planning application consultations and promoting policies to protect and enhance the environment in development plans.

During 1998 there were 4 successful prosecutions brought against polluters in the Middle Severn area, and no formal cautions. Formal cautions are given where it is deemed inappropriate to prosecute but it was clear that a significant offence had been committed. Other pollutions are dealt with by warning letters. We responded to 483 reported pollution incidents in total in the Middle Severn area, of which 355 were substantiated on investigation. Of the 355 substantiated pollutions, 4 were Category 1 incidents.

Routine monitoring work includes site inspections throughout the area. During 1998 there were 465 site inspections carried out at sewage works (private and water company), 268 inspections of sewerage systems, 475 industrial sites and 59 contaminated land inspections. There were 3,453 water samples taken for chemical analysis and 277 for biological determination. In addition there were 122 farm inspections, 1,930 site inspections of licensed waste management facilities, and 18 landspreading inspections.

During the year (1997/98 data) a total of 34 abstraction licences were issued, 17 were for surface water abstraction, 17 for groundwater abstraction. In addition, 501 routine enforcement visits to licence holders were carried out. A total of 44 water resource incidents were investigated in the catchment, mainly relating to low flow problems.

A total of 62 Land Drainage Consents were granted in the Middle Severn area during 1998.

## APPENDIX 2

### Current Status of Local Authority Development Plans in the Middle Severn area

Local Authority	% of Area	Development Plan and Current Status
Shropshire County Council	76.7	Shropshire County Structure Plan 1989-2006 – operative January 1993. Structure Plan Review 1996-2011 Consultation – Options and Directions – April 1997, Deposit Draft due Spring 1999. Shropshire Minerals Local Plan – Deposit Draft April 1996, public inquiry June 1997, proposed modifications published October 1998. Shropshire Waste Local Plan – Consultation Draft in preparation.
North Shropshire District Council	20.2	North Shropshire Local Plan 1991 - 2001 adopted August 1996. Local Plan review to commence Spring 1999.
Bridgnorth District Council	19.8	Local Plan being reviewed to roll plan forward to 2011. Deposit version awaiting Structure Plan.
Shrewsbury & Atcham Borough Council	19.6	Shrewsbury & Atcham Rural Area Local Plan – adopted June 1992. Shrewsbury Urban Area Local Plan – adopted 1985. Shrewsbury & Atcham Local Plan (District wide) – Deposit Draft November 1997. Public inquiry opens 26 January 1999.
South Shropshire District Council	3.0	South Shropshire Local Plan – Adopted October 1994. Proposed Alterations 1996-2006 – Deposit Draft July 1998. Public enquiry due Autumn 1999.
Oswestry Borough Council	2.9	Oswestry Rural Area Local Plan – adopted 1991. Oswestry Borough Council Local Plan (District Wide) – Deposit Draft May 1996. Public Inquiry April 1997, Inspector's Report April 1998, proposed modifications October 1998.
Telford & Wrekin Council	11.3	Wrekin Local Plan Deposit Draft February 1996, Public Inquiry February 1997. Inspectors Report April 1998.
Worcestershire County Council	15.7	New authority (two tier) created 1 April 1998 from predecessor Hereford & Worcester County Council. Worcestershire County Structure Plan to be produced for period 1996-2011, Consultation Draft due May 1999, Deposit Nov/Dec 1999. Existing Hereford & Worcester County Structure Plan, second alteration operative March 1993, Minerals Plan adopted April 1997.
Wychavon District Council	5.4	Wychavon District Local Plan adopted January 1998.
Wyre Forest District Council	3.9	Wyre Forest District Local Plan adopted May 1996. Review starting early 1999.
Bromsgrove District Council	2.7	Bromsgrove District Local Plan - Deposit Draft November 1993, Inspector's report following Public Inquiry February 1997.
Malvern Hills District Council	2.5	Malvern Hills District Local Plan adopted May 1998.
Worcester City Council	1.0	Worcester City Local Plan adopted February 1998.
Staffordshire County Council	6.9	Replacement Staffordshire Structure Plan 1986 - 2001 operative April 1991. Review commenced, Consultation Draft October 1997, deposit due January 1999. Staffordshire Aggregates Local Plan, proposed adoption Draft October 1995. Staffordshire Minerals Local Plan, consultation process commenced.

Local Authority	% of Area	Development Plan and Current Status
		Staffordshire Waste Local Plan - Consultation Draft spring 1997.
Stafford Borough Council	3.0	Stafford Borough Local Plan adopted November 1998.
Newcastle Borough Council	2.1	Newcastle-under-Lyme Borough Local Plan adopted May 1995.
South Staffordshire District Council	1.7	South Staffordshire District Local Plan adopted December 1996.
Wrexham County Borough	<1	Clwyd County Council Structure Plan (1986-2006) amended Deposit Draft January 1996. Glyndwr District Local Plan - adopted February 1994. Unitary Development Plan - Consultation Draft July 1998.
Powys County - Montgomeryshire	<1	<p>Montgomeryshire Local Plan (including waste policies) – Deposit draft October 1995. Public Inquiry September 1996 – proposed modifications following Inspector's report, June 1997. Adoption awaiting Secretary of State decision.</p> <p><b>-ex Clwyd/Glyndwr Area</b></p> <p>Clwyd County Council Structure Plan (1986-2006). Amended Deposit. Glyndwr District Local Plan – adopted February 1994. Strategic Interim Planning Guidance and proposed 'Interim Planning Policies' for the Communities of Llangedwyn, Llanrhaedr Ym Mochnant and Llansilin – Deposit Drafts June 1997.</p>

### APPENDIX 3

#### Pollution Incident Reports by Type and Cause - January 1998 - December 1998

		Category 1	Category 2	Category 3	Cumulative Total
TYPE	Agriculture	1	2	38	41
	Oil	2	4	98	104
	Chemical	-	3	24	27
	Sewage	-	1	75	76
	Other	1	5	229	235
	TOTAL	4	15	464	483
CAUSE	Industry & Commercial	1	4	48	53
	Agriculture	1	2	39	42
	Water Utility Company	-	2	62	64
	Other	2	7	315	324
	TOTAL	4	15	464	483

Category 1 - Major incident, Category 2 - Significant incident, Category 3 - Minor incident

