local environment agency plan

AXE AND LIM

ANNUAL REVIEW

MARCH 2002

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March 2001

CONTENTS

SUMMARY

The Axe & Lim LEAP aims to promote integrated environmental management in the area surrounding the River Axe and the River Lim. It seeks to develop partnerships with a wide range of organisations and individuals who have a role to play in the management of the area. It is vital that the needs of all aspects of the area, including flora and fauna, are balanced to ensure continued protection of these precious assets.

Since the publication of the Axe & Lim LEAP Action Plan in November 2000 we have made good progress on the actions. We have already completed 5% of the actions published in the plan and work is being undertaken on a further 66%, many through collaborative projects with other organisations. However, this leaves 29% of actions which we have not yet been able to progress. We will be looking at ways in which these can be progressed over the next year.

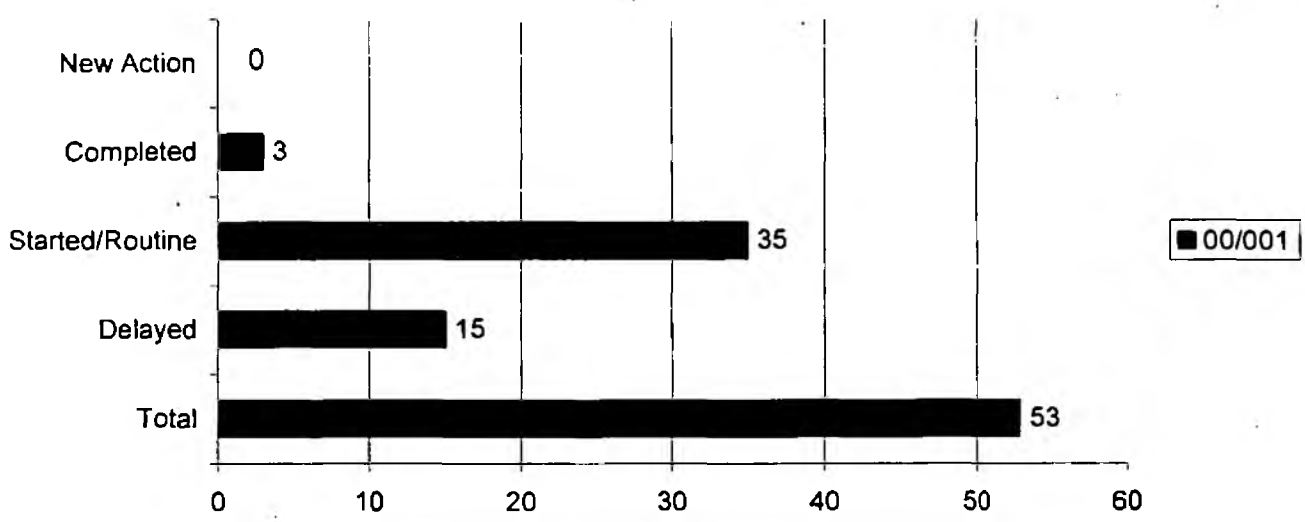
Some of the work due to be carried out over the past year has been delayed due to the outbreak of foot and mouth. Survey work which was due to be completed last year will now be carried out during 2002.

OFWAT have now agreed the funding and timetable for work to be carried out by South West Water Ltd (SWWL) under Asset Management Programme 3 (AMP3) and this will lead to improvements at four sewage treatments works within the LEAP area.

There are four bathing waters in the LEAP area which were all compliant with the mandatory standards of the EC Bathing Waters Directive in 2001, though Lyme Regis (Church) failed to comply with the more stringent guideline standards.

We were disappointed to see that water quality has declined along five stretches of river in 2000 compared to 1999. However, the water quality of the River Yarty from its source to Newhaven improved in 2000. This may be attributed in part to the successful River Yarty Headwaters Project which encourages best farming practices in the upper catchment of the River Yarty.

AXE & LIM LEAP PROGRESS CHART



1. INTRODUCTION

This is the First Annual Review of the Axe & Lim LEAP Action Plan. It summarises progress made with actions and should be read in conjunction with the LEAP Action Plan which was produced in November 2000.

1.1 The Environment Agency

The Environment Agency has a wide range of duties and powers relating to different aspects of environmental management. These duties, together with those areas where we have an interest but have no powers to act, are described in more detail in Section 4.

1.2 Local Environment Agency Plans

Local Environment Agency Plans (LEAPs) help us to identify and assess, prioritise and solve local environmental issues related to our functions, taking into account the views of our local customers.

Some issues can be resolved through our statutory and routine work programme, whilst others require action over and above our day-to-day business. Funding for the latter is not always certain. Usually, because of the short-term nature of our funding, we can only firmly commit ourselves to action in the current and next financial years. Our priorities, policies and budget may change.

In most cases we show the anticipated cost to the Agency for an action. These are estimated costs to give the reader an idea of the relative size and resource implications for each action. Some issues require solutions beyond the scope of our existing budgets or technology – they are nevertheless valid issues and earn their place in this plan, in the hope that a solution may be found in the future.

The Consultation Report - The publication of the LEAP Consultation Report marked the start of a three-month period of formal consultation, which enabled external organisations and the public to work with us in planning the future of the local environment. At the end of the consultation period, we produced a Statement on Public Consultation that gave the results of the process.

The Action Plan - The Action Plan followed on from the Consultation Report, taking into account the results of the consultation. It included numerous actions identifying costs, timescales and partner organisations. Agreed actions are incorporated into our annual business plans.

The Annual Review - We monitor implementation of the Action Plan and report on the year's progress in a published Annual Review. The Annual Review also identifies any additional issues and actions needed to maintain progress in light of any changes within the LEAP area. **We invite people to contact us at any time to raise new issues or suggest new actions – this ensures the LEAP process is an active one, which evolves to meet the changing needs of the local environment.**

1.3 The LEAP Steering Group

The LEAP Steering Group act as a communication link between ourselves, our committees and the local community. The members of the group represent a range of commercial, local authority, recreational and environmental interests. They commented upon the Consultation Report and Action Plan prior to public release, and monitor the implementation of the Action Plan, providing us with specific advice on the importance of issues within the LEAP area. They will help to promote and develop initiatives of benefit to the environment within the LEAP area. The Steering Group members are:

Name	Representing
Mr J Boult	Axe Fly Fishers
Mr P R Burrough	Farming
Mr N Butler	East Devon Heritage Coast Service
Mr D Campbell	Axe Vale and District Conservation Society

Mr N Cornwall	Lyme Regis Town Council
Mr S Day	English Nature
Mr T Edwards	Axmouth Harbour Company
Mr T C Frost	Farming / NFU
Mr D Minchin	Riparian Owner
Mr B Newbery	Farming / NFU
Mr C G Pole-Carew	Riparian Owner
Cmdr C B Tuke	Axe Vale Rivers Association
Mr K Whetlor	Lyme Regis Environmental Group
Mr M Williams	South West Water Ltd
Mr J Williams	Taunton Fly Fishing Club

1.4 Working With Others

We can only deliver long-term environmental improvement by working with others, building partnerships with those who share common objectives, and developing links to the community.

Local Agenda 21 - This is the global action plan endorsed at the United Nations Conference on Development and the Environment in 1992. It is designed to achieve sustainable development within all levels of our society. Within the LEAP area, local authorities are assisting local communities to develop strategies and action plans for sustainable development.

Development Plans - These are produced by Local Authorities to guide the way in which land is developed. We have limited control over the development of land, but we provide advice and guidance to Local Authorities and work with them to develop policies that minimise the impact of development of the environment.

Non-Statutory Plans - We work with a number of other organisations to develop partnerships and collaborative projects. The LEAP is one of a number of separate, but related environmental initiatives that aim to protect and manage the environment. Other non-statutory plans include:

- Devon Biodiversity and Earth Science Action Plan[1]
- Lyme Bay and South Devon Shoreline Management Plan
- East Devon Heritage Coast Management Plan
- Devon's Local Agenda 21 Network Issues Report

1.5 Environment Strategy

We are required and guided by Government to use the duties and powers which are outlined in Section 4 in order to help achieve the objective of sustainable development. Sustainable development has been defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs'.

One of the key outcomes of the United Nations 'Earth Summit' was agreement by governments that, to solve global environmental problems, local action is crucial: we must therefore all think globally but act locally.

An Environmental Vision - Our vision for the environment and a sustainable future is a healthy, rich and diverse environment in England and Wales, for present and future generations. It was published in January 2001 and is available on our web site at www.environment-agency.gov.uk.

A number of themes have been identified to contribute to this long-term goal:

- a better quality of life
- an enhanced environment for wildlife
- cleaner air for everyone
- improved and protected inland and coastal waters

- restored, protected land with healthier soils
- a 'greener' business world
- wiser, sustainable use of natural resources
- limiting and adapting to climate change
- reducing flood risk
- educating and informing

Long-term objectives have been set for each theme and progress towards these objectives will be measured using a set of key indicators. We will use this vision as a basis for co-operative projects with others, including those we regulate, to help protect the environment and to enhance its quality wherever we can.

We have consulted widely about the content and direction of the vision, and it therefore reflects views from across society, as well as from within the Environment Agency.

2. THE LEAP AREA

The area covered by the Axe & Lim LEAP straddles the counties of Devon, Dorset and Somerset and comprises the catchments of the River Axe and the River Lim, which drain to the sea at the coastal resorts of Seaton and Lyme Regis respectively.

LEAP Area	443 km^2 approximately
Length of river monitored for classification purposes	164.7 km
Average annual rainfall	945 mm
Approximate population (1991 census)	40,000
Main settlements	Axminster, Seaton, Lyme Regis
Administrative areas	East Devon District Council, South Somerset District Council, West Dorset District Council, Taunton Deane Borough Council

2.1 Compliance with EC Directives

There has been a lot of attention in the media recently on the new EC Regulations concerning substances that deplete the ozone layer because of the implications for disposal of fridges. Under the Regulations, member states have to remove ozone depleting substances from refrigeration equipment before such appliances are scrapped. Further information on the Regulations can be found on DEFRA's website: www.defra.gov.uk/environment/waste/fridges.

We have recently launched a national campaign about tyres to reduce the impact of tyres on the environment and encourage sustainable recovery of waste tyres. Under the EC Landfill Directive, there is a scheduled ban on disposal of tyres to landfill (whole tyres are banned from 2003 and shredded tyres from 2006). We will be working with the Government (DTI) and industry to find sustainable solutions to tyre recovery and disposal.

EC Bathing Waters Directive[2] – This Directive aims to protect the environment and public health by reducing pollution entering identified bathing areas. There are four designated Bathing Waters in the Axe and Lim LEAP area. The compliance of the bathing waters with the mandatory and more stringent guideline standards of the Directive in 2000 and 2001 is given below:

Bathing Water	Mandatory standards		Guideline standards	
	2000	2001	2000	2001
Lyme Regis (Cobb)	Compliant	Compliant	Fail	Compliant
Lyme Regis (Church)	Fail	Compliant	Fail	Fail
Seaton	Compliant	Compliant	Compliant	Compliant
Beer	Compliant	Compliant	Fail	Compliant

In 2000, Lyme Regis (Church) failed to comply with the mandatory standards of the Directive. Following investigations, we identified that the bacterial contamination of the bathing water was likely to be from a number of sources. We are currently progressing actions resulting from this investigation to improve the quality of the River Lim.

Improvements at Seaton STW as part of the AMP3 programme are to ensure compliance with the guideline standards of the Directive at Seaton bathing water.

EC Fresh Water Fish Directive[3] - This Directive sets out the quality of waters needing protection or improvement in order to support fish life. There are five designated stretches in the Axe and Lim LEAP area. Each of the stretches was compliant with the standards required by the Directive in 2000.

EC Dangerous Substances Directive[4] - This Directive is concerned with controlling certain substances considered harmful which are discharged to the aquatic environment.

List I Substances – There were no failures for List I substances in the LEAP area in 2000.

List II Substances - In 2000, two pesticides (azinphosmethyl and triazophos) were recorded as failing their Environmental Quality Standards (EQS's) at Whitford Bridge on the River Axe. However, this was only because the analysis method for the two substances was not sensitive enough to detect the pesticides at concentrations at or below the EQS's. These were not 'real' failures because they were due to a problem with our analysis method. This problem has now been resolved.

EC Habitats Directive[5] - This Directive requires us to review all authorisations and other permissions that have been previously issued by us, as well as our own activities, to establish whether or not they are adversely affecting Special Protection Areas (SPAs - designated under the EC Birds Directive) or candidate Special Areas of Conservation (cSACs - to be designated under the EC Habitats Directive), collectively known as Natura 2000 sites. If existing authorisations are causing significant damage, we are required to modify or revoke them. We have embarked on a twelve-year programme (1998-2010) to carry out this review, consisting of a four-stage process. We have completed stages I and II of the review of Agency issued authorisations. A moderation exercise has resulted in additional features and new sites being proposed for designation. We assess all new applications for their potential impact on Natura 2000 sites.

2.2 2000 Compliance with River Quality Objectives (RQOs)

The rivers of the Axe and Lim LEAP area have been divided into 29 classified stretches, equating to 164.7 km. We monitor the water quality of these stretches by setting RQOs. RQOs are set using a classification scheme known as the River Ecosystem (RE) Classification which comprises five hierarchical classes (see table below).

Class	Description (RE Class)
RE1	Water of very good quality suitable for all fish species
RE2	Water of good quality suitable for all fish species
RE3	Water of fair quality suitable for high class coarse fish populations
RE4	Water of fair quality suitable for coarse fish populations
RE5	Water of poor quality which is likely to limit coarse fish populations

These classes reflect the chemical quality needed by different types of river ecosystems. In comparison with 1999, compliance against the RQO worsened in 2000 in five stretches. We believe that this is in part related to the exceptionally poor weather conditions in Autumn 2000. The heavy rainfall recorded (up to 43mm in 24 hours) will have lead to a great deal of diffuse pollution (especially from agricultural sources) entering the watercourses in the catchment.

We are disappointed and concerned that the major contributor to water quality problems in the Axe catchment continues to be the impact of agriculture despite carrying out inspections and pollution prevention visits. Therefore, we feel that a new approach is needed in this area. We are currently developing a project in collaboration with a number of partners to promote sustainable land use practices. As part of the project, best farming practices will be promoted and it is hoped that this 'project approach' will deliver the water quality improvements which are needed. **Action 2b.**

Four stretches of the **River Axe from A3066 Bridge Mosterton to Bow Bridge** failed to achieve their RQOs. Two stretches from the A3066 Bridge to Oathill Farm significantly failed to achieve their RQOs of RE2. Two stretches from Oathill Farm to Bow Bridge marginally failed their RQO of RE2. Three stretches from Seaborough to Bow Farm significantly failed their Long Term RQOs of RE1. The cause of the poor water quality of these stretches is thought to be diffuse agricultural pollution as the upper Axe is intensively farmed. We have previously undertaken pollution prevention visits to all farms in the upper Axe catchment.

Water quality of the **River Axe from Seaborough to Oathill Farm Wayford** is also affected by unsatisfactory private discharges at Clapton. The residents of Clapton (supported by South Somerset District Council) have applied to South West Water Ltd for first time sewerage which we understand has been accepted and we hope to see provision of mains sewerage for the residents in the near future. **Action 1a.**

The **Umborne Brook from source to Triffords Farm** significantly failed to achieve its long term RQO of RE1 due to elevated ammonia. The water quality of this stretch may be impacted by a number of sources, including Wilmington Trout Farm discharge, Wilmington STW discharge and diffuse agricultural pollution. We are proposing to determine the impact of Wilmington Trout Farm on Umborne Brook and identify other sources impacting on water quality in 2002. **Action 1d**.

The **Yarty from Beckford Bridge to River Axe** confluence significantly failed to achieve its long term RQO of RE1 due to elevated Biochemical Oxygen Demand (BOD) results. The majority of elevated results were recorded during the winter period and were associated with rainfall. We suspect that diffuse agricultural runoff is the cause. This stretch will be included in the River Axe Project (see above). **Action 2b.**

The **Kit Brook from source to River Axe** confluence significantly failed to achieve its RQO due to elevated BOD results. The majority of results failing the standards were associated with rainfall events. We suspect that diffuse agricultural runoff may be the cause of the poor water quality although the land surrounding the Kit Brook is not as intensively farmed as the upper Axe. We have undertaken a thorough catchment inspection but we were unable to identify any significant sources of contamination although a number of septic tank problems were found. These have since been resolved. If further elevated BOD results are recorded we will repeat the catchment inspection. This stretch will be included in the River Axe Project.

The **Blackwater River from source to River Axe** confluence significantly failed to achieve its long term RQO of RE1 due to elevated BOD. The majority of elevated BOD results are associated with rainfall events and some samples also had elevated ammonia. Diffuse agricultural pollution is considered to be the cause of the elevated results. We have carried out an inspection along the length of the watercourse and no obvious sources of contamination were found. This stretch will be included in the River Axe Project. **Action 2b**.

The **Forton Brook from source to Tatworth** marginally failed to achieve its RQO of RE1 due to elevated BOD. We suspect that surface drainage and surface water overflows at Chard, at the head of the brook, contribute to the poor water quality. We have recently carried out risk assessment visits to the businesses at Millfield Industrial Estate. A number of problematic discharges to the brook were identified and have since been eliminated.

The **Forton Brook from Tatworth to River Axe** confluence significantly failed to achieve its RQO of RE1 due to elevated BOD results. This is suspected to be the result of diffuse agricultural pollution and discharges from Tatworth STW. Tatworth STW is due to be improved under AMP3 by December 2004. We are currently having discussions with SWWL with regard to the provision of temporary solutions to improve the quality of the final effluent discharge until the AMP3 improvements are completed. This stretch will also be included in the River Axe Project. **Action 2b.**

The **Temple Brook from source to River Axe** confluence significantly failed to achieve its RQO of RE2 due to elevated BOD results. Historically, unsatisfactory septic tank discharges at Greenham have impacted on the water quality of the stretch but a new treatment plant has recently been installed which has removed those discharges. Improvements have also recently been carried out at a farm which historically impacted on water quality. We are planning to undertake farm visits in the catchment this winter to identify further potential sources of contamination.

The **Clapton Stream from source to River Axe** confluence marginally failed to achieve its long term RQO of RE2 as a result of elevated BOD. We suspect that the failure is the result of the combination of unsatisfactory septic tank discharges at Clapton and diffuse agricultural pollution. We hope to see provision of mains sewerage for the residents of Clapton in the near future. **Action 1a**

The **Drimpton Stream from source to Axe** confluence significantly failed to achieve its long term RQO of RE1 and marginally failed to achieve its RQO of RE2 due to elevated BOD results. The majority of elevated results were associated with rainfall. The most likely cause of the poor water quality is diffuse agricultural pollution. We are hoping to undertake farm checks in the catchment this winter to provide pollution prevention advice.

The **Whetley Stream from source to River Axe** confluence marginally failed to achieve its RQO of RE2 as a result of elevated BOD. The elevated results were associated with rainfall. Diffuse agricultural pollution is suspected to be the most likely cause of the poor water quality. As the most

recent elevated result was recorded in August 1999 we do not propose any action unless further elevated results are recorded.

Biological Quality - During 2000, we sampled macroinvertebrate fauna at all routine sites in the Axe and Lim LEAP area as part of the General Quality Assessment (GQA) survey. In comparison with the 1995 survey, biological quality appears to have declined slightly from very good to good in three stretches (Umborne Brook from source to Triffords Farm and the River Yarty from source to Newhaven Bridge and from Beckford Bridge to River Axe confluence).

3. PROGRESS TABLES

The following pages give updates for the actions from the Axe & Lim LEAP for the year up to February 2001. The current status of each action is indicated in the left hand column as follows:

- ✕ New Action
- ● Completed/Routine
- ▼ Started/Ongoing
- ■ Delayed/No Progress

Key to Tables:

n/a	Cost not applicable to the Agency	<1k	Cost to Agency under £1000
u/k	Cost to Agency is unknown	p.a.	Per Annum

Issue 1: Impact of Effluent Disposal

We regulate the disposal of effluent to surface and groundwaters by issuing consents to control discharges, including treated sewage from water companies and private properties, industrial and farm wastes. Rivers and coastal waters can naturally render the main constituents of many effluents harmless and with proper controls over effluent disposal the environment will not be harmed.

We aim to maintain and, where appropriate, improve the quality of water and we achieve this by setting water quality targets for rivers based on River Quality Objectives (RQOs) to protect recognised uses, standards laid down in EC Directives and international commitments (see Section 2). As compliance against an RQO is assessed using three years' data, this improvement will not be reflected in the RQO compliance until 2002 or 2003.

Sewage treatment improvement plans – The Water Companies' investment programme for the period 2000-2005 is known as Asset Management Plan 3 (AMP3). AMP3 has been developed along guidelines agreed between the Environment Agency, the Department of the Environment, Transport and the Regions (now the Department for Environment, Food and Rural Affairs (DEFRA)), the water services companies and the Office of Water Services (OFWAT).

We have agreed with DETR (DEFRA) which sewage discharges require improvement during AMP3. OFWAT has now completed a review of water prices which allows for this programme of environmental investment and enables the companies to make the environmental improvements by 2005. Many of these schemes will be delivered before 2005.

South West Water Ltd will be carrying out improvements to the following STWs in the Axe & Lim LEAP area under AMP3 (2000-2005):

STW	Receiving Water	Required Treatment	Reason for Investment	Due by
Seaton	Axe Estuary	Ultraviolet disinfection	Bathing Waters Directive to achieve compliance with the guideline standards at Seaton designated bathing water.	March 2002
Beer Head	Lyme Bay	Secondary treatment of existing untreated sewage discharge	Urban Waste Water Treatment Directive (appropriate treatment)	March 2002
Tatworth	Forton Brook	Improved secondary treatment, an increase in sewage flows receiving full treatment, remove aesthetic impact	Urban Waste Water Treatment Directive and protection of downstream RQO.	December 2004

STW	Receiving Water	Required Treatment	Reason for Investment	Due by
		of storm sewer discharges and a consent condition for ammonia to protect the RQO.		
Dalwood	Corry Brook	Improvement to remove aesthetic impact of storm sewer discharges.	Urban Waste Water Treatment Directive (appropriate treatment).	December 2004

Where private houses are not connected to mains sewerage, under certain circumstances residents can apply to their Water Company for **First Time Sewerage**. There are a number of locations in the LEAP area where First Time Sewerage would be appropriate.

Septic tank discharges at Clapton contribute to water quality problems in the Clapton Stream and we understand that SWWL have accepted the duty to provide First Time Sewerage here.

Mains sewerage has been provided at Thorncombe, but there are a few houses which are not connected to the system. We are not aware that these houses are causing an environmental problem.

Chilson Common was identified to SWWL as a potential First Time Sewerage scheme by South Somerset District Council because of environmental health concerns. We are not aware of an impact on water quality.

Private discharges in Combepyne flow into the Buckland Stream via a combined system (foul and surface water flows combined). We are considering carrying out an investigation this year to assess the impact of these discharges on the watercourse. The results from this investigation will be used to decide whether a public sewerage system is required.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
1a ▼	Consider first-time sewerage at the following: Clapton, Combpyne, Chilson Common and Thorncombe.	LAs, Residents, SWWL, *Agency*	01/12/00	31/03/03	u/k	See above
1b ▼	Seek improvements to Seaton, Beer Head, Tatworth and Dalwood STW under AMP3.	Agency, *SWWL*	01/12/00	31/03/05	u/k	Discussions are ongoing with SWWL with regard to these improvements.
1c ▼	Carry out further work to determine sources of bacterial contamination at Lyme Regis (Church) and Lyme Regis (Cobb) beaches.	Agency, *SWWL*	01/12/00	31/03/02	u/k	Our investigation identified that poor water quality at Lyme Regis (Church) is likely to be the result of bacterial contamination of the River Lim from a number of different sources. We are currently progressing with actions to eliminate the specific sources identified. We have not identified any specific sources of contamination to Lyme Regis (Cobb).
1d	Determine impact of Wilmington Trout Farm on	Agency	01/12/00	31/03/02	u/k	We are proposing to investigate the impact of

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
▼	the Umborne Brook.					Wilmington Trout Farm and other sources on water quality in 2002.

Issue 2: Impact of Farming

River Axe Project – In common with other rivers in Devon the River Axe has experienced a decline in both habitat and water quality in recent years. The causes for this decline include: intensive farming and use of fertilisers and pesticides, inappropriate stock management, increase in soil erosion, discharges from sewage treatment works and industry. We are working with a number of organisations to develop a project for the River Axe that will deliver sustainable land use that protects the River Axe and its tributaries. **Action 2b.**

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
2a ■	Review results of River Otter Atrazine study to assess implications for the Axe & Lim LEAP area.	Agency	01/04/01	31/03/02	1k	There has been no progress on this action to-date.
2b ▼	Seek external funding for a project to reduce diffuse pollution in the LEAP area.	Agency, EN, *Wildlife Trusts, Angling Interests, WRT*	01/12/00	31/03/02	u/k	We are working with a number of partners to develop a project for the River Axe and its tributaries upstream of the normal tidal limit. This project will include the promotion of best farming practice.
2c ▼	Support the River Yarty Headwaters Project.	SWT, *FWAG, Agency,*	01/12/00	31/03/01	u/k	The Somerset Headwater Streams Project, which the Yarty Headwaters Project forms part of, was initiated by South Somerset District Council in response to the BAP for South Somerset which recognised headwaters as a priority habitat. The project has been operating since 1999 in three areas. The aim is to encourage best farming practices in these areas, including introduction of buffer zones and vegetation strips along riverbanks as well as reducing diffuse pollution and agricultural runoff.
2d	Encourage riparian owners to undertake management of bankside trees and provide suitable conditions for development of more	Agency	01/12/00	31/03/05	u/k	We continue to undertake this work as part of our routine activities. See also information on River Axe Project.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
▼	extensive marginal vegetation.					
2e ▼	Where appropriate, promote bankside fencing schemes to limit bank erosion and reduce sediment input to the river.	Agency, Landowners, Farmers, DEFRA	01/12/00	31/03/05	u/k	This work is ongoing, however there has been limited uptake from farming interests to-date.

Issue 3: Potential for Eutrophication

Raised levels of nutrients in a watercourse, particularly nitrates and phosphates, can increase the growth of algae and higher plants. If algal growth becomes excessive then the chemical, biological and aesthetic quality of a water body can be affected. This is called eutrophication. We have published a national strategy for dealing with eutrophication, which focuses on a partnership approach to the management of this problem.

There are three main sources of orthophosphates to the river: agricultural runoff, industrial effluent and sewage effluent. We have been working with English Nature to identify the relative contributions of each source to the overall nutrient levels within the pSAC/SSSI. When this work is completed, we will be able to identify the actions required to reduce nutrient inputs to the river. **Action 3a.**

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
3a ▼	Investigate potential sources of nutrient inputs to the SSSI using plant surveys and nutrient data.	Agency, EN	01/12/00	31/03/02	5k	This will be carried out as part of the River Axe Project.

Issue 4: Impact of Development

Increased development can put pressure on our water resources and sewage treatment works that can lead to failure of water quality objectives, increase the risk of flooding, cause air quality problems and generate more waste. However, development can also bring benefits such as the redevelopment of brownfield sites and the clean-up of contaminated land. We use the planning process to ensure that appropriate mitigation is put in place to reduce the impact of develpment.

The LEAP area contains many sites and features of historic and archaeological interest. Many organisations would benefit from the production of a simple document based on a rapid archaeological assessment of the wider area. This could cover either the wider LEAP area or fit political boundaries. There is also a possibility that submerged features may be damaged by our work, particularly in areas close to known archaeological sites. **Action 4b.**

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
4a	Complete review of flood warning standards of service and where necessary improve flood warning at some locations. (The cost is for the South West region as a whole).	Agency	01/04/01	31/03/02	21k	The review of flood warning standards has been completed and the results of the study will be fed into the programme for improvement. In the Axe & Lim LEAP Area the study showed one area where improvements

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
●						could be made; this was along the River Lim.
4b ▼	Lack of archaeological information in a useable format - discuss options for a rapid archaeological assessment of the whole LEAP area with potential partners.	DCC, Agency, *EDDC, DAS, AVCS*	01/12/00	31/03/02	<1k	The historic / archaeological interest of the area is now well documented within the Historical Atlas of South West England which was published in 1999. We will continue to seek opportunities to improve our understanding of the archaeology/history of the area.
4c ■	Review Defence of Britain Project to identify any actions for the Agency regarding pill-boxes.	Agency	01/12/00	31/03/02	<1k	There has been no progress on this action to-date.
4d ■	Examine feasibility of reinstating leat at Middle Mill Weir, taking account of environmental, water resources and flood defence considerations.	Lyme Regis Town Council, *Agency*	01/12/00	31/03/02	<1k	There has been no progress on this action to-date.

Issue 5: Impact of Water Demand

Catchment Abstraction Management Strategies (CAMs) is a major national initiative which will provide the opportunity, at a local river catchment level, for groups and individuals to contribute to the development of the strategy for water resources management to be adopted for the LEAP area. It will provide information on: the availability of water in an area, licensing practice in dealing with new applications, any changes needed to the abstraction regime in the area to achieve the sustainable long-term use of water resources, a transparent basis for planning by abstractors, the Agency and all other interested parties. It will also be the vehicle for reviewing existing time limited licences. **Action 5c**.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
5a ■	Low flows in the Umborne Brook – complete calibration work to enable precise gauging of abstraction.	Agency	01/12/00	31/03/01	<1k	A more robust solution is required for this site in combination with Action 5b. We have not yet been able to progress this action.
5b ■	Seek to remedy issue of deprived reach at Wilmington Trout Farm by agreement.	Agency, Owner	01/04/01	31/03/05	u/k	There has been no progress on this action to-date.
5c ■	Implement CAMS for the LEAP area.	Agency	01/04/02	31/03/03	u/k	The Catchment Abstraction Management Strategy (CAMS) for the Otter, Sid, Axe & Lim will commence in April 2002.

Issue 6: Managing our Freshwater Fisheries

The River Axe once supported a major salmon run, but over the past 30 years there has been a dramatic decline in the numbers observed in the river. Rehabilitation work carried out during the early 1990's may have had some benefit as small numbers of salmon have been seen in recent years. During 1999 and 2000 several thousand smolts were released into the river catchment to boost stocks. We will be reviewing the stocking programme in 2003. **Action 6a**.

Historically the River Axe supported good populations of coarse fish, however over recent years a decline in size and number has been noticed. One possible reason for this decline might be the introduction of pike into the river. We have carried out electro fishing operations which allowed us to remove several pike from the river and transfer them to more appropriate waters. We plan to carry out further operations over the forthcoming year. **Action 6f**.

Target:

Maintain and increase 1997 salmon population in the River Axe by 2001.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
6a ▼	Continue salmon stocking programme.	Agency, Riparian and Fishery Owners	01/12/00	31/03/04	16k	This work is ongoing. Some beneficial results have been observed, and a major review of stocking programme is planned for 2003.
6b ■	Continue programme of habitat improvements including gravel rehabilitation.	Agency, Riparian and Fishery Owners	01/12/00	31/03/05	2k p.a.	Gravel rehabilitation work was severely curtailed due to the foot and mouth outbreak.
6c ■	Install fish passes, according to regional priority, on Lexhayne Weir and Wilmington Weir.	Agency, *Riparian Owners, Angling Associations*	01/04/01	31/03/04	6k and 9k	There has been no progress at Wilmington. Our work force are awaiting opportunities to complete work at Lexhayne Weir.
6d ■	Seek to have existing 'Irish Bridges' that restrict fish passage removed or replaced.	Agency, County Councils	01/12/00	31/03/02	<1k p.a.	There has been no progress on this action to-date.
6e ▼	Include the River Axe in the current Agency/Wild Trout Society investigation into the decline in brown trout in Devon rivers.	Agency, Wild Trout Society, Riparian and Fishery Owners, Anglers	01/12/00	31/03/02	u/k	A site for an improvement scheme is to be identified on the River Axe for implementation of recommendations from the above study.
6f ▼	Investigate status of roach and dace stocks, particularly of larger fish, including surveys of middle and lower reaches to assess current coarse fish populations.	Agency, *Fishery Associations*	01/04/01	31/03/02	2k	Limited numbers of coarse fish were observed during an electro fishing operation in the Lower Axe. Further operations are planned which will also concentrate on the removal of Pike which have recently appeared in the River Axe.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
6g ▼	Establish Agency approach to the issue of fish-eating birds following DEFRA decision regarding government policy in the light of R&D findings.	Agency, DEFRA	01/12/00	31/03/03	u/k	Our current policy is to continue to follow Government guidance on the matter.
6h ▼	Pursue changes in law to allow increased control of in-river works where damage to the fishery is likely to result.	Agency	01/12/00	31/03/02	<1k	Will be input into proposals for new legislation which are now being developed following completion of the fisheries legislative review.

Issue 7: Enhancing Biodiversity

The Countryside and Rights of Way Act 2000, which came into force on 30 January 2001, provides a statutory basis for biodiversity conservation. Until now this work has been undertaken purely as a matter of policy. However, Government Departments now have a duty to have regard to biodiversity conservation. Procedures associated with the notification, protection and management of SSSI's have been improved, and threatened species have been given stronger legal protection. Management of Areas of Outstanding Natural Beauty has also been improved.

We have produced 'Focus on Biodiversity'[6] which summarises our contribution to the national Biodiversity Action Plan (BAP) process. National and County targets for habitats and species have been set and we are progressively adopting them on a catchment scale.

Designations

The EC Habitats Directive requires all Competent Authorities such as the Environment Agency to use their powers to ensure that sites are maintained at favourable conservation status. This means that we have to review all authorisations and other permissions that have been previously issued, as well as our own activities, to establish whether or not they are adversely affecting SPAs or cSACs. We also have to assess all new applications for their potential impact on these sites. **Action 7a & 7b.**

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
7a ●	Review all existing permissions for the cSACs in the LEAP area to identify which are likely to have a significant effect on the sites.	Agency	01/12/00	31/03/03	u/k	An initial review of permissions affecting cSACs has been carried out and Site Issues Briefings have been produced for all cSACs within the LEAP area. They are; the River Axe, Beer Quarry and Sidmouth to West Bay coast. This action is now complete.
7b ●	Conduct assessments on identified permissions to establish any adverse effects.	Agency	01/04/02	31/03/05	u/k	Site Action Plans have been developed to identify actions together with a timetable for delivery. This action is now complete.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
7c ▼	Establish criteria for designation of rivers and streams as County Wildlife Sites and examine potential for creating demonstration sites for best working practice.	Agency, DWT, EDDC	01/12/00	31/03/05	u/k	Following disappointing results from the spiling work at the demonstration site at Wadbrook, we are developing new proposals which we hope will be implemented within the coming year.

Wet Woodland

Wet woodland is a characteristic feature of the south-west landscape due to the climate and characteristically heavy soils. The habitat often contains a rich ground flora, with a diverse assemblage of associated invertebrate (particularly flies) and lichen communities. The invertebrate interest of wet woodland in turn attracts other wildlife such as the pipistrelle bat, a widespread species which has nevertheless experienced a significant decline in numbers during the last century. **Actions 8a, 8b, & 8c**.

Target:

Recreate 5ha of wet woodland by 2005 (subject to further information on current extent of resource in area).

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
8a ▼	Promote and implement actions from the Devon BAP for wet woodland by assisting with assessment of extent of resource, seeking potential new sites and promoting use as buffer strips.	EN, DWT, Agency, DEFRA, FWAG, NFU, CLA	01/12/00	31/03/05	<1k p.a.	The current extent of wet woodland is being identified through a national project initiated through the National Biodiversity Network. .The first stage of the project should be completed in the South West by 2003. During this period all available data will be collated and shortfalls in habitat identified.
8b ▼	Identify areas of river valleys where tree planting can be encouraged without adversely affecting flood risks.	Blackdown Hills Project, Agency	01/12/00	31/03/01	u/k	There has been no specific progress on this action, however we continue to promote tree planting and the creation of buffer zones where appropriate.
8c ■	Create new areas of wet woodland through planting and appropriate management.	Blackdown Hills Project, Agency	01/04/01	31/03/05	u/k	Progress is dependant upon the results of action 8a.

Rhôs Pasture

The heavy soils of the Blackdown Hills, strongly influenced by clays and a wet climate, support a diverse mosaic of habitats linked by wet conditions known as Rhôs pasture. Particular features include the springline mires, often in association with heathland and the mires (known as fens) of West Dorset. Rhôs pasture is an internationally important species-rich wet grassland with 80% of the national resource occurring within Devon.

Sites like Yarty Moor (part of Deadmans SSSI) just south of Taunton, support a number of noteworthy species including the marsh fritillary, white-beaked sedge, pale butterwort and oblong-leaved sundew. We have been supporting work with the Somerset Wildlife Trust to manage this site. Other species likely to benefit from this work include curlew and barn owl.

Targets:

Restore 20 ha of spring-line mire habitat on appropriate sites (e.g. Blackdown Hills).

Maintain or restore a minimum of one large population (1k+ adults) of marsh fritillary in the Blackdown Hills by 2005, increase number of breeding curlew by 1 or more pairs by 2010.

No.	Action	Lead By/ Others	Start Date	End Date	Cost	Progress
9a ▼	Promote and implement actions from Devon BAP for Rhôs pasture by encouraging sympathetic management and/or restoration of sites. Also discourage inappropriate creation of lakes/ponds within Rhôs pasture.	DWT, EN, Agency, Blackdown Hills Project, SWT, FWAG	01/12/00	31/03/04	<3k p.a.	Whilst we have not been involved with specific projects, we continue to protect and where possible enhance this habitat through our activities.
9b ▼	Promote and implement actions from Dorset BAP for fens.	DoWT, Agency, FWAG	01/12/00	31/03/04	u/k	As progress for action 9a.
9c ▼	Promote and implement actions from the Devon BAP for curlew and marsh fritillary by promoting sympathetic management and restoration of breeding sites.	DWT, Blackdown Hills Project, SWT, EN, Agency, DEFRA, BC, FWAG	01/12/00	31/03/04	1k p.a.	There has been no specific progress on this action this year, however we continue to protect the interests of these species through our routine activities.
9d ▼	Promote and implement actions from the Devon BAP for barn owl by promoting appropriate management of riparian feeding habitats and providing nest boxes to encourage recolonisation.	Agency, BOT, SWT, FWAG, Landowners	01/12/00	31/03/04	1k p.a.	The East Devon Barn Owl project was launched at the end of 2000 and has identified several sites across East Devon where management guidance has been provided. Two nest boxes have been put up by the Barn Owl Trust within the LEAP area.
9e ■	Support measures from the National Fen, Carr, Marsh, Swamp & Reedbed Habitat Statement, and enter 80% of Rhôs pasture area resource into protective management by 2005.	EN, Blackdown Hills Project, FWAG, Agency	01/12/00	31/03/04	3k p.a.	We have been unable to progress this action due to the outbreak of foot and mouth disease.

Rivers, Streams and Fluvial Processes

The Axe & Lim LEAP area supports a diverse range of in-stream habitats and species. Already a SSSI, the River Axe from Wadbrook to Colyford (approximately 13 kilometres) has also been proposed as a SAC. The site supports an exceptionally diverse aquatic and marginal flora, with an interesting assemblage of plant communities in the upper reaches usually confined to the sandstone areas in Scotland. The river also supports diverse invertebrate communities with Medicinal Leech (*Hirudo medicinalis*) being of particular note.

The area also has a high geomorphological interest. Many of the rivers in the area demonstrate excellent examples of ongoing fluvial processes driven by erosion and deposition including meanders, eroding cliffs and oxbows.

Targets:

10b Produce policy and practical guidelines for the protection of ERS.

10c Restore breeding otters to 1970s distribution by 2010.

10d Ensure protection of all known bat roosts and achieve a 30% increase in Greater horseshoe bat populations in area by 2010.

10e Identify current water vole status in the area by 2001 and restore 2km of suitable habitat by 2005.

No.	Action	Lead By/ Others	Start Date	End Date	Cost	Progress
10a ▼	Promote and implement actions from the Devon BAP for fluvial processes by promoting measures to conserve, enhance or interpret earth science features linked to the water environment.	Agency, EDDC, EDCCS	01/12/00	31/03/05	u/k	We will continue to protect these interests through our licensing and advisory activities.
10b ■	Implement recommendations of R&D into exposed riverine sediments (ERS) invertebrate.	Agency, EN	01/12/00	31/03/05	2k p.a.	No further work has been undertaken since the ERS survey undertaken previously. We continue to protect ERS through our licensing and advisory activities.
10c ▼	Promote and implement actions from the Devon BAP for otter by continuing the post-mortem programme and identify road casualty blackspots and investigate other possible causes for the slow colonisation of LEAP area. Promote habitat creation/restoration.	Agency, DWT, EN, DCC, LPAs	01/12/00	31/03/05	3k	We have supported a survey of three roads in Devon to identify features which contribute to the increased risk to otters from traffic. Although the study was not within the Axe & Lim LEAP area, it has highlighted the type of structures associated with watercourses which can restrict otter movement and direct them onto roads. It has also identified solutions to address the problems. These solutions are generic and can be used in a variety of locations.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
10d ▼	Promote and implement actions from the Devon BAP for bats by protection and restoration of wetland and riparian habitats, encouraging water quality levels which will help support populations of aquatic insects on which bats feed.	Agency, EN, Devon Bat Group, DWT, *Others*	01/12/00	31/03/05	u/k	We continue to raise public awareness of the presence of bats and seek to protect and enhance habitat for bats as part of our routine activities.
10e ■	Promote and implement actions from the Devon BAP for water vole by determining the status within the LEAP area requesting information on the sightings and investigating opportunities for habitat restoration and population re-establishment if appropriate.	Agency	01/12/00	31/03/05	2k	There has been no progress on this action due to restrictions on work following the foot and mouth outbreak. Survey work is currently being planned for 2001/2002. We continue to seek opportunities to enhance riparian habitat through our routine activities.
10f ■	Support Dorset Wildlife Trust survey of water vole and River Axe in 2001.	Agency, DoWT	01/04/01	31/03/02	u/k	There has been no progress on this action due to restrictions on work following the foot and mouth outbreak.
10g ▼	Monitor spread of signal crayfish by encouraging reporting of sightings of signal and native crayfish.	Agency	01/12/00	31/03/05	2k	We continue to record the presence of native and non-native crayfish species. Records will be passed to the Devon and the Dorset Biodiversity Records Centres.
10h ▼	Investigate the extent of Phytophthora within the River Axe pSAC/SSSI and develop appropriate actions in line with national understanding of the disease.	EN, Agency, Forest Research	01/12/00	31/03/03	4k	We have identified two reaches of the River Axe pSAC where we will be undertaking a project to investigate the effectiveness of coppicing on trees infected with Phytophthora. This work will be completed by March 2002.

Lack of Information on River Habitat

To make more informed management decisions in the LEAP area, we need to improve our knowledge of river habitats. River Habitat Survey (RHS) is a system for assessing the physical character and quality of rivers. By recording data using a standard methodology, an assessment of habitat quality and the extent of artificial channel modification can be made.

Collecting this information is relevant not only to ourselves, but also to a wide range of other organisations and individuals. It is used in a number of applications including river rehabilitation

assessment opportunities, investigation into sediment sources and sinks for flood defence purposes, assessment of river habitat quality for fish and the provision of evidence to support the protection of a length of river against development. We have only managed to survey 15 sites within this LEAP area, and many more sites (representing approximately 25% of total river length) are required before we can use RHS to its best ability.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
11a ■	Complete River Habitat Surveys to cover 25% of the LEAP area.	Agency	01/12/00	31/03/05	6k	There has been no progress on this action due to foot and mouth disease.

Open Standing Water

There are a number of small areas of standing open water within the LEAP area ranging from ponds to ornamental lakes. Ponds occur infrequently, but provide an important habitat for a wide range of associated flora and fauna. Many ponds have been lost through infilling and neglect, but the loss of conservation value can also occur through the introduction of fish, waterfowl or invasive plants. We must work to redress this loss/decline if we are to protect species dependent on this habitat.

Target:

Establish current status of great crested newt and maintain or restore to 1970's range and distribution by 2005.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
12a ▼	Promote and implement actions from the South-West BAP for standing open water by ensuring favourable management, encouraging creation of new sites and the development of county-based databases for amphibian records.	DWT, SWT, Agency, FWAG, LPAs, EN	01/12/00	31/03/05	u/k	Recent work at Seaton Marshes LNR, which was undertaken by East Devon District Council, has helped to improve the marginal habitat around the existing lagoon, whilst creating new areas of open water.

Floodplain Grazing Marsh

Grazing marsh occurs along the margins of the Axe estuary. The wildlife value has historically been reduced through agricultural improvement and infrastructure development, however, there is still a network of species-rich ditches across the marsh.

With the difficulties currently facing the farming community, it is becoming increasingly difficult to encourage management practices sympathetic to the needs of wildlife without appropriate funding. We will, therefore, continue to seek to influence the levels of payments and priorities for agri-environment schemes through discussions with MAFF.

Targets:

Restore 30ha of grazing marsh which has become too dry or is intensively managed on appropriate sites by 2005.

Increase number of breeding waders, such as redshank by 1 or more pairs by 2005.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
13a ▼	Support development of Seaton Marshes Local Nature Reserve.	EDDC, Agency	01/12/00	31/03/03	u/k	We continue to support the development of this reserve.
13b ▼	Promote and implement actions from Devon BAP for grazing marsh by encouraging sympathetic management and identify opportunities for enhancement.	Agency, RSPB, DWT, EN EDCCS, FWAG	01/12/00	31/03/04	u/k	East Devon Coast and Countryside Service have been carrying out enhancement work at Seaton Marshes LNR and are now developing similar work at Colyford Common - a potential new LNR. We continue to seek opportunities to implement this action.

Reedbed

Reedbed occurs predominantly within the Axe estuary along the north and western shores. It is an important habitat supporting a distinctive complement of many specialised breeding bird species and, in many circumstances, large populations of amphibians. The opportunity for the creation of additional reedbed adjacent to the estuary is limited due to the concentration of existing habitats of wildlife value, but there may be opportunities for the creation of reedbeds, albeit on a relatively small scale, elsewhere within the area.

Target:

Create up to 1ha of additional reedbed by 2005.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
14a ▼	Promote and implement actions from Devon BAP for reedbed by encouraging appropriate management of existing reedbeds and advise on and encourage the use of reedbeds for wildlife and pollutant/ effluent treatment.	Agency, LPAs, SWWL, RSPB, DWT	01/12/00	31/03/04	>1k	We continue to pursue this action through our activities.

Estuaries

The Axe estuary is a bar-built estuary containing extensive mudflats, saltmarsh and reedbeds. At low tide islands are formed across the intertidal mudflats, isolated by a narrow channel. These mudflats support impoverished low-salinity mud invertebrate communities, which in turn attract wintering waders and wildfowl, including widgeon, lapwing and curlew. The intertidal flats are flanked with saltmarsh and animals are grazed within the upper estuary where the vegetation is typical of mid/upper saltmarsh. The lower estuary is ungrazed and has a preponderance of low/mid marsh vegetation.

Target:

Establish current extent and quality of saltmarsh by 2001 and maintain. Maintain current number and range of wintering waders and waterfowl, such as widgeon, lapwing and curlew.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
15a ▼	Promote and implement actions from Devon BAP for estuaries and in addition ensure public access arrangements and management to banks etc. do not adversely affect estuary through increased disturbance.	Agency, EDCCS	01/12/00	31/03/05	<1k	Work is currently underway to open up access to the Seaton Marshes LNR. This will involve the provision of a hide and screens (to restrict disturbance to wildlife). We will continue to promote these actions. See also Action 13b.

Sea Cliff and Slopes and RIGS

The geology of Devon gives rise to a wealth of exposed features and impressive landscapes. Exposed features occur in a variety of situations including riverbanks and cliffs. The Devon RIGS (Regionally Important Geological/Geomorphological Sites) Group has been established to identify and describe sites of county importance. In line with our conservation duties, we are keen to support this initiative. A similar initiative has also been undertaken in Somerset, where information on RIGS is held at the Somerset Records Centre.

Two RIGS have been identified within the Axe & Lim LEAP area. Where possible we will continue to support the identification of RIGS and the updating of inventories.

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
16 ▼	Support identification of sites of regional earth science importance and encourage conservation.	Devon RIGS Group, Agency	01/12/00	31/03/05	<1k	We continue to support activities associated with the identification and protection of earth science features.

Coastal Reefs and Rocky Seabed

Lyme Bay contains coastal reefs which support diverse communities of marine life including sponges, anemones, cup corals, ross corals and sea fans. Information gathered during a recent survey undertaken by the Devon Wildlife Trust (DWT) showed that this reef contained a low abundance of species diversity with occasional sightings of scallops *(Pectin maximus)* and a few hydroids (*Nemertesia antennina*) attached top rock fragments and empty shells. This suggests that the site has been extensively dredged which may account for the low species diversity. There are currently no specific actions for this habitat. They will be developed in future if necessary.

Issue 8: Recreational Use of the Area

The LEAP area has considerable potential for recreation both within and adjacent to watercourses and water bodies. Many people choose to live in the West Country to take advantage of the recreational opportunities and it is likely that recreational pressure will increase further with the proposed increase in housing development for the area.

We launched a phone service called Rivercall during 1998, to provide information to river users (particularly canoeists and fishermen) on the river levels. The scheme was not as successful as planned and disappointment was expressed by users at the way the information on river levels was provided. Improvements are being made, with the aim of providing up-to-date information in a readily accessible and understandable format. **Action 17a.**

No.	Action	Lead By/ *Others*	Start Date	End Date	Cost	Progress
17a ▼	Review and develop Rivercall System.	Agency, BCU, Fishing Associations	01/12/00	31/03/02	u/k	Rivercall has been relaunched and is now operating well. We are considering placing web cams at five river locations in Devon and Cornwall. The aim of this scheme is to provide live visuals on our Web Site of the state of river flow at strategic points.
17b ▼	Support principle of development of South Somerset Cycle Route and appraise options.	Sustrans, EDDC, *Agency*	01/12/00	31/03/05	u/k	We continue to support the principle of cycle routes through the area. This includes the national cycle route from Plymouth to Dorset which has been approved in principle by Devon County Council.

4. Duties, Powers and Interests of the Environment Agency

The Environment Agency has a wide range of interests in the areas of water management, waste management and pollution prevention and control. Whilst many of these interests are supported by statutory duties and powers, much of our work is advisory, with the relevant powers resting with other bodies such as local planning authorities. The following table summarises our duties, powers and interests and their relationship to land-use planning.

Agency Duty	The Agency has powers to:	The Agency has an interest (but no powers) in:	Partnership
Water Resources The Agency has a duty to conserve, redistribute, augment and secure the proper use of water resources.	• Grant or vary water abstraction and impoundment licences on application with appropriate conditions imposed to safeguard the needs of the environment whilst allowing reasonable and justified use of available and sustainable water resources - with the aim of achieving an equitable balance between competing demands. • Revoke or vary existing licences to reinstate flows or levels to surface waters or groundwater which have become depleted as a result of abstraction. Compensation may be payable if such powers are used. • Secure the proper use of water resources through our role in water resources planning, and the assessment of reasonable need for abstractions and the promotion of more efficient use of water resources. • Monitor and enforce abstraction and impoundment licences. • Issue conservation notices to direct appropriate practices with regard to water resources issues associated with exempt dewatering activities.	• 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. • Protecting the water environment from any adverse impact due to proposed major developments.	• The Agency uses its position as a statutory consultee to the planning authorities to secure conditions and agreements that protect the water environment and that encourage water conservation measures. • The Agency also seeks to influence planning decisions for new development by ensuring that planning authorities allow for any lead-time required for resource development. • 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.
Contaminated Land The Agency has a duty to develop an integrated approach to the prevention and control of land contamination, ensuring that remediation is proportionate to risks and cost-effective in terms of the economy and environment.	• Regulate the remediation of contaminated land designated as special sites. • Prevent future land contamination by means of its IPC, Water Quality and other statutory powers. • Report on the state of contaminated land.	• Securing with others, including local authorities, landowners and developers, the safe remediation of contaminated land.	• The Agency supports land remediation and will promote this with developers and local authorities and other stakeholders.

Agency Duty	The Agency has powers to:	The Agency has an interest (but no powers) in:	Partnership
Air Quality The Agency has a duty to implement Part 1 of the Environmental Protection Act 1990.	• 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. • Have regard to the government's National Air Quality Strategy when setting standards for the releases to air from industrial processes.	• The vast number of smaller industrial processes which are controlled by local authorities. • Control over vehicular emissions and transport planning.	• 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. 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.
Flood Defence The Agency has a duty to exercise general supervision over all matters relating to flood defence throughout each LEAP area.	• Control, through Land Drainage consents, of development within 8 m of main river (Water Resources Act 1991, Section 109) or construction of a structure that would affect the flow of an ordinary watercourse (Land Drainage Act, 1991 Section 23). • Produce flood risk maps for all main rivers under S105 of Water Resources Act 1991. • Undertake works to main rivers using permissive powers. • Issue flood warnings relating to main river to the public, local authorities and the police. • Consent mineral working within 16 m of main rivers.	• Granting of planning permission throughout a LEAP area but especially floodplains where development can significantly increase flood risk. This permission is granted by local planning authorities. • Installation of surface water source control measures e.g. flood attenuation structures. • Supervising the maintenance of ordinary watercourses which is a local authority remit, but may impact on main rivers. • Installation of buffer zones which reduce flood risk and have significant environmental benefits. • Urban and rural land use and measures that can reduce flood risk or the need for watercourse maintenance.	• As a statutory consultee on planning applications within main river floodplains the Agency offers advice based on knowledge of flood risk. It also advises on the environmental impacts of proposed floodplain development. • 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.
Water Quality The Agency has a duty to monitor, protect, manage and, where possible, enhance the quality of all controlled waters including rivers, groundwaters, lakes, canals, estuaries and coastal waters through the prevention and control of pollution.	• Issue discharge consents to control pollution loads in controlled waters. • Regulate discharges to controlled waters in respect of water quality through the issue and enforcement of discharge consents. • Issue 'works notices' where action is required to reduce the risk of pollution. • Prosecute polluters and recover the costs of clean-up operations. • Serve prohibition notices (with or without conditions) on highway authorities to require treatment and pollution measures for highway runoff.	• The greater use of source control measures to reduce pollution by surface water runoff. • Prevention and education campaigns to reduce pollution incidents. • The provision of highway runoff control measures which is a highway authority remit.	• 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.

Agency Duty	The Agency has powers to:	The Agency has an interest (but no powers) in:	Partnership
Radioactive Substances The Agency has a duty under the Radioactive Substances Act 1993 to regulate the use of radioactive materials and the disposal of radioactive waste.	• To issue certificates to users of radioactive materials and disposers of radioactive waste, with an overall objective of protecting members of the public.	• The health effects of radiation.	• 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. The Agency will work with DEFRA to ensure that the disposal of radioactive waste creates no unacceptable effects on the food chain. • 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.
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.	• 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.	• The conservation impacts of new development. These are controlled by local planning authorities. • 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. • Implementation of the UK Biodiversity Plan for which it is the contact point for 35 species and one habitat.	• 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.
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.	• 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.	• The landscape impact of new development, particularly within river corridors. This is controlled by local planning authorities.	• 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.
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.	• The Agency must promote its archaeological objectives through the exercise of its water management and pollution control powers and duties.	• Direct protection or management of sites of archaeological or heritage interest. This is carried out by local planning authorities, County Archaeologists and English Heritage.	• 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.

Agency Duty	The Agency has powers to:	The Agency has an interest (but no powers) in:	Partnership
Fisheries The Agency has a duty to maintain, improve and develop salmon, trout, freshwater and eel fisheries.	• Regulate fisheries by a system of licensing. • Make and enforce fisheries byelaws to prevent illegal fishing. • Promote the free passage of fish and consent fish passes. • Monitor fisheries and enforce measures to prevent fish entrainment in abstractions. • Promote its fisheries duty by means of land drainage consents, water abstraction applications and discharge applications.	• The determination of planning applications which could affect fisheries.	• Many development schemes have significant implications for fisheries. The Agency will work with anglers, riparian owners, developers and local authorities to protect fisheries.
Recreation The Agency has a duty to promote rivers and water space for recreational use.	• The Agency contributes towards its recreation duty through the exercise of its statutory powers and duties in water management.	• Promotion of water sports. This is carried out by the Sports Council and other sports bodies.	• The Agency will work with the Countryside Commission, the Sports Council, British Waterways and other recreational and amenity organisations to optimise recreational use of the water environment.

GLOSSARY

Abstraction - Removal of water from surface or groundwater sources.

Asset Management Plan (AMP) - The Asset Management Plan is produced by the Water Companies for the Office of Water Services (OFWAT). It sets out the water industry investment programme for a set number of years.

Biochemical Oxygen Demand (BOD) - A standard test which measures over five days the amount of oxygen taken up by aerobic bacteria to oxidise organic (and inorganic) matter.

Biodiversity - The variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species , between species and ecosystems. (Article II of the Biodiversity Convention).

Catchment - The total area from which a single river collects surface runoff.

Coarse fish - This is a lay-man's term for cyprinid fish and other commonly associated species such as pike, perch and eels of angling significance. The term does not normally refer to minor species such as bullhead, stone loach, minnow and stickleback.

Confluence - The point at which two rivers meet.

Diffuse pollution - Pollution without a single point source, e.g. acid rain, pesticides, urban runoff, etc.

Environmental Quality Standard (EQS) - The concentration of a substance found in the environment which should not be exceeded in order to protect the environment or human health. An EQS is set by the EC through EC Directives and also by the Government.

Eutrophic - Water enriched with nutrients which result in high plant (including algal) growth. Usually used when referring to enrichment from man-made sources such as fertilisers leaching from the soil.

Floodplain - Part of river valley or coastal plain which is inundated during periods of flooding.

Fluvial - Pertaining to, or found in, rivers.

Rhôs pasture - Type of nutrient poor grassland present on culm geological formations.

Riparian - Relating to or situated on the bank of a river or stream.

Riparian owner- Owner of riverbank and/or land adjacent to a river. Normally owns river bed and rights to mid-line of channel.

River Quality Objective (RQO) - The level of water quality that a river should achieve in order to be suitable for its agreed uses.

Runoff - Rainwater which does not soak into the ground but which runs over the surface in a downhill direction.

Sewage - Liquid waste from cities, towns and villages which is normally collected and conveyed in sewers for treatment and/or discharge to the environment.

Sewerage - A system of underground pipes designed to carry sewage to Sewage Treatment Works.

SSSI - Sites of national importance designated under the Wildlife and Countryside Act 1981 by English Nature in England. Sites may be designated to protect wildlife, geology or land forms.

Surface water - General term used to describe all the water features such as rivers, streams, springs, ponds and lakes.

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

ABBREVIATIONS

AMP	Asset Management Plan
AONB	Area of Outstanding Natural Beauty
BATNEEC	Best Available Technique Not Entailing Excessive Cost
BC	Butterfly Conservation
BCU	British Canoe Union
BOD	Biochemical Oxygen Demand
BOT	Barn Owl Trust
BPEO	Best Practicable Environmental Option
CLA	Country Landowners Association
DAS	Devon Archaeological Society
DCC	Devon County Council
DETR	Department of the Environment, Transport and the Regions (now DEFRA)
DEFRA	Department for Environment, Food and Rural Affairs
DoWT	Dorset Wildlife Trust
DSFC	Devon Sea Fisheries Committee
DWT	Devon Wildlife Trust
EDDC	East Devon District Council
EDCCS	East Devon Coast & Countryside Service
EH	English Heritage
EN	English Nature
ERS	Exposed Riverine Sediment
FWAG	Farming and Wildlife Advisory Group
GQA	General Quality Assessment
IPC	Integrated Pollution Control
LEAP	Local Environment Agency Plan
LPAs	Local Planning Authorities
MDDC	Mid Devon District Council
NFU	National Farmers Union
NT	National Trust
OFWAT	Office of Water Services
OSMTC	Ottery St Mary Town Council
RIGS	Regionally Important Geological Site
RQO	River Quality Objective
RSPB	Royal Society for the Protection of Birds
SAC	Special Area of Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
STWs	Sewage Treatment Works
SWT	Somerset Wildlife Trust
SWWL	South West Water Ltd
TDBC	Taunton Deane Borough Council
UWWTD	Urban Waste Water Treatment Directive

REFERENCES

[1] Nature of Devon: A Biodiversity Action Plan, July 1998.

[2] European Council Directive of 8 December 1975 concerning the Quality of Bathing Water (76/160/EEC). Official Journal of the European Communities No. L31/1.

[3] European Council Directive on the Quality of Freshwaters needing Protection or Improvement in order to support Fish Life (78/659/EEC). Official Journal of the European Communities No. L22/1.

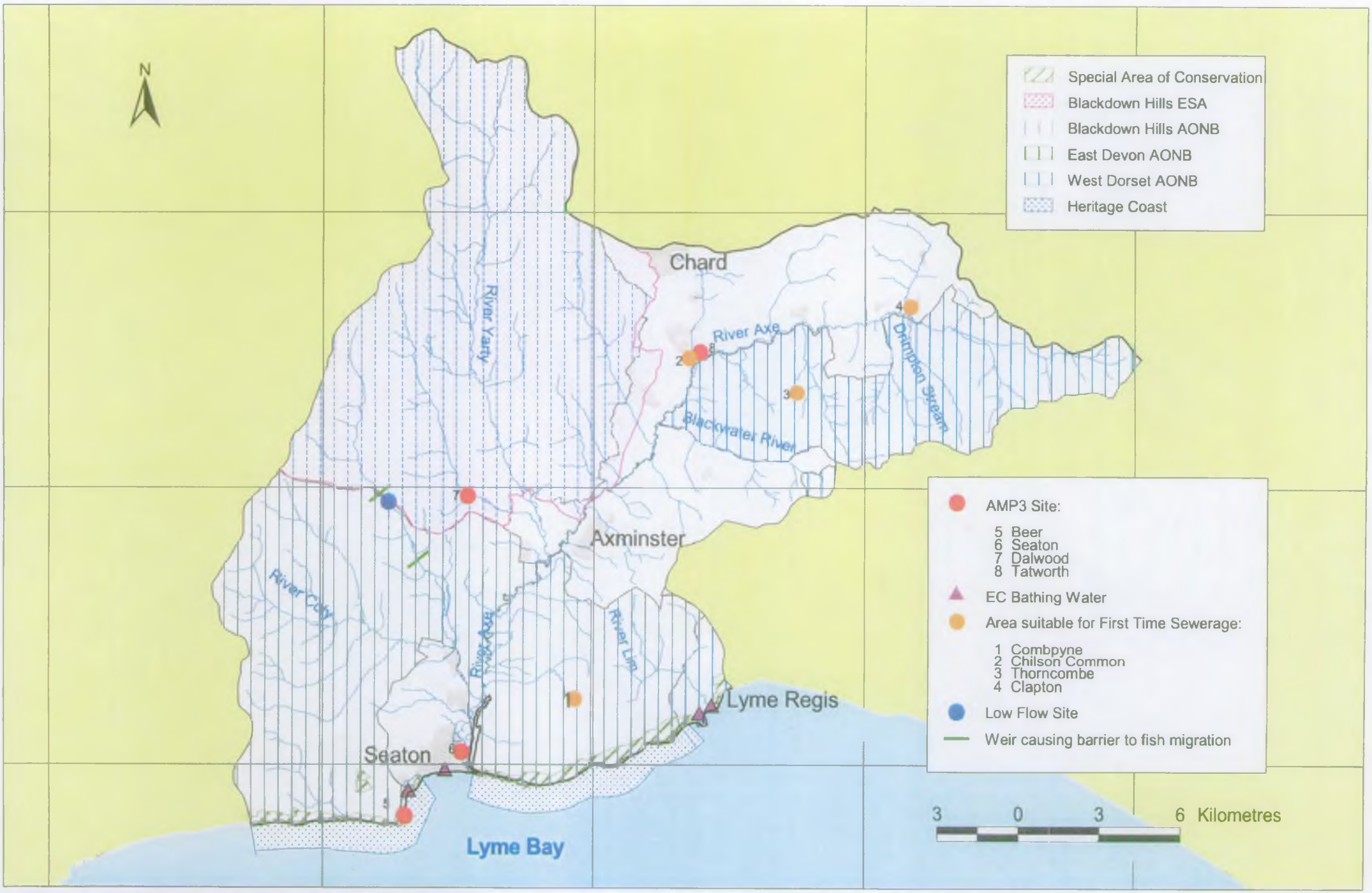
[4] European Council Directive on Pollution Caused by the Discharge of Certain Dangerous Subtances into the Aquatic Environment (76/464/EEC). Official Journal of the European Communities No. L129.

[5] European Council Directive on Species and Habitats (92/43/EEC). Official Journal of the European Communities No. L206, 1992.

[6] Focus on Biodiversity, The Environment Agency, June 2000.

Map 1 - Compliance with River Quality Objectives for 2000

Map 2 - Key Sites in the Axe & Lim LEAP Area



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