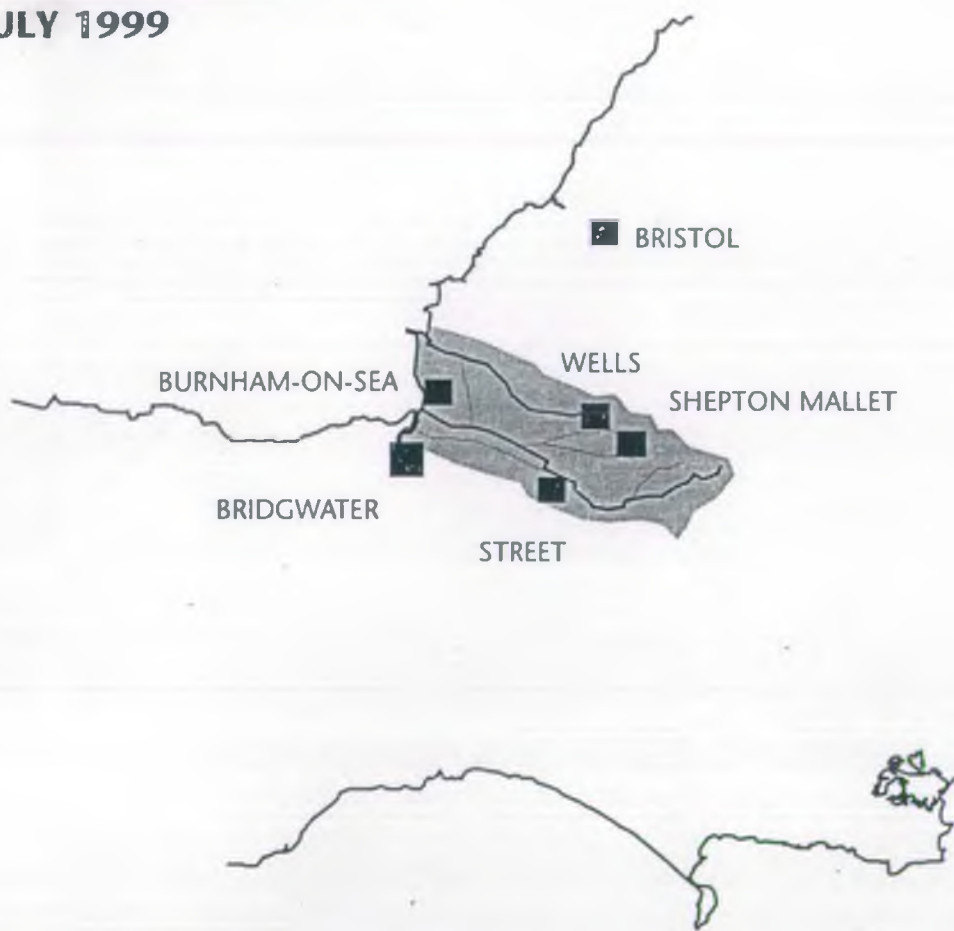


local environment agency plan

BRUE AND AXE

FIRST ANNUAL REVIEW

JULY 1999



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AGENCY



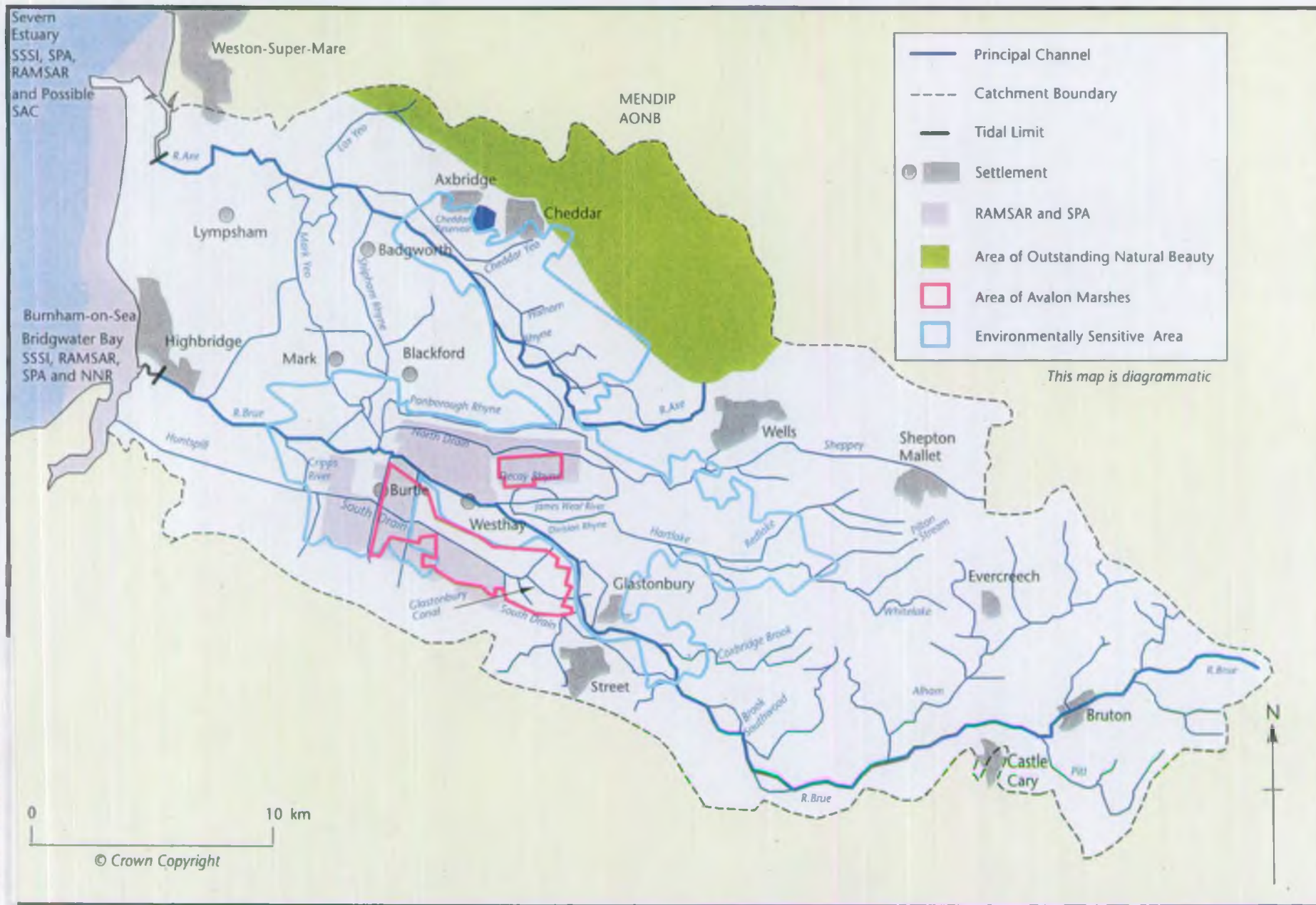
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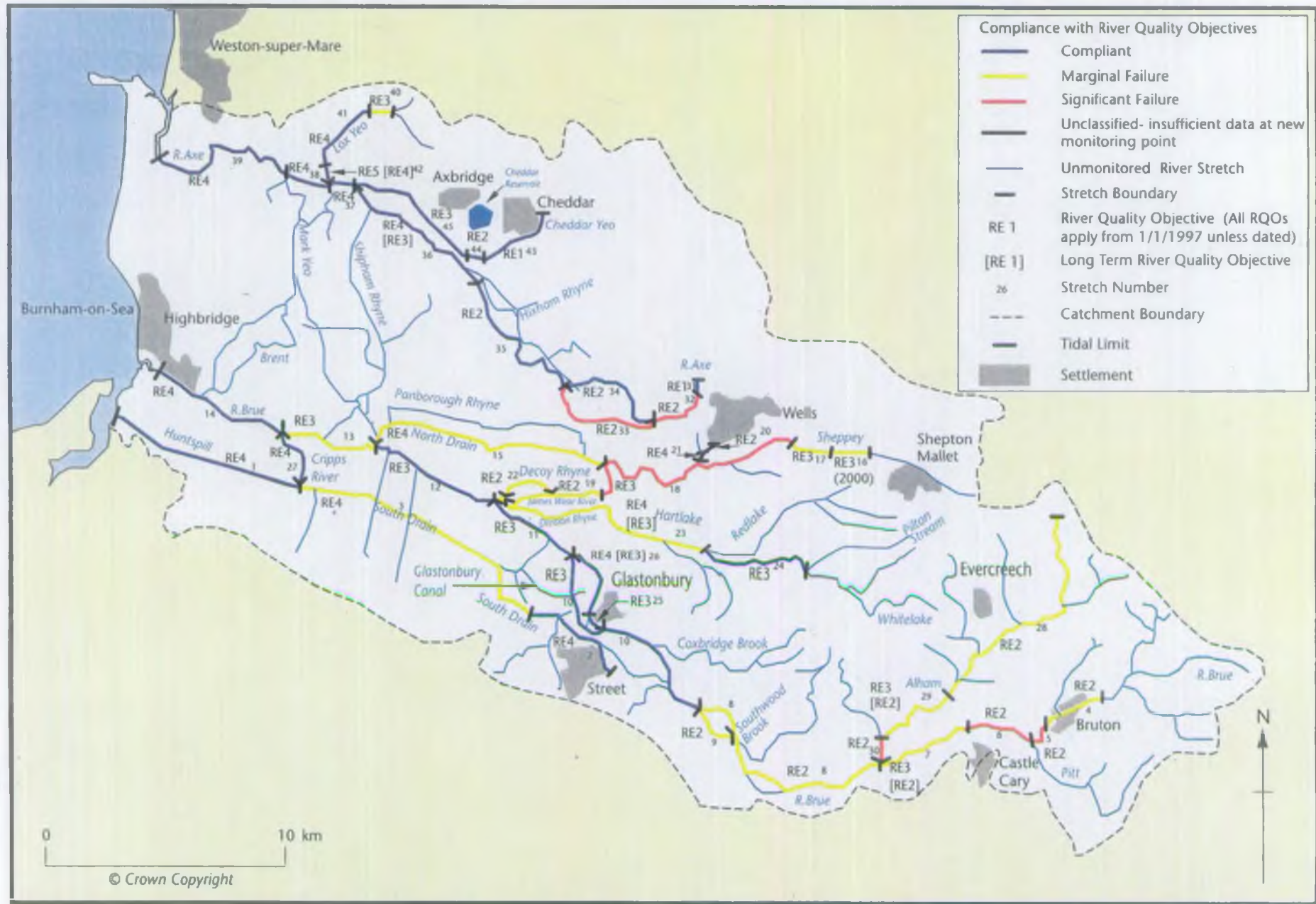
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Map 1 - River Brue Catchment



Map 2 - Compliance with River Quality Objectives



Information correct as of January 1998 based on 1996 River Ecosystem Classification Data

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Map 1 – River Brue Catchment

Map 2 – Compliance with River Quality Objectives

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1. Introduction

This is the First Annual Review of the River Brue & Axe Action Plan. It introduces the Environment Agency and summarises progress made with actions. Previous publications relating to this catchment contain more background detail, and this Review should be read in conjunction with these publications:

- River Brue & Axe Consultation Report – July 1997
- River Brue & Axe Action Plan – March 1998

1.1 The Environment Agency

The Environment Agency is a non-departmental public body established by the Environment Act 1995 and formed on 1 April 1996. We are sponsored by the Department of the Environment, Transport and the Regions (DETR) with policy links to the Welsh Office and the Ministry of Agriculture, Fisheries and Food (MAFF).

We have taken over the functions of our predecessors: the National Rivers Authority (NRA), Her Majesty's Inspectorate of Pollution (HMIP), the Waste Regulation Authorities (WRAs) and some parts of the DETR.

We provide a comprehensive approach to the protection of the environment by combining the regulation of air, land and water into a single organisation. We cannot work in isolation, but seek to educate and influence individuals, groups and industries to promote best environmental practice, and develop a wider public awareness of environmental issues.

Our Vision is:

- a better environment in England and Wales for present and future generations.

We will:

- protect and improve the environment as a whole by effective regulation, by our own actions and by working with and influencing others
- operate openly and consult widely
- value our employees
- be efficient and businesslike in everything we do.

Our Aims are:

- to achieve significant and continuous improvement in the quality of air, land and water, actively encouraging the conservation of natural resources, flora and fauna
- to maximise the benefits of integrated pollution control and integrated river basin management
- to provide effective defence for people and property against flooding from rivers and the sea
- to provide adequate arrangements for flood forecasting and warning
- to achieve significant reductions in waste through minimisation, reuse and recycling and to improve standards of disposal

- to manage water resources to achieve the proper balance between the needs of the environment and those of abstractors and other water users
- to secure, with others, the remediation of contaminated land
- to improve and develop salmon and freshwater fisheries
- to conserve and enhance inland and coastal waters and their use for recreation
- to maintain and improve non-marine navigation
- to develop a better informed public through open debate, the provision of soundly based information and rigorous research
- to set priorities and propose solutions that do not impose excessive costs on society.

We do not cover all aspects of environmental legislation and service to the general public. Your local authority deals with all noise problems; air pollution arising from vehicles, household areas, small businesses and small industries; planning permission (they will contact us when necessary); contaminated land issues (in liaison with ourselves); and environmental health issues.

1.2 The LEAP Steering Group

LEAP Steering Groups represent a range of interests who endorse the Consultation Report and Action Plan prior to public release. They monitor the implementation of the Action Plan and provide the Agency with specific advice on the importance of issues within the LEAP. They act as a communication link between the local community, the Agency and its committees and help to promote and develop initiatives of benefit to the environment within the LEAP. This Annual Review of the River Brue & Axe LEAP Action Plan is reported to the members of the River Brue & Axe Steering Group. The Steering Group Members are:

Name	Representing
Mr I Ham	National Farmers Union
Mr P Hodge	Bristol Water Company
Mr N House	Royal Ordnance Plc
Mr J Mathrick	Fisheries
Dr C Hancock	Somerset Wildlife Trust
Mr R Bradford	English Nature
Mr P Daniel	Wyvern Waste
Capt. P Lee	Sedgemoor District Council
Mr R Moon	Somerset County Council
Mr R Shearwood-Porter	Inveresk Plc, St Cuthberts Paper Mill
Mr D Hooper	Mendip District Council
Mr J Comer	County Landowners Association
Mr N Gibson	British Canoe Union
Mr J B H Watkis	Internal Drainage Boards
Mr I Blair	Wessex Water Plc
Mr R Bond	Somerset Peat Producers Association

2. Overview of the catchment

The River Brue & Axe Catchment lies wholly within the County of Somerset. The River Brue rises in the clay uplands to the east of the catchment, flowing slowly through the flat lowlands of the Somerset Levels and Moors, often in man-made channels, before entering the sea at Highbridge.

The River Sheppey, the River Axe and its tributaries, the Cheddar Yeo and Lox Yeo, rise from limestone springs on the Mendips, before flowing through the Somerset Levels and Moors to the sea just north of Brean Down. The rivers are interconnected in several places by rhynes controlled by sluices, forming a very complex artificial drainage system.

The catchment is of major importance to wildlife conservation. Of over-riding importance is the internationally designated lowland wet grassland resource of the Somerset Levels and Moors, the largest remaining area of this habitat in Britain. Five of the wetland Sites of Special Scientific Interest (SSSI) have recently been designated as a Special Protection Area (SPA)/RAMSAR site of international importance with 51 Sites of Special Scientific Interest (SSSIs) and 33 County Wildlife Sites. These designations are because of their international importance for over-wintering wildfowl and breeding waders.

The catchment is predominantly agricultural with an increasing amount of tourism including the evolving Avalon Marshes Project to the West of Glastonbury. The Royal Ordnance factory is situated at Puriton just to the north of Bridgwater. Some light industry is centred around the main towns and there are two limestone quarries in the Mendips. There is cider making at Shepton Mallet, a paper mill at Wells and peat extraction to the west of Glastonbury.

In 1995, 27% of monitored river length in the Brue and Axe Catchment was of good or very good chemical quality, while 60% was fair and 13% was of poor or bad quality. In biological terms 60% of the monitored river was of excellent quality and the remaining 40% was good or fairly good quality. Between 1990 and 1995 there was an overall improvement in chemical quality of 15% of monitored river length while biological quality improved by 35%. The large difference in biological quality between 1990 and 1995 is considered partly attributable to the introduction of new/improved monitoring techniques.

3. Summary of progress

3.1 Conservation

The majority of our conservation activities have centred on the internationally important wetland sites in that part of the Brue and Axe catchment that lies within the Somerset Levels and Moors. In partnership with other organisations we have been monitoring habitat trends and species distribution as a priority. The review of the Somerset Moors and Levels Strategy and the production of Water Level Management Plans have all required significant conservation input. Our work investigating water quality in the rhyne and ditch system in parts of the Levels and Moors will enable us to understand inputs of nutrients and constraints and determine optimum conditions to support the important biodiversity. Earlier this year, Cambridge University researchers sponsored by the Agency discovered that the lower River Brue held one of the largest populations, yet discovered in the UK, of a key biodiversity target species, the depressed river mussel. We will try to seek additional funding to determine the distribution of the species and its local habitat requirements.

In March this year the Agency was granted approved body status by English Nature enabling us to manage the Huntspill River as National Nature Reserve. We have completed a Conservation and Recreation Management Plan for the Reserve, which is also Agency owned. Key elements of the plan include bankside habitat creation with reed and willow and grassland management to increase vole numbers. Short-tailed field voles are the major food for barn owls, which breed successfully on the Huntspill land in artificial nestboxes, a project started some years ago in collaboration with the Hawk and Owl Trust.

We have developed a 5 year river restoration and conservation plan that assists us to prioritise specific river reaches throughout the North Wessex Area. A priority within this catchment is the River Brue itself but at present there is no funding. Opportunities also exist on the River Axe pending a review of the structure of Bleadon sluice and its operation.

When the Agency undertakes capital flood defence works we seek opportunities to further nature conservation and promote amenity. During the past year we have ensured that a mammal crossing was retained when Whitehouse Sluice was refurbished and brokered visual enhancements using recycled stone. We are also hoping to find a new role for the timber from the old doors of Highbridge Clyce which are being replaced during the current year.

We continue to work through the planning process and our own consenting activities to further nature conservation. On the tidal River Axe works associated with the construction of Weston Sewage Treatment Works are nearing completion. We have worked with Wessex Water, English Nature and North Somerset Council to set back tidal defences and develop additional saltings and lagoons.

We are working to increase the coverage of River Habitat Survey (RHS) within North Wessex. RHS is a method of assessing and evaluating the physical character and quality of river habitat. Its main purpose is to provide river managers with information to sustain and enhance biodiversity. Together with its database RHS has become a powerful tool for monitoring habitat change, comparing habitats and predicting environmental impacts.

3.2 Development Pressures

The Local Planning Authorities covering the Brue and Axe catchments are North Somerset Council, Mendip District Council, Sedgemoor District Council and South Somerset Council. Of the two authorities that cover the majority of the catchment Mendip and Sedgemoor both have included Section 105 flood data on their Local Plan Deposit maps. The Agency considers this to be most helpful as it not only informs the readers of the plan on this aspect but also demonstrates to other Local Planning Authorities that it can be practically achieved without over burdening the maps. South Somerset District Council, who placed their Local Plan on Deposit last year have not to date included the Section 105 flood map data. This resulted in an objection from the Agency. Continuing discussion will, it is hoped lead to inclusion of the Section 105 flood plain data on the

adopted plan's maps. The remaining Council, North Somerset, is still in the process of working up its thoughts on their development plan.

The availability of water resources is an increasingly important issue across England and Wales. Whilst the Government has said that it does not expect water resources to be a reason for development proposals being rejected, the provision of adequate water supplies could have an influence on the timing of developments. The Agency comments on all county and district plans, and any individual planning applications that will have a significant water use, with respect to water resources and indeed water efficiency (as all new homes are now metered water efficiency can reduce customer's bills). However we can only comment on water resources in general as the specifics depend on which sources the relevant water company would plan to use to supply the development.

3.3 Fisheries

The Environment Agency has set out its fisheries aims and objectives in 'An Action Plan for Fisheries'. Locally we are surveying the fish populations to monitor their status within a 5 year rolling programme. The fisheries of the Brue and Axe catchments are generally in a healthy state. We will soon be using a national fisheries classification scheme which will allow a clearer reporting style. The 1999 National Angling Championships are to be held on the River Huntspill and Kings Sedgemoor Drain in September.

We continue to protect the local fisheries through enforcement of fisheries laws and the screening of consents and permissions within the planning and development control process. Fisheries work relies heavily on income from rod fishing licences. The availability of licences nationally has increase through a new telephone application service in addition to being available from all Post Offices. Several Issues raised within this plan relate to eels and the elver fishery. These are relevant to other LEAP areas particularly the River Parrett.

The fish populations of the River Brue are due to be re-surveyed in the year 2000 and the Axe in 2001 as part of our ongoing five year rolling survey programme. Nationally a review of eel licensing is taking place and also an eel strategy is being written. The Agency has produced a Course Fisheries Strategy to which comments are welcome until 1 September 1999. This strategy informs anglers and the public of how the Environment Agency intends to deliver better course fisheries in the future. This strategy complements the existing general fisheries strategy that is called 'An Action Plan for Fisheries'.

3.4 Flood Defence

The LEAP actions identified form only part of the Flood Defence commitment within the catchment. Anticipated revenue maintenance expenditure during 1999/00 is in excess of £800k.

Core maintenance activities in the summer include weedcutting, application of herbicide and grasscutting of floodbanks whilst in the winter dredging, fence repairs and tree/blockage removal is carried out. Asset and water level management is carried out all year round. This involves operation and maintenance of pumping stations and sluices which maintain summer water levels and evacuate winter floodwater. Most of this work is carried out by the In-house Emergency Workforce who also routinely respond to flood events and pollution incidents whenever and wherever they occur.

There is currently an identified need for additional maintenance of mechanical and electrical equipment and a programme of refurbishment is ongoing. Asset inspections have also identified a need to increase maintenance of existing flood alleviation schemes to ensure they are secure should their design flood occur. Locations in the Brue and Axe catchment include Briston and West Lydford.

Notable works last year include major dredging of the Brue from Cripps River to North Drain pumping station as well as from Glastonbury to Baltons Borough. Dredging was also carried out to the Glastonbury Canal which included major conservation enhancements.

A number of capital schemes have been or are in the process of being carried out. Improvements to the estuary banks of the river Axe were completed last year and refurbishment of Highbridge Clyce mitre doors and Whitehouse pumping station are currently in progress.

As a result of the floods last Easter the Bye Report has highlighted 85 actions. It has been agreed that these **will** be implemented and are now the highest priority for Area Flood Defence. There is a significant resource implication and although there may be an impact on the progress of the existing LEAP actions. Some additional funding has been secured to implement these actions.

3.5 Recreation

We are writing Conservation and Recreation Management Plans for all the major areas of land owned by the Agency and we have completed the plan for the Huntspill River. We have carried out a survey of our riverside car parks for a risk assessment but we have also looked at opportunities for other enhancements if funds become available.

We continue to work through the planning process and our own consenting activities to promote waterside recreation. On the tidal River Axe works associated with the construction of Weston Sewage Treatment Works are nearing completion. We have worked with Wessex Water, English Nature and the local authorities to provide sensitively managed public access across the new nature reserve with paths, a cycle way and bird hide.

At the Peat Moors Visitor Centre in the Brue valley we have contributed to the interpretation centre that enables visitors to understand both the archaeological remains preserved locally in the peat and the natural history of the nearby Shapwick Heath National Nature Reserve.

3.6 Water Quality

In respect of chemical water quality in 1998, 11% of monitored river lengths in the Brue and Axe Area were of good quality to very good quality, 69% were of fairly good or fair quality and 20% were of poor quality. When compared to the 1995 figures published in the LEAP Consultation Draft (July 1997) this shows a deterioration of water quality. However, data collected in the last year suggests water quality is now improving. The improvements in the upper reaches of the River Axe are likely to be attributable to improvements in the effluent management regime at St Cuthberts Paper Mill, following revision to the discharge consent in April 1998.

Catchment specific figures for incidents are not available but Regional data on incident numbers for 1998 for water quality indicates a reduction on previous years. The oil and construction industry sectors were targeted for pollution prevention in 1998/9. A target of 5% reduction in incident numbers was comfortably reached.

Throughout 1998/9 we have been identifying any stretches of river impacted by water company discharges. These include continuous discharges of treated sewage which require higher levels of treatment, inadequate storm sewage discharges and emergency facilities at sewage pumping stations. We have been prioritising these improvements so the spending by the water industry is focussed at providing the greatest environmental benefit.

3.7 Water resources

The Government's water watchdog OFWAT is undertaking a review of water prices for the period 2000 – 2005; the outcome of this will be Asset Management Plan 3. This will detail, amongst other information, the companies' estimates of costs for meeting quality and environmental improvements as required by the Government. The Agency's proposals for the National Environment Programme for water companies 2000 – 2005 was submitted to government in May 1998 in the document 'A Price Worth Paying'. Following consultation with the Agency and OFWAT the Department of the Environment, Transport and the Regions (DETR) published guidance in September to OFWAT for the environmental and quality objectives to be achieved by the water industry in the period 2000- 2005 in the report 'Raising the Quality'. This guidance has now been translated into detailed environmental obligations which have been agreed by the Secretary of State for each water company. There are no water resources obligations within the Brue and Axe LEAP area.

AMP3 also required the water companies to revise their water demand forecasts, review their resource availability and consider any potential resource options to meet forecasted deficits within the planning horizon. In parallel with this the Agency required the water companies to complete Water Resource Plans by March 1999. The water resource plans require water companies to produce demand forecasts and compare them with their available resources for up to the next 25 years. Potential demand or resource-management options, including leakage reduction, have to be considered, and, if necessary, any resource-development options which may be required to meet the forecast demand. These plans have been received and a report on them, 'Planning Public Water Supplies', was sent to DETR in June 1999. The companies will be expected to update these plans on an annual basis and the report also details the main changes the Agency wishes to see incorporated in the revision of the plans

3.8 Waste

In the North Wessex Area 32 Waste Management Licences are identified as having a high priority for review by the Environment Agency. Within the Brue and Axe LEAP Area there are two licences; St Cuthberts Paper Mill at Wells and Southwood Skip Hire at Evercreech. The St Cuthberts licence is under review to assess the impact of the landfill on the local environment, in particular in respect of groundwater issues. The licence covering the Transfer Station at Southwood Skip Hire is being reviewed in the light of ongoing development for sorting and recycling and to bring the licence up to the current standard for environmental monitoring.

The National Waste Production Survey took place between October 1998 and April 1999 and involved 20000 companies nationwide. In the North Wessex Area 368 companies were visited, of which 19 were in the Brue and Axe LEAP Area. Data was collected from companies across a variety of industrial and commercial sectors on the amounts and types of wastes produced and how it was managed. The data collected by the Survey will be used in the production of a statutory National Waste Strategy, due to be published in 2000.

We are currently working with Mendip and Sedgemoor District Councils in respect of the forthcoming Contaminated Land Regulations, due in December 1999, regarding the identification of contaminated land and Special Sites within the Brue and Axe Area. Contaminated land is the responsibility of the local authority and is defined as any land which appears to a local authority to be in such a condition – because of the substances it contains- that water pollution or significant harm is being, or is likely to be, caused. Special Sites will be the responsibility of the Environment Agency and are sites where there is a risk of the contamination causing serious harm or serious pollution to controlled waters.

Provision of advice and guidance to local groups, on waste minimisation is ongoing. The household waste recycling rate for the county of Somerset stood at 13.64% for 1998/99, working towards the Government's target of 25% by year 2000 – ref -. *Making Waste Work, Government's White Paper*. We are currently involved in investigating the establishment of a cross-functional forum for Somerset, in partnership with County, District and Non Government Organisations to promote a holistic approach to environmental issues, to specifically include business environmental management and conservation programmes. Area staff, in contribution to the Agency's top ten target regarding waste minimisation, helped four North Wessex companies make substantial savings through reduction and minimisation of waste.

As a requirement of Waste Management Licence conditions we receive data from site operators relating to the amount of waste each site has managed in a set period, usually quarterly. This data is amalgamated to provide statistics on how much waste is being managed at licensed sites within a particular area, district or county. These statistics can then be used for planning purposes in the production of the Agency's own Strategic Waste Advisory Bodies and advising local authorities about the provision of land and resources for waste management. The Agency's South West Region is currently writing a Regional Waste Management Report about the amounts and types of waste managed in the region, including the 65,000 tonnes of waste managed at licensed sites in the Brue and Axe Area in the year 1998/99.

The Producer Responsibility Obligations (Packaging Waste) Regulations place an obligation to recycle and recover certain amount of packaging on those companies that supply more than 50 tonnes of packaging per annum and have an annual turnover greater than £5million. Proof of recycling and recovery is required by the Agency and can be provided by an Accredited Reprocessor (a company that is voluntarily registered with the Agency and has had the process of packaging, recycling and recovery checked by the Agency). In 1998 there were 8 registered producers and one Accredited Reprocessor in the Brue and Axe Area. Nationally the number of registrations is set to double in 2000 as, according to the current Regulations, the financial threshold will be £1million.

3.9 Somerset Levels and Moors

Somerset Levels and Moors Water Level Management Strategy Review - The steering group of representatives from interested bodies produced a draft action plan from responses to public consultation during 1998. The draft Action Plan went out to consultation early 1999, and a final document with widespread support will be launched in the autumn. The Action Plan runs to 2004, and allows for annual reviews of progress. Implementation of some actions has commenced, but others will be dependent on funding, for which the Action Plan will be a bidding document.

Review of Flood Defence Practices – An eagerly anticipated action from the Water Level Management Strategy. A scoping report covering current practices and their purpose and justification will be sent to interested bodies in July 99. On receipt of responses, there will then follow a period of investigation of suggested changes and options, which will lead to a programme of further work.

3.10 Integrated Pollution Control

Two sites which have IPC authorisations in the plan area are the Royal Ordnance Factory at Puriton and St Cuthberts Paper Mill at Wells.

The continued self monitoring of the Royal Ordnance Factory and reporting of the final effluent quality has confirmed that the reedbed system is now acclimatised and typically oxidises 40-75% of the chemical oxygen demand. The control of pH level has been maintained within limits. There have been some issues due to shock loads, mainly of acetic acid, but the Operator is able to put the reedbed onto full recycle if needed and this has helped to control this within authorised limits.

St Cuthberts Paper Mill is likely to come under the new Integrated Pollution Prevention and Control (IPPC) regime and a dialogue with the owners about the necessary application during the financial year 2000 has commenced.

3.11 Air Quality

The Agency is co-operating with the local authorities in the catchment as they carry out their responsibilities under the Air Quality Regulations 1997 to investigate pollutants of concern that may have a significant impact on air quality, where these pollutants are released from industrial processes regulated by the Agency.

The first stage, to identify sites and pollutants associated with them has been carried out by all the district councils concerned and reports have been published for public consultation to which the Agency responded. In general the largest negative influence on air quality in this catchment is not industrial processes but transport activities.

However two industrial process sites have been identified where the second stage, to carry out limited local monitoring, is indicated, and at a third site, where there is some specific monitoring is being carried out for a new process. The results of each survey will be published.

Royal Ordnance, Puriton

There is a significant source of oxides of nitrogen (NO_x) on this large site and Sedgemoor District Council is carrying out local air quality monitoring for NO_x during summer 1999.

Hanson Aggregates, Cheddar

The lime process at this site is a significant source of particulate matter, i.e. dust, and this release includes particles less than 10 microns in size (PM 10). In order to quantify this, the Agency had the release monitored for PM 10 during May 1999, as part of a National survey. The levels found were fairly low at an average of 3.1 milligrams per cubic metre, equivalent to only about 10% of the total dust released from the lime kiln. The Agency intends to carry out air dispersion modeling of this release.

Deposition gauge monitoring is carried out around this site by Somerset County Council and has shown declining levels of dust over the past years, reflecting improvements made by the Operators during this time.

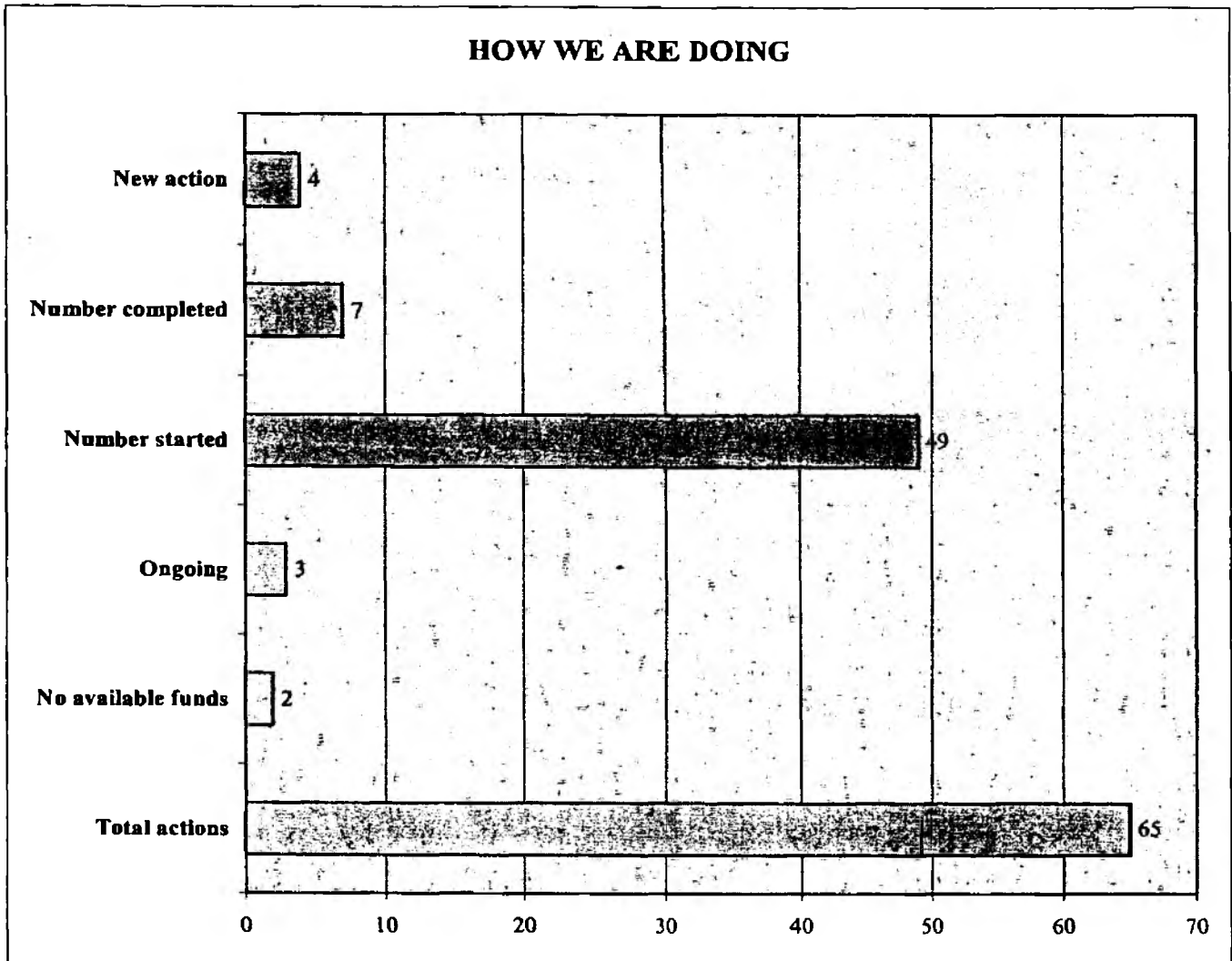
Bronzeoak Thermal Processing, Castle Cary

This new animal carcass incineration process is located on the southern boundary of the catchment, adjacent to the Parrett catchment. It began operating in January 1999 and has experienced significant complaints and problems in complying with its authorised limits for releases to air.

By arrangement with the Agency, South Somerset District Council are carrying out air quality monitoring for sulphur dioxide and oxides of nitrogen in the immediate locality of the site, commencing in June 1999, for an initial period of three months.

3.12 How we are doing

This chart is a breakdown of our progress with the actions from the publication of the Action Plan in March 1998 until the end of June 1999.



Some actions are ones we will carry out every year and so will never be completed. We will however report progress on the results of these actions.

4. Action Plan Monitoring Report

The following tables indicate progress on specific actions. The costs shown are estimated and are 3k i.e. in thousands of pounds. For a fuller account of the issues please see the River Brue and Axe Action Plan (March 1998) and for more general supporting information about the catchment please see the River Brue and Axe Consultation Report (July 1997).

Action Plan Monitoring Report Brue & Axe

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
Securing future public water supplies...									
5.1.1. Manage Demand - We will work with the water companies to identify any problems meeting demands in Resource Zone and consider viable solutions.	Agency, Bristol Water Wessex Water	○	○	⊙	⊙	⊙	⊙	0.5	Through the Water Resource Plan process any potential deficits in available water have been identified between 2000 and 2025. Where there are deficits the relevant company and the Agency are working together in order to find a solution be it through managing the demand for water, making best use of the available resources and/ or developing a new resource. The Agency has published it's view on all water company plans in 'Planning Public Water Supplies'. Both Bristol Water Company's and Wessex Water Services Ltd's plans were accepted by the Agency as being suitable to address the water supply situation within the company supply area including the Brue and Axe LEAP area.
Securing future public water supplies...									
5.1.2. Manage Demand - We will monitor and encourage implementation of water company efficiency plans.		○	○	⊙	⊙	⊙	⊙	0.5	Both companies have been working toward water conservation initiatives over the past year. Bristol Water have advertised both gardening and domestic water use conservation tips as well as promoting the use of a one litre plastic bottle in the toilet cistern as a way of reducing the amount of water used in the flush through their 'Have you got the Bottle?' campaign. Both Bristol Water and Wessex Water have been offering water butts at subsidised prices throughout their supply areas. Amongst other initiatives Wessex Water have an education officer who works across their region as well as a number of education centres, the nearest to the Brue and Axe LEAP area is at Ashford, which is in the neighbouring River Parrett LEAP area.

Issues and Actions	Resp Body	97 98 99 00 01 02	Cost	Progress
Securing future public water supplies...				
5.1.3. Manage Resources - We will encourage the companies to actively reduce leakage to economic levels.	Agency, Bristol Water, Wessex Water	○ ○ ● ● ● ●	0.5	Bristol Water met their target for 1997/98 publishing a leakage figure of 59.3 Million Litres a day (M/d). They have now been set a new target by OfWat of 54.8 M/d to meet by March 2000. Wessex Water's new target for March 2000 is 89.0 M/d. Their actual leakage figure for 1997/98 was 109.8 M/d which was below the target for that year. Leakage and water efficiency figures for 1998/99 will be released by OfWat at the end of July 1999 but not formally published until the end of the year.
Securing future public water supplies...				
5.1.4. Manage Resources - We will encourage the joint use of sources in order to increase the amount of water deliverable without requiring physical development of new sources.	Agency, Bristol Water, WWSL, other water co.s	○ ○ ● ● ● ●	0.5	Both Bristol Water and Wessex Water operate a combination of abstraction from rivers, boreholes and reservoirs from within their area. In addition to this the Agency supports the principle of transfers of water between companies where it is a feasible use of a resource, this is a view which is shared by Government as indicated in their publication 'Maintaining Water Supplies'. There are a number of transfers of water between Bristol Water and Wessex Water of varying sizes, two of the smaller ones are located in the south of the Brue and Axe LEAP area.
Securing future public water supplies...				
5.1.5. Work with water supply companies to prioritise expenditure on water resource management and development. Ensure Agency's demand management targets are met.	Agency, Bristol Water, Wessex Water	○ ○ ● ● ● ●	0.5	The Water Resource Plan process requires companies to establish a list of potential future resource options be they to manage demand, manage resources or develop new resources. In doing this they are required to undertake an environmental and social cost benefit analysis for each option and in most cases this is used for initial ranking of the schemes. Whilst the Agency is working closely with the water companies on water efficiency and demand management promotion it has as yet not been possible to set hard targets for the companies to meet on many areas of demand management due to the impracticability of measuring the effect of measures such as advertising campaigns and education. The Agency is satisfied with the companies' progress so far and will continue to work with them and move toward being able to set appropriate targets in the future.

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
Maintaining and enhancing biodiversity...									
6.1.1. Following advice from English Nature (EN) review current abstraction licences and consents to discharge in relation to SPA/RAMSAR/pSAC designations as required by the EC Habitats' Directive. The review will consider the inclusion of nutrients as part of discharge consents.	Agency, EN, holders of authorisations	○	○	●	○	○	○	50	Programmed in the Action Plan in 8.1.2 for 2001. Some work is being undertaken to identify relevant licenses and produce a nutrient balance this year.
Maintaining and enhancing biodiversity...									
6.1.2. Rhynes and ditches (and associated species of plants and invertebrates). In the light of earlier survey work (1994) develop a revised programme to monitor water quality and biological conditions in SSSIs to investigate causes of eutrophication and duckweed blooms.	Agency, EN	○	○	●	○	○	○	5	The WQ monitoring programme will investigate two SSSIs in detail - West Sedgemoor and Curry/Hay Moor SSSI (neither of which are in this catchment) By concentrating on a reduced number of sites and monitoring more intensively, it is hoped to develop a more detailed understanding of influences on WQ and apply this to the Brue and Axe catchment.
Maintaining and enhancing biodiversity...									
6.1.3. Fen meadows and raised mire communities. Continue national programme to reduce emissions of sulphur and nitrogen oxides from major power plants and thereby reduce pollution from fallouts onto these sites. See Section 11.	Agency, National Power see Section 11	○	○	●	○	○	○	1	There are no major power plants within the catchment. Emissions of sulphur nationally are decreasing. The Hull and Edinburgh Universities Critical Loads Advisory Group - Soils Sub Group have computer modelled sulphur depositions and predict that by 2005 it will be reduced to one fifth of 1995 levels. Report on progress against National Targets required.
Maintaining and enhancing biodiversity...									
6.1.4. We are continuing to contribute to the development of WLMPs within the Brue and Axe Catchment. We will review the programme of implementation in 1999/00.	Agency, IDB, landowners see 8.1.3	○	○	●	○	○	○	0.5	First contributions completed by 12/98, i.e. Tealham & Tadham, Chilton Moors et al, Mark Yeo, U.Axe Drainage Board, and Westhay Moor. We will continue liaison with IDB's over water level issues. We are following MAFF guidelines for completion of the programme which is currently under review.
Maintaining and enhancing biodiversity...									
6.1.5. Lowland wet grassland. Implement the Somerset Levels & Moors Water Level Management Conservation Strategy.	Agency, IDBs, landowners, EN, MAFF see 8.1.2	○	○	●	○	○	○	0	This action is the same as 8.1.2 and so will be dropped.
Maintaining and enhancing biodiversity...									
6.1.6. Help to promote reedbed creation together with others e.g. Avalon Marshes through the provision of technical advice.	Agency	○	○	●	○	○	○	0.4	We have contributed technical advice and appropriate authorisations to those who are creating reedbeds at Ham Wall and Shapwick Heath. Work is continuing at these sites. Ham Wall will, when complete, be the seventh largest reedbed in the UK.

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
Maintaining and enhancing biodiversity...									
6.1.7. Tufa depositing springs and headwater streams. Survey to assess value and develop conservation strategy.	Agency, SERC, SWT	○	○	●	○	○	○	2	SERC have undertaken field survey work and are producing a report on the Tufa springs in the Polden and Mendip Hills. A conservation strategy (collaborative action) will be drawn up on receipt of the report.
Maintaining and enhancing biodiversity...									
6.1.8. Water-voles - Increase our knowledge of distribution, in partnership with others	Agency, WTs, Record Centres, Hawk and Owl Trust	○	○	●	○	○	○	0.5	We currently lack the resources to finance systematic survey work and are therefore concentrating on known or new sites e.g. Huntspill NNR in conjunction with Hawk and Owl Trust. We are changing grassland management practices to increase the amount of suitable habitat. The Trust are monitoring the impact of the changes.
Maintaining and enhancing biodiversity...									
6.1.9. Otters - Develop partnership to monitor otter populations and enhance habitats and take steps to reduce road deaths.	Agency, SWT	○	○	●	●	●	●	0.5	Work with Somerset Otter Group, and a PhD Student who is carrying out DNA analysis of spraint to enable the characterisation of individuals and estimation of population.
Maintaining and enhancing biodiversity...									
6.1.10. Otters - Collect carcasses of otter road casualties and send for tissue analysis.	Agency	○	○	●	●	●	●	3	This is a long term commitment.
Maintaining and enhancing biodiversity...									
6.1.11. Barn owls - Extend scheme to provide nest boxes and manage habitat to encourage voles on Agency owned land e.g. Huntspill and South Drain.	Agency, Hawk and Owl Trust, IDBs	○	○	●	○	○	○	2	Huntspill C & R Management plan includes alterations to grass land management to favour short tailed field voles and Barn Owls. We will develop plans for the South Drain corridor in conjunction with English Nature.
Maintaining and enhancing biodiversity...									
6.1.12. Barn owls - Explore the possibility of developing, in partnership with others, corridors with long grass suitable for linking existing owl populations.	Agency, Hawk and Owl Trust, IDBs	○	○	●	○	○	○	0.5	See 6.1.11. Links to review of flood defence practices, particularly bank flailing.
Maintaining and enhancing biodiversity...									
6.1.13. Native crayfish - Continue to support survey work, particularly within the Alham catchment to enable the formulation and implementation of a conservation strategy.	Agency, SERC	○	○	●	●	●	●	1	A population of native crayfish has been identified in the Alham catchment. There is a collaborative project between the Agency and English Nature to protect and enhance this isolated population in two small ponds.

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
Eel and elver fishery...									
7.1.1. Implement recommendations of Barriers to Migration survey	Agency	○	○	●	●	●	●	0.5	Knowledge and understanding of the biology and ecology of the European eel is still relatively low compared to many other fish species. Physical barriers to their migration into and along rivers is one of several factors that may limit or influence eel numbers in inland waterways. We are aware of potential migration barriers within the Axe and Brue catchment, many other factors may influence eel populations which are not fully known. Modifying barriers to migration, if considered necessary, will be considered as a management option.
Eels and elver fishery...									
7.1.2. Assessment of adult stock in routine fisheries surveys.	Agency	○	○	●	●	●	●	0.5	see 7.1.1; 7.1.3 and 7.1.4
Eel and elver fishery...									
7.1.3. Research and Development - eel and elver stocks in England and Wales, their status and management.	Agency, MAFF	○	○	●	○	○	○	50	See 7.1.1; 7.1.2 and 7.1.4
Eel and elver fishery...									
7.1.4. Complete National review of licence duties eels and elvers.	Agency	○	○	●	○	○	○	0.5	See 7.1.1; 7.1.2 and 7.1.3
Eel and elver fishery...									
7.1.5. Continue liaison with police and parish councils.	Agency	○	○	●	●	●	●	0.5	There are several seasonal issues relating to elver fishing that can impact on local communities which are outside of the Agency's jurisdiction. We will continue to liaise with the police and parish councils in the affected areas.
Eel and elver fishery...									
7.1.6. As consultee contribute to Government Review of Fisheries Legislation.	Agency	○	○	●	○	○	○	0.5	The Review Group appointed by the Government has throughout 1998/99 been receiving evidence on a whole range of issues relating to Fisheries and their management. Eels specifically have been considered along with other fish species groupings and the Agency nationally submitted evidence to the review along with other interested parties. The group will produce a report and make recommendations later in the year. The outcome and recommendations are not known at this stage.
Water level management on the Levels and Moors...									
8.1.1. Review the Somerset Levels and Moors Water Level Management Strategy (consultation period 2 February - 5 May)	Agency	○	○	●	○	○	○	5	Action plan ready for finalising. Launch planned for Autumn 1999.

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
Water level management on the Levels and Moors, including the need for improvements to lowland wet grassland....									
8.1.2. Implement agreed actions from the review of the Somerset Levels and Moors Strategy	Agency, EN, SCC, NFU, RSPB, FRCA, IDB's, LAMP	○	○	●	○	○	○	1.75	Launch planned for Autumn 1999. £350K funding identified for 99/00. £200K shortfall to be sought.
Water level management on the Levels and Moors...									
8.1.3. Review control of penning structures, summer and winter water levels, and the operation of the summer supply network, through our role in contributing to the development of WLMPs for SSSIs.	Agency, IDBs	○	○	●	○	○	○	0.5	As 6.1.4
Water level management on the Levels and Moors...									
8.1.4. Draw up Memoranda of Understanding with other users such as public water suppliers, IDB and conservation bodies to secure wise use of resources through our role in the development of WLMPs.	Agency, IDBs, SWT, EN, RSPB, Bristol Water, WWSL	○	○	●	○	○	○	0	Agreement on water use on the Levels and Moors will be part of the water level management plan process. No MOU's will be produced. This action is completed and will be removed.
Water level management on the Levels and Moors...									
8.1.5. In partnership with others explore the feasibility of creating additional storage volume to provide more summer irrigation water.	Agency, IDB, landowners, conservation bodies	○	○	●	○	○	○	0	This will be considered as part of Water Level Management Plan's. See Somerset Levels & Moors Water Level Management Strategy Review Action Plan, actions 6.1; 6.2 and 6.3
Water level management on the Levels and Moors...									
8.1.6. Review modifications to the structure of Bleadon sluice together with a review of the conditions attached to the Bristol Water licence.	Agency	○	○	●	○	○	○	0.5	The first part of this action will be considered during the capital improvements works to the sluice which is currently programmed for 2005. A review of the operating conditions will be discussed with Bristol Water.
Water level management on the Levels and Moors...									
8.1.7. Consider the feasibility of developing drought contingency plans to safeguard water-related nature conservation sites.	Agency	○	○	●	○	○	○	0.5	This has been incorporated into the Somerset Levels and Moors Water Level Management Strategy Review. See actions 6.1; 6.2 and 6.3.
The impact of river canalization and maintenance...									
8.2.1. Examine current weed removal practices to reduce risk of fish kills, to ensure compliance with EC Freshwater Fish Directive, and provide benefits for wildlife conservation.	Agency	○	○	●	○	○	○	4	This will be considered as part of the 'Review of Flood Defence Practices' which is currently in progress and should be completed by autumn 99.
The impact of river canalization and maintenance...									
8.2.2. In consultation with landowners and farmers, explore tree planting opportunities in appropriate places to provide shade and reduce the need for aquatic weed cutting.	Agency	○	○	●	○	○	○	3	No progress.
Eutrophication...									
8.3.1. Promote the creation of buffer strips to take up excess fertiliser runoff (a booklet is available).	Agency, MAFF, FWAG, EN	○	○	●	○	○	○	1	In our regulatory activities we recommend the use of buffer strips where appropriate, e.g. applications to spread fertilising waste to land.

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
Eutrophication...									
8.3.2. Rhynes and ditches (and associated species of plants and invertebrates). In the light of earlier survey work (1994) develop a revised programme to monitor water quality and biological conditions to SSSIs to investigate causes of eutrophication and duckweed blooms. (see 6.1.2).	Agency	○	○	●	○	○	○	0	See 6.1.2.
Eutrophication...									
8.3.3. Introduce WQ monitoring for the SPA/RAMSAR sites to ensure they are maintained in a favourable conservation status.	Agency	○	○	●	○	○	○	0.5	See 6.1.1. review of consents affecting Habitats Directive sites.
Use of Environment Agency controlled land and water...									
8.4.1. Implement Huntspill Conservation and Recreation Management Plan.	Agency, EN	○	○	●	●	○	○	0.5	Plan launched; grassland management altered; programme of bankside enhancements continuing, but dependent on resources.
Use of Environment Agency controlled land and water...									
8.4.2. Produce a Conservation and Recreation Management Plan for the South Drain.	Agency	○	○	●	○	○	○	3	No progress to date.
Use of Environment Agency controlled land and water...									
8.4.3. Investigate feasibility of developing canoe access where appropriate.	Agency, BCU	○	○	●	●	●	○	0.5	Access agreement to the River Huntspill has been agreed with the Local BCU. We will undertake a conservation and recreation assessment of all Agency owned land to identify potential sites for improving public access for recreational purposes.
Use of Environment Agency controlled land and water...									
8.4.4. Continue to support access/transport funding to Somerset Environmental Education Forum for schools to access sites of "hands on" environmental learning. ("Big Green Bus").	Agency	○	○	●	○	○	○	0	Contribution was made in 1998. Since that date talks have been given and will continue to be given, but there are very limited funds for this action.
The impact of peat extraction...									
8.5.1. Enter discussions with peat industry and conservation groups with a view to reducing impact of peat extraction.	Agency, peat industry, conservation groups	○	○	●	○	○	○	0.5	We have jointly funded a study with EN on optimum water level management for peat soils/archaeological remains.
The impact of agriculture...									
8.6.1. Investigate farm inputs to the North Drain	Agency	○	○	●	○	○	○	3	28 farms in North Drain catchment visited in a farm campaign. Variety of advice given and this will be followed up in the coming year.
The impact of agriculture...									
8.6.2. Continue with farm visit campaign on the River Alham	Agency	○	○	●	●	○	○	3	All farms on the Alham have been visited, but quality of the lower stretches of the river is still poor. This needs further work in 1999/2000.

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
The impact of agriculture...									
8.6.3. Implement the findings of MAFF's R&D on nitrogen inputs to groundwater from outdoor pigs.	MAFF, Agency	○	○	●	○	○	○	0.5	MAFF has not yet published its Code of Good Practice for outdoor pig rearing. Little has been done on this but it is not seen as a major problem.
The impact of agriculture...									
8.6.4. Implement the Somerset Levels & Moors Water Level Management Strategy. (see 8.1.1).	Agency, EN, LAMP, SCC, IDBs, NFU, CLA, RSPB	○	○	●	●	○	○	1.75	See action 8.1.2
The impact of agriculture...									
8.6.5. Work to establish water level management which sustains the hydrological integrity of peat soils so as to avoid wastage and shrinkage taking into account recommendations in the Silsoe College R&D Report produced for English Nature (EN) in 1997 when contributing to the production of Water Level Management Plans. (See 8.1.1).	Agency, EN, farmers, FWAG	○	○	●	○	○	○	100	None. This is one of the actions to be implemented under 8.1.2. Sites at risk to be identified this year, research to be established 2001-2002.
The impact of sewage treatment works...									
8.7.1. Shepton Mallet - continue to monitor the performance of the STW and its impact on water quality in the River Sheppey.	WWSL, Agency	○	○	●	●	●	●	10	Shepton Mallet STW exceeded its consent conditions in 1998/99. The Agency is currently considering enforcement action against Wessex Water for non-compliance. We expect improvements to Shepton Mallet STW to be carried out in AMP3. Wessex are progressing the appraisal work to plan the work required to meet the new conditions. These include improvements to the storm sewer overflow in order to meet requirements of the Urban Waste Water Treatment Directive (UWWTD) and improve sewage treatment in order to improve the water quality downstream of the works.
The impact of sewerage treatment works...									
8.7.2. Wells - assess water quality data from the new monitoring locations on the Keward Brook in order to gauge the impact of Wells STW on downstream water quality.	Agency	○	○	●	●	●	○	0.3	New monitoring location is more representative of water quality in the Keward Brook, both above and below Wells STW.
The impact of septic tanks and soakaways...									
8.8.1. Identify problematic septic tank discharges particularly those discharging to SSSIs. Through negotiation and legislative powers where necessary, ensure that owners improve the discharge.	Agency, owners	○	○	●	○	○	○	4	We continue to seek to resolve inadequate septic tank drainage where it impacts on water quality. This work is ongoing.
The impact of septic tanks and soakaways...									
8.8.2. Investigate and report on septic tank/package plant impact in support of first time sewerage schemes	Agency	○	○	●	○	○	○	2.5	Report produced indicating area of concern where sewerage system not in place. This will be used to target resources in 1999/2000.

Issues and Actions	Resp Body	97 98 99 00 01 02	Cost	Progress
The impact of abandoned lead mines...				
8.9.1. Review the environmental consequences of disturbing and disposing of river silts.	Agency	○ ○ ● ○ ○ ○ ○	0.4	Study undertaken by Southampton University and now completed. The results confirmed that the silts contained high levels of lead which if disturbed could have environmental consequences on the biodiversity of the river.
Unknown causes of water quality standards non-compliance...				
8.10.1. Investigate causes of non-compliance and take appropriate action.	Agency	○ ○ ● ○ ○ ○ ○	16	Data review is underway. Action on the ground will follow in Summer and Autumn 1999.
Unknown causes of water quality standards non-compliance...				
8.10.2. Investigate reports of inadequate water quality for Bristol Water's Brinscombe abstraction and if required take appropriate action. Costs shown = investigation only.	Agency	○ ○ ● ○ ○ ○ ○	2	The investigation has been completed and found no significant point source of poor water quality. However, diffuse sources may contribute to a slight decline in quality during wet, winter months.
Waste management...				
10.1.1. Survey waste arisings in the Region (including this catchment) to provide a basis for waste planning and we will feed into a National Waste Strategy Report during 1999.	Agency	○ ○ ● ○ ○ ○ ○	3.8	We have contributed to the National Waste Production Survey by collecting data in this area. This data will be used in the production of a statutory National Waste Strategy, due to be published in 2000.
Waste management...				
10.1.2. Advise waste disposal and planning authorities and local industry on the best practice for waste reduction and disposal. Collect, collate and provide relevant data for waste planning purposes, such as local authority Waste Local Plans and Waste Strategies and the Agency's own Strategic Waste Management Assessments and Regional Waste Management Reports.	Agency	○ ○ ● ● ● ● ●	120	All data relating to waste managed licensed sites in 1998/9 has been collected and put towards the Regional Waste Management Report.
The impact of the Royal Ordnance factory...				
11.1.1. Continue monitoring the effluent quality to ensure the problem of acidity will not allow an unexpected return to the safety hazard that existed in the early 1990s and before.	Agency	○ ○ ● ○ ○ ○ ○	0.5	A treatment plant has been constructed to overcome acidity. Monitoring is still carried out on a weekly basis to ensure that the plant continues to work effectively.
The impact of St Cuthberts Paper Mill...				
11.2.1. Continue the programme to remove product in paper production which causes high ammonia	Mill operator	○ ○ ● ○ ○ ○ ○	0	Final report on monitoring of St Cuthberts effluent and its impact on the River Axe was produced in March 1999. Effluent quality has improved substantially and is well below consented ammonia concentration limits. Effluent quality discharged by the Mill has improved in the last two year. The discharge can still have a significant impact on the ammonia concentration and temperature of the Axe. The temperature impact will probably be investigated in further detail later this summer.

Issues and Actions	Resp Body	97	98	99	00	01	02	Cost	Progress
The impact of St Cuthberts Paper Mill...									
11.2.2. Monitor the recently improved biological treatment of effluent to ensure consent compliance.	Agency	○	○	●	○	○	○	1	Monitoring is performed by the Mill Company, since the consent required self monitoring. Returns of data to the Agency indicate improved management and treatment of effluent.
The impact of St Cuthberts Paper Mill...									
11.2.3. The effluent recirculation trials at the mill have now been completed. An application for a variation to the existing consent has been submitted, and is currently under consideration.	Mill operator, Agency to monitor	○	○	●	○	○	○	0.3	The revised consent was issued on 8 April 1998.
The impact of St Cuthberts Paper Mill...									
11.2.4. Assess the impact of the effect on the River Axe.	Agency	○	○	●	○	○	○	5	Following issue of load based consent for ammonia discharge the quality of the River Axe downstream of the Mill has improved. Monitoring will continue to ensure this improvement is maintained.
Phytophthora...									
7.16.1. To establish the extent of the problem, we will survey the alders of the Upper Bristol Avon catchment.	Agency	○	●	●	○	○	○	2.5	
Waste Management..									
10.1.3. Implement and enforce the Producer Responsibility Obligations (Packaging Regulations)	Agency	○	○	●	●	●	●	210	We are continuing to give advice to companies on the implications of the Regulations.
Securing future public water supplies...									
5.1.6. Revise the Regional Water Resources Strategy including use of information received in the Water Companies Water Resources Plans. This action will be completed by the Agency in December 2000.	Agency	○	○	●	●	○	○	0	This is a new action. Work is ongoing toward meeting this target.
Impact of low flows on the river Sheppey...									
10.1.4. Investigate causes for the river Sheppey going dry in a reach upstream of Shepton Mallett	Agency	○	○	●	●	○	○	2	New Action
Impact of low flows upstream of Shepton Mallett...									
11.2.5. We will investigate causes for the river Sheppey going dry in a reach upstream of Shepton Mallett.	Agency	○	○	●	●	○	○	2	New Action
Protection of the depressed river mussel...									
11.2.6. We will seek funds to determine the distribution of the depressed river mussel in the River Parrett, Tone and Brue and Axe plan areas. We will investigate the different types of management techniques that may influence the distribution and population size of the depressed river mussel.	Agency	○	○	●	●	○	○	0.5	New Action

Issues and Actions	Resp Body	97 98 99 00 01 02	Cost	Progress
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Promoting recreation activities on the Levels and Moors...

<p>11.2.7. We will use our local knowledge of watercourses on the Levels and Moors to assess potential circular routes for canoeists. We will need to examine constraints and assess likely costs associated with any problems. When we have identified a route or routes we will need to collaborate with others to progress any ideas.</p>	Agency	<input type="radio"/> <input type="radio"/> <input checked="" type="radio"/> <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/>	0.5	New Action
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5. Appendices

5.1 Duties, powers and interests of the 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 the Agency's work is advisory, with the relevant powers resting with other bodies such as local planning authorities. The following table therefore summaries the Agency's 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
<p>Water Resources The Agency has a duty to conserve, redistribute, augment and secure the proper use of water resources.</p>	<ul style="list-style-type: none"> • Grant or vary water abstraction and impoundment licences on application. • Revoke or vary existing licences to reinstate flows or levels to surface waters or groundwater which have become depleted as a result of abstraction, and are subject to a liability for compensation. • Serve Conservation Notices (S30) on Minerals Operators to control the process of dewatering in quarries. 	<ul style="list-style-type: none"> • 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. • Negotiating S106 Agreements (of the Town and Country Planning Act 1990) that afford protections to the water environment. 	<ul style="list-style-type: none"> • The Agency is committed to water-demand management and will work closely with water companies and developers, local authorities and relevant organisations to promote the efficient use of water. • The Agency acknowledges that new resources may be needed in the future and supports a twin-track approach of planning for water resource development alongside the promotion of demand-management measures. • The Agency seeks to influence planning decisions for new development by encouraging the inclusion of water conservation measures in new properties, particularly in areas where water resources are under stress, and by ensuring that planning authorities allow for the lead time for resource development. • Negotiating S106 Agreements that afford protections to the water environment.

Agency Duty	The Agency has powers to:	The Agency has an Interest (but no powers) In :	Partnership
<p>Flood Defence The Agency has a duty to exercise general supervision over all matters relating to flood defence throughout each catchment.</p>	<ul style="list-style-type: none"> • 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 to the public, local authorities and the police relating to main rivers. • Consent mineral working within 16 m of main rivers. • Monitor activities of the Internal Drainage Boards 	<ul style="list-style-type: none"> • Granting of planning permission throughout a catchment 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. 	<ul style="list-style-type: none"> • 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.
<p>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.</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The Agency will liaise with local authorities, developers, the Highways Agency, industry and agriculture to promote pollution prevention and the adoption of source control measures. As a statutory consultee on planning applications, the Agency will advise local planning authorities on the water quality impact of proposed developments.
<p>Air Quality The Agency has a duty to implement Part 1 of the Environment Protection Act 1990.</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The vast number of smaller industrial processes which are controlled by local authorities. • Control over vehicular emissions and transport planning. 	<ul style="list-style-type: none"> • 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.

Agency Duty	The Agency has powers to:	The Agency has an Interest (but no powers) in :	Partnership
<p>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.</p>	<ul style="list-style-type: none"> • To issue certificates to users of radioactive materials and disposers of radioactive waste, with an overall objective of protecting members of the public. 	<ul style="list-style-type: none"> • The health effects of radiation. 	<ul style="list-style-type: none"> • 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 MAFF 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 (NII) to ensure adequate protection of workers and the public at nuclear sites. The Agency will work with the HSE on worker protection issues at non-nuclear sites.
<p>Waste Management The Agency has a duty to regulate the management of waste, including the treatment, storage, transport and disposal of controlled waste, to prevent pollution of the environment, harm to public health or detriment to local amenities.</p>	<ul style="list-style-type: none"> • Vary waste management licence conditions. • Suspend and revoke licences. • Investigate and prosecute illegal waste management operations. 	<ul style="list-style-type: none"> • The siting and granting of planning permission for waste management facilities. This is conducted by the waste industry and local planning authorities. The Agency, as a statutory consultee on planning applications, can advise on such matters. 	<ul style="list-style-type: none"> • The Agency will work with waste producers, the waste management industry and local authorities to reduce the amount of waste produced, increase re-use and recycling and improve standards of disposal.
<p>Contaminated Land The Agency has a duty to develop an integrated approach to the prevention and control of land contamination, ensuring that remediation is proportionate to risks and cost-effective in terms of the economy and environment.</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Securing with others, including local authorities, landowners and developers, the safe remediation of contaminated land. 	<ul style="list-style-type: none"> • The Agency supports land remediation and will promote this with developers and local authorities and other stakeholders.
<p>Conservation The Agency will further conservation, wherever possible, when carrying out water management functions; have regard to conservation when carrying out pollution control functions; and promote the conservation of flora and fauna which are dependent on an aquatic environment.</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • 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 forty-one species and four habitats. 	<ul style="list-style-type: none"> • 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.

Agency Duty	The Agency has powers to:	The Agency has an interest (but no powers) in :	Partnership
<p>Landscape The Agency will further landscape conservation and enhancement when carrying out water management functions; have regard to the landscape when carrying out pollution control functions; and promote the conservation and enhancement of the natural beauty of rivers and associated land.</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The landscape impact of new development, particularly within river corridors. This is controlled by local planning authorities. 	<ul style="list-style-type: none"> • The Agency produces River Landscape Assessments and Design Guidelines which it uses when working with local authorities and developers to conserve and enhance diverse river landscapes.
<p>Archaeology The Agency has a duty to consider the impact of all of its regulatory, operational and advising activities upon archaeology and heritage, and implement mitigation and enhancement measures where appropriate.</p>	<ul style="list-style-type: none"> • The Agency must promote its archaeological objectives through the exercise of its water management and pollution control powers and duties. 	<ul style="list-style-type: none"> • Direct protection or management of sites of archaeological or heritage interest. This is carried out by local planning authorities, County Archaeologists and English Heritage. 	<ul style="list-style-type: none"> • The Agency will liaise with those organisations which have direct control over archaeological and heritage issues to assist in the conservation and enhancement of these interests.
<p>Fisheries The Agency has a duty to maintain, improve and develop salmon, trout, freshwater and eel fisheries.</p>	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • The determination of planning applications which could affect fisheries. 	<ul style="list-style-type: none"> • Many development schemes have significant implications for fisheries. The Agency will work with anglers, riparian owners, developers and local authorities to protect fisheries.
<p>Recreation The Agency has a duty to promote rivers and water space for recreational use.</p>	<ul style="list-style-type: none"> • The Agency contributes towards its recreation duty through the exercise of its statutory powers and duties in water management. 	<ul style="list-style-type: none"> • Promotion of water sports. This is carried out by the Sports Council and other sports bodies. 	<ul style="list-style-type: none"> • The Agency will work with the Countryside Agency, the Sports Council, British Waterways and other recreational and amenity organisations to optimise recreational use of the water environment.

5.2 Glossary of Terms and Abbreviations

AMP	Asset Management Plan
AONB	Area of Outstanding Natural Beauty, designated by the Countryside Commission to conserve and enhance the natural beauty of the landscape, mainly through planning controls
BAP	Biodiversity Action Plan
BCU	British Canoe Union
CSO	Combined Sewer Overflow
DETR	Department of the Environment, Transport and the Regions
DLAP	Draft Local Action Plan
EC	European Community
EN	English Nature
ESA	Environmentally Sensitive Area
FDMS	Flood Defence Management System
FWAG	Farming and Wildlife Advisory Group
HMIP	Her Majesty's Inspectorate of Pollution, the former regulatory authority for IPC, and now part of the Environment Agency
IDB	Internal Drainage Board
IPC	Integrated Pollution Control, a system introduced to control pollution from industrial processes which could cause significant pollution to air, land and water
LEAP	Local Environment Agency Plan
LPA	Local Planning Authority
MAFF	Ministry of Agriculture, Fisheries and Food
NFU	National Farmers Union
NGO	Non Governmental Organisations
NRA	National Rivers Authority
OFWAT	Office of Water Services, the government regulatory agency for the water industry
R&D	Research and Development
RQO	River Quality Objective
RWLA	Raised Water Level Areas
SBG	Somerset Butterfly Group
SCC	Somerset County Council
SERC	Somerset Environmental Records Centre
SLA	Special Landscape Area
SSSI	Site of Special Scientific Interest of national importance designated under the Wildlife and Countryside Act 1981. Habitats, sites for individual species, geology and land forms may be designated
STW	Sewage Treatment Works
SWT	Somerset Wildlife Trust
WLMP	Water Level Management Plan
WRA	Waste Regulatory Authority, now part of the Environment Agency
WTW	Water Treatment Works
WWSL	Wessex Water Services Ltd

MANAGEMENT AND CONTACTS:

The Environment Agency delivers a service to its customers, with the emphasis on authority and accountability at the most local level possible. It aims to be cost-effective and efficient and to offer the best service and value for money.

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GENERAL ENQUIRY LINE

0645 333 111


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

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