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ENVIRONMENT
AGENCY

FIRST ANNUAL REVIEW
OF THE
RIVER TONE
CATCHMENT MANAGEMENT
PLAN
(1998)



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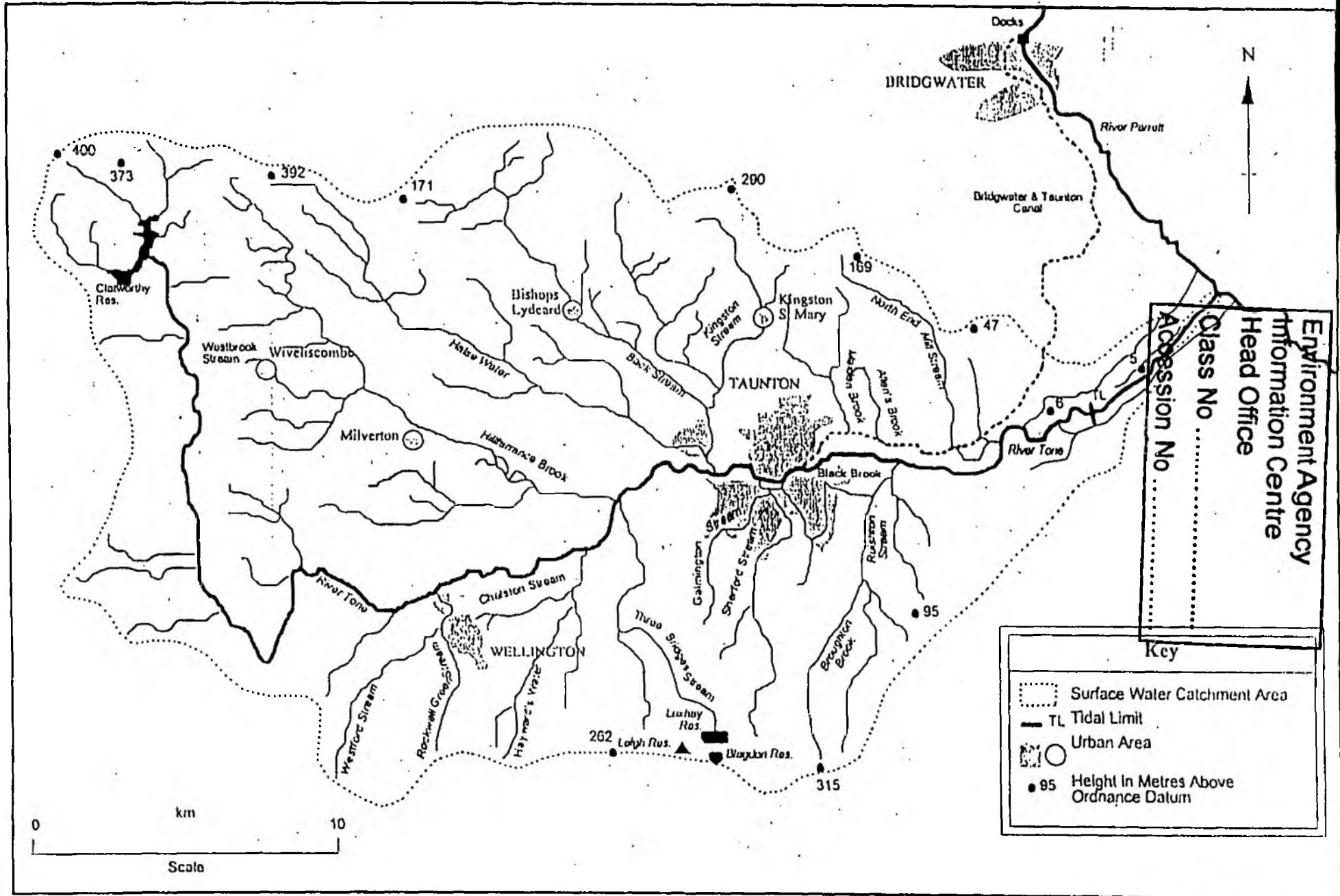
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The River Tone Catchment



BIVER TONE CATCHMENT

1. Introduction

This is the First Annual Review of the River Tone Action Plan which was published in March 1997. 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 Tone Catchment Management Plan Consultation Report - September 1995
- River Tone Catchment Management Plan Action Plan - March 1997

The River Parrett Action Plan stated that the River Parrett LEAP will be revised and published as a joint LEAP Action Plan with the River Tone, following public consultation on a Draft Local Action Plan (DLAP). Since the Parrett Action Plan was published we have decided to have separate LEAPS for the River Parrett and River Tone. The River Tone LEAP Action Plan Consultation Draft will be published in November 1999.

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 Catchment Steering Group

Catchment 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 catchment. 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 catchment. This Annual Review of the River Tone Catchment Management Plan Action Plan is reported to the members of the River Tone Steering Group. The Steering Group Members are:

Name	Representing
Mr Martin Venning	Wessex Water
Mr A J Tucker	Industry
Mrs Audrey Lennox	Sport and Recreation
Mr James Williams	Fishing
Mr Phil Stone	Somerset County Council
Mr Don Alder	Taunton Deane Borough Council
Mr Roger Martin	Conservation Trusts
Dr Flemming Ulf-Hansen	English Nature
Mr Tim Walford	CLA
Mr David House	NFU
Mr Jonathan Comer	Local Flood Defence Committee
Mr Eric Kidner	Wiveliscombe Parish Council
Mr Richard Dommett	British Waterways Board

2. Overview of the catchment

The River Tone Catchment covers an area of approximately 414 km² and has its source in the Brendon Hills near Rafeh's Cross. From its source to the confluence with the River Parrett it is about 33 km long and falls approximately 370 metres. Downstream of its origin, the Tone enters Clatworthy Reservoir. From the reservoir the river runs south towards the village of Greenham. It then does a U-turn, heading north for a short stretch, before turning east. The Tone skirts to the northern side of Wellington, then passes Bishop's Hull before entering Taunton. From Taunton, the river flows past Creech St. Michael, and becomes tidal at New Bridge Sluice before joining the Parrett at Burrowbridge.

The Bridgwater and Taunton Canal leaves the River Tone at Firepool Lock in Taunton and enters Bridgwater at Hamp where a weir allows excess water to run into the tidal River Parrett.

The predominant land use in the upper reaches of the Tone Catchment is permanent pasture, with woodland (some ancient semi-natural) on the steeper valley sides. As the valley widens in the middle reaches, land use becomes more intensive, with improved and reseeded grassland, maize cultivation and potatoes (principally in the Hillfarrance subcatchment) which are regularly irrigated. Sheep and cattle grazing are common, with increasing numbers of horses. In the lower reaches of the Tone, the floodplain is essentially open moorland with improved permanent pasture, reseeded grassland, withy beds and maize.

The catchment is characterised by its beautiful landscape with more than half the total area designated as an Area of Outstanding Natural Beauty (AONB) or Special Landscape Area (SLA). The river corridor itself is designated a Landscape Character Area between Taunton and Wellington, and between Creech St. Michael and Burrowbridge, where the river passes through the unique landscape of the Somerset Moors.

The river corridor provides a wide variety of habitats for wildlife including the otter and water-vole. The Tone is an exceptionally varied river in geomorphological terms until it becomes embanked/impounded below Taunton. It has the most kingfishers of any Somerset river; the nationally scarce otters and water-voles are still present in good numbers. There is a rich dragonfly fauna.

3. Summary of progress

3.1 Conservation

The framework for action to maintain and enhance biodiversity within the Tone catchment is beginning to emerge.

We will seek further opportunities for river and wetland rehabilitation and take action to safeguard dependent species working with partners and using "Make A Difference" project funds.

3.2 Development Pressures

To ensure the Agency fulfils its role in the land use planning and sustainable development debate we have issued all Local Planning Authorities (LPAs) with plans of indicative flood risk areas as part of our role as formal advisor to the LPAs on Development and Flood Risk (Section 105 Plans).

We have an ongoing programme of producing detailed flood mapping which is targeted at areas likely to be allocated for development within the current round of Local Plan Reviews to 2011.

In conjunction with the Section 105 programme the Agency also advises LPAs on appropriate planning policies to deal with flood risk and surface water disposal.

The recently published Draft Deposit Local Plan for Taunton Deane incorporates the flood risk areas within the proposals maps and the text includes appropriate environmental and flood risk protection policies.

The Agency is also represented on various technical working groups such as the House Builders Federation advising on current best practice in flood risk mitigation and source control

3.3 Fisheries

Fisheries work in 1997 included a survey of several River Tone tributaries. This extended our knowledge of the brown trout habitat and added to our information on the distribution of eel and small species such as bullhead. Brook lampreys were found in the upper reaches of the Hillfarrance Brook.

A one-year collaborative project with FWAG and SWT has started. The project aims to promote environmental best practice amongst the farming community. The project will hopefully result in conservation or improvement of riverside habitats and lead to a reduction in diffuse pollution from agriculture.

3.4 Flood Defence

Actions such as the Asset Surveys, Flood Defence Management System (FDMS), Standards of Service are national initiatives and are being given a high priority for implementation, phased over the next 3 years. Others such as Stan Moor Bank and Hillfarrance Brook are dependent on availability of Capital funds whilst others such as the Parrett model and Firepool Weir are local initiatives but are influenced by the availability of revenue funds.

3.5 Recreation

Action is being taken, specifically within Taunton, to enhance the landscape and wildlife value of the river corridor and utilise it as a sustainable walking and cycling route, whilst raising public awareness of the value of river corridors.

3.6 Water Quality

We are seeking improvements to Taunton Sewage Treatment Works (STW), Maundown Water Treatment Works (WTW) and Galmington surface water outfall in Wessex Water's Asset Management Plan (AMP3) programme. Any improvements under AMP3 are subject to funding being approved by OFWAT. Wessex Water have improved the remaining Combined Sewer Overflow (CSO) at Trull (see Issue 1.4).

It is anticipated that all these measures should benefit the overall quality of the River Tone and its tributaries.

Investigations on the Chelston Stream, Wellington have identified a vegetable washing business as a pollution source and improvement measures are progressing.

In the Action Plan we reported that a new monitoring point had been set up on the Broughton Brook. Water quality data shows that the Brook marginally failed to comply with its RQO of RE2 in 1997, however the RQO is a dated one and the target date for compliance is 1998. Although remedial work has been carried out by one farm, water quality has not improved to the level of achieving the RQO of RE2. Further investigations into the cause of degraded water quality will be carried out.

In the Tone catchment we monitor three sites under the EC Surface Water Abstraction Directive: Clatworthy Reservoir, Leigh Reservoir and Luxhay Reservoir. In the Action Plan we reported that Clatworthy Reservoir had exceeded the standard for dissolved and emulsified hydrocarbons. Exceedences of these standards cannot always be attributed to polluting discharges, and we suspect that some exceedences may be due to natural compounds resulting from the breakdown of vegetation. Following concerns about the suitability of the methods for analysis of dissolved & emulsified hydrocarbons the method was reviewed and improved to one involving UV fluorescence in September 1997. Since then none of the samples for the reservoirs in the Tone catchment have exceeded the standard for dissolved and emulsified hydrocarbons.

3.7 Water Resources

Regular meetings are being held with Wessex Water during the OFWAT Periodic Review (AMP3) due to be reported in 1999. Through this process Wessex Water is required to provide a water resources plan for the period 2000 to 2010 and to submit to OFWAT its estimates of costs for

meeting quality standards and environmental standards. The Agency has provided guidelines for this process and reports both to OFWAT and the DETR on outcomes.

3.8 Bridgwater and Taunton Canal

The water resources management arrangements for the Bridgwater and Taunton Canal are now being reviewed by a joint Agency, British Waterways and Wessex Water Technical Group. A programme of field work to collect information on flow rates and water quality in the canal will be implemented this summer. The outcome will provide an improved understanding of the canal water balance. Opportunities to secure better use and conservation of the canal's water resources, and potential improvements to water quality, may be identified. Results will also be used to review the potential for changes to existing abstraction arrangements, both into and from the canal, so as to best balance the needs of users with those of the environment. Interests to be accounted for will include flow needs in the River Tone to meet downstream dependencies as well as those of the canal and of its key users, British Waterways and Wessex Water.

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
1a Algal blooms in the Bridgwater & Taunton Canal....								
1.1. Work with British Waterways to improve flow in the lower stretches of the Canal.	Agency, British Waterways	.	.	.	.	.		Flow monitoring and chemical analysis is continuing this year as part of the initiative to review water resource management of the Bridgwater and Taunton Canal (see also Section 3.8 Bridgwater and Taunton Canal).
1b. Marginal failure of RQO at Sherford Stream - Pitminster to confluence with the Tone....								
1.2. Support options for first time sewerage schemes at Blagdon Hill and Pitminster.	Parish Council, Agency	.	.	.	.	.		Wessex Water have agreed to construct first time sewerage for Blagdon Hill and Pitminster. It is programmed for detailed design in 1999/2000, a start in 2000/1 and completion in 2001/2.
1.3. Improve farm waste handling facilities.	Farmers	.	.	.	.	.		Prosecution to commence shortly against one farmer. On-going discussions with another.
1.4. Investigate impact of discharge from remaining storm overflow at Trull.	Agency	.	.	.	.	.		The remaining CSO at Trull has been improved and consented. The other two are no longer operational and the consents have been revoked.
1c Failure of long term RQOs at River Tone from Ham to Knapp....								
1.5. Negotiate with WWSL to secure improvements to Taunton STW under AMP3 (from 2000).	Agency	.	.	.	.	.		We are seeking improvements to Taunton STW in AMP3. Any improvements will be subject to available funding.
1d Failure of long term RQOs at River Tone between the confluence with the Bridgwater & Taunton Canal and confluence with the Broughton Brook....								
1.6. Evaluate the results of the 1996 study into the impact of Priory storm overflow on water quality.	Agency	.	.	.	.	.		A study has been undertaken by Wessex Water and the Environment Agency, the general conclusion is that since the Priory storm overflow was improved it no longer has a significant impact on water quality.
1e Non compliance with the EC Dangerous Substances Directive downstream of Clatworthy Reservoir....								
1.7. Carry out investigation work on the reservoir and stream inputs to determine metal levels and likely sources.	Agency	.	.	.	.	.	£3k	Investigation completed and a report was produced in December 1996. Concluded that copper and zinc originated from natural metalliferous deposits in the Brendon Hills.

ACTION PLAN MONITORING REPORT

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
1f Poor (Class C) biological quality on the Chelston Stream....								
1.8. Monitor the effect of recent improvements to discharges from Poole landfill and Chelston Business Park.	Agency	•	•				£1k	We have undertaken investigations on the Chelston Stream. Attention is now being redirected to farms upstream of Poole landfill and Chelston Business Park. Impact from these has masked the possible effects of the landfill and Business Park so the farm problems will also be resolved. We have identified a vegetable washing business as another potential source of pollution which may contribute to the poor biological quality and improvements have been requested.
1g Oil pollution in the River Tone....								
1.9. Monitor effectiveness of the improvement programme at Galmington Trading Estate.	Agency	•	•					Further improvements have been made at specific premises on the Galmington Trading Estate. Wessex Water have been requested to install an oil interceptor on the surface water outlet into the River Tone as part of the AMP3 investment programme, subject to approved funding.
1h Nutrient enrichment in SSSIs....								
1.10. Complete evaluation of water quality in the Curry and Hay Moors SSSI. Repeat survey in 1999/2000.	Agency		•	•	•		£34k to Dec 1998	We have reviewed water quality data which has revealed a high nutrient status system. We will be carrying out more detailed investigations during 1999-2000 on selected sites (including Curry and Hay Moors).
1.11. Work with EN/MAFF and others to prevent further deterioration in water quality by promoting less intensive floodplain agriculture and use of buffer strips.	Agency, EN, MAFF	•	•	•	•			Ongoing FWAG project in 1998 to encourage establishment of buffer strips and improved riverside habitats. MAFF have introduced buffer strip tier to ESA prescriptions.
1i High nitrate concentrations in groundwater....								
1.12. Collect and analyse existing data and consider the need for additional monitoring.	Agency, TDBC	•	•					A collaborative project was set up with TDBC to further investigate elevated nitrate concentrations in groundwater. During 1998/99 further investigations will be undertaken.

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
1.13. Where necessary investigate sources of pollution identified in 1.12 and draw up a suitable remediation plan.	Agency		*	*	*			The Environment Agency's Groundwater section in Exeter and TDBC have produced a recent report. We have undertaken a supporting role for TDBC in order to highlight the problem areas by providing analytical services.
1.14. Visit farms to advise on groundwater protection.	Agency		*	*				Only a limited number of farm visits undertaken due to shortage of staff resources. We will undertake further farm visits once the problem areas have been identified to advise on correct farm waste disposal procedure.
1j Saline intrusion into the Bridgwater & Taunton Canal....								
1.15. Carry out a study into the feasibility of reducing saline intrusion.	Agency		*	*				See 1.1.
2a Water demand for spray irrigation....								
2.1. Consider whether bankside storage reservoirs could be used when issuing licences in the catchment.	Agency		*	*	*	*		This is now part of the procedure for issuing new licences in all catchments. No further reporting in future plans.
2.2. Organise abstraction rotas at times of very low flow.	Agency, farmers		*	*	*	*		The organisation of abstraction rotas would be carried out on an "as required basis".
2b Management of the water extracted from the Tone and Bridgwater Canal....								
2.3. Evaluate the costs and benefits of installing a continuous flow measurement station at the Firepool abstraction.	British Waterways, Agency		*	*				There is currently a lack of data on the flows in the canal. A technical liaison group including Wessex Water, British Waterways and the Environment Agency has been established to implement a monitoring programme associated with the requirements for a review of water resources management practices. See 1.1.
3a Biodiversity....								
3.1. Continue to work with others to formulate Regional and Local Habitat and Species Action Plans.	Agency, EN, NGOs, MAFF		*	*	*	*	£5k p.a.	We contributed to the SW Regional Plan and TDBC BAP. The next stage will be to implement the recommended actions.
3b Otter conservation....								
3.2. Develop Otter Conservation Plan for North Wessex Area.	Agency		*	*				No progress due to lack of funding. Funds will be sought next year.

ACTION PLAN MONITORING REPORT

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
3.3. Continue to recover road casualties for tissue analysis.	Agency							Ongoing. Routine work. Only one or two casualties recovered this year.
3c Water-vole conservation....								
3.4. Develop National Species Action Plan.	Agency	•						The revised National Action Plan was produced in July 1997. No further reporting in future plans.
3.5. Produce technical handbook.	Agency		•				£100k nationally	The handbook is due to be published this summer (1998).
3.6. National R&D study looking at predation and land use.	Agency		•	•	•	•		Ongoing - national.
3.7. Continue to support survey of water-voles in Somerset.	Agency	•	•	•	•			Ongoing. Update data as required.
3d Great Crested Newt conservation....								
3.8. Improve database of known sites, survey ponds in areas proposed for development.	SERC, SWT, EN, Agency	•	•	•	•			No progress due to lack of specific funding.
3e Marsh Fritillary conservation....								
3.9. Safeguard important sites.	SERC, SWT, SBG, Agency	•	•	•	•			We will co-operate with SWT as and when required. Safeguard through control over authorisations. No further reporting in future plans.
3f Brook Lamprey conservation....								
3.10. Increase knowledge of status and distribution within the catchment.	Agency	•						Previous surveys have shown brook lamprey to be present in the Tone. In 1997 the species was also found in the headwaters of the Hillfarrance Brook. No further reporting in future plans.
3g Black Poplar conservation....								
3.11. Develop Action Plan.	Agency, TDBC	•	•	•	•		£5k (99/00)	No progress due to lack of funding. We hope to contribute to national study of genetic diversity, which will assist in the development of the Action Plan.
3h The impact of river maintenance downstream of Taunton....								
3.12. Consider opportunities to review river maintenance.	Agency	•						No progress.
3i River and wetland restoration and enhancement....								
3.13. Identify suitable sites for wetland restoration and enhancement.	Agency, EN, MAFF, SWT, SERC, TDBC	•	•					No specific progress made.

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
3.14. Promote river and floodplain habitat restoration schemes.	Agency, Riparian owners, MAFF, EN, IDBs	•	•	•	•	•		Tree planting and channel habitat improvements are planned for the Obridge-Bathpool section with tree planting also planned for downstream of Taunton.
3i River and wetland restoration and enhancement....								
3.15. Develop and implement a collaborative river corridor enhancement plan for the River Tone through Taunton.	Agency, TDBC, SCC	•	•				£10k	Plan completed and being implemented with TDBC.
3.16. Assist in monitoring biological effects and changes in water level management and water quality on the Somerset Levels and Moors.	Agency, EN, MAFF, SCC, SWT	•	•	•	•		£5k p.a.	Ongoing.
4a Use of Agency owned land for recreation....								
4.1. Survey Agency land to assess its potential for recreation and education use.	Agency		•				£5k	We hope to look at all Environment Agency land in Somerset this year to assess the potential. We aim to produce a data base and individual management plans for areas suitable for public use.
4b Canoe access to the River Tone....								
4.2. Give technical advice to the British Canoe Union and Taunton Canoe Club when they are negotiating access agreements.	Agency		•	•				Will contribute as and when required.
4c Siltation at Firepool Weir....								
4.3. Examine need for and feasibility of removing silt at Firepool Weir.	Agency		•	•	•		£90k (98/99)	There is no hydraulic need to remove the silt from the basin upstream of Firepool Weir. The Agency therefore proposes that the need and feasibility of removal should be included as part of the 'Tone Restoration in Taunton Make a Difference' project. It should be noted that the waste disposal charges for removing the silt off site could be in the region of £85k.
4d Develop footpath/cycle-way through Taunton....								
4.4. Develop footpath/cycle-way through Taunton.	TDBC, SCC, Agency		•				£15k	A section is due to be constructed from Heron Way to Bathpool in August. The Environment Agency have contributed £15k to the cost of interpretative signs to be installed this summer.

ACTION PLAN MONITORING REPORT

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
5a The need for fish passes at Wellington and Homshay Weirs....								
5.1. Seek funding to provide fish passes.	Agency		•					Dependent on availability of funding.
5b Siltation of spawning gravels in the upper Tone....								
5.2. Promote the prevention of bank erosion and field runoff by encouraging riparian owners to create buffer strips, fence banks and plant riverside trees.	Riparian owners, Agency, FWAG, NFU, MAFF	•	•	•	•		£12.5k	Collaborative project with FWAG planned for 1998 throughout the whole Tone catchment.
5.3. Carry out desk study to understand the flow regime in the upper catchment and its impact on siltation.	Agency	•	•	•				The study is due to be completed by October 1998.
5c The conservation of Native Crayfish....								
5.4. Continue to support work to establish status and distribution of white clawed and signal crayfish, and to investigate presence/absence of plague.	Agency, SERC							SERC carried out survey and found no plague but signals were found therefore no re-introductions are now possible. No further reporting in future plans.
6a The adverse impact of new development....								
6.1. Ensure District Wide Local Plans contain policies to protect the environment and promote sustainable development.	Agency	•	•	•	•		£30k (98) £35k (99) £5k (00)	As advisors on development and flood risk the Agency has agreed policies relating to surface water disposal and flood risk in the Taunton Deane Local Plan. The LPA has also incorporated the Agency flood maps within the draft Local Plan to 2011.
6.2. Work with WWSL to ensure that future needs for water supply and disposal can be sustained without unacceptable impact on the environment.	Agency	•	•	•	•			The Agency is closely involved with WWSL in the preparation of the company's supply and demand balance required for the OFWAT Periodic Review AMP3. This will inform the review of the Agency's water resources development strategy to be published in year 2000, and in the interim provide a clearer view of the potential for sustainable development. Simultaneously we are working with WWSL to secure a mutual understanding of the needs and priorities for effective and environmentally acceptable disposal of waste water.
6.3. Survey waste arisings in the TDBC area.	Agency	•						The national waste arisings survey is likely to start in October 1998. This will use statistical sampling to produce figures for each Local Authority area.

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
6.4. Advise Taunton Deane Waste Disposal Authority and the water industry on best practice for waste management.	Agency	.	.	.	.	.		We are encouraging and supporting Taunton Deane's Green Deane's Business Club. Taunton Deane contact us as and when required.
6.5. Seek the earliest possible discussion with the Local Authority developers and road builders.	Agency	.	.	.	.	.	£5k p.a.	Ensure all new development is protected from flood risk and does not in itself adversely affect third parties. 1998/99 will see the introduction of a major incident plan for Taunton dealing with flood warning dissemination and co-ordinated response from local authorities and emergency services.
7a The need for a system to target flood defence resources to the greatest need....								
7.1. Complete the Tone and Parrett model calibration and development for input to the review of Flood Defence practice on the Levels and Moors.	Agency	.	.	.	.	.	£30k to 1999	The model calibration is progressing. Data has been gathered and is being analysed. The model is due for delivery in November 1998.
7b The need for an audit of land drainage works....								
7.2. Audit land drainage works to ensure consent conditions are complied with and take enforcement action for any unconsented works.	Agency	.	.	.	.	.		This is ongoing and is part of the Land Drainage Consent process. No further reporting in future plans.
7c The need to improve the efficiency and effectiveness of flood defence work....								
7.3. Classify upland reaches in accordance with Standards of Service methodology and compare the current standard of flood protection with the target.	Agency	.	.	.	.	.	£20k to date, £15k p.a. until 2002	The upland reaches have been classified in accordance with the Standard of Service methodology and compared with the target. This generally indicated that the upland reaches were under-serviced. Planned maintenance over the next 5 years has therefore been included in the revenue programme.
7.4. Complete asset survey.	Agency	.	.	.	.	.	£60k (98/99)	Halcrows are due to undertake the fieldwork for the asset survey on the River Tone next year.
7.5. Provide economic justification of maintenance works in the Somerset Levels and Moors part of the catchment for input to the review of Flood Defence work on the Levels and Moors.	Agency	.	.	.	.	.		Posford Duvivier have produced a draft inception report on how justification can be done. It is currently subject to comment and requires further work before it is acceptable.
7d The need for WLMPs for SSSIs....								
7.6. Contribute to Curry and Hay Moors SSSI WLMP.	Curry Moor IDB, Agency	.	.	.	.	.	£3.5k	The Environment Agency has contributed to the Curry Moor Drainage Board WLMP. No further reporting in future plans.

ACTION PLAN MONITORING REPORT

Issues and Actions	Resp Body	97	98	99	00	01	Cost	Progress
7e Stan Moor bank levels....								
7.7. Return Stan Moor bank to its design level.	Agency						£759k (00) £1500k (01) £1000k (02), £870k (03)	Currently in the Capital programme 2000/01/02/03/04.
7f Hook Bridge Spillway levels....								
7.8. Return Hook Bridge Spillway to design levels.	Agency						£50k (02/03)	Work due to be carried out following completion of the Stan Moor bank. To be financed by revenue income.
7g Identifying flood problem locations in the catchment...								
7.9. Complete review of flood problems and use FDMS to identify priorities.	Agency							See 7.4.
7h Flood problems at Hillfarrance....								
7.10. Make the Hillfarrance Brook a main river.	Agency							We propose to make the Hillfarrance Brook into a main river in association with the flood protection scheme.
7i Flood problems at Hillfarrance....								
7.11. Implement the Hillfarrance flood protection scheme.	Agency						£373k (01/02)	The scheme is currently in the capital programme for 2001/02.
7j The lack of flood warnings on non-main rivers....								
7.12. Complete the investigation into the suitability of Milverton flow gauge for providing flood warnings for the Hillfarrance Brook catchment.	Agency						£5k (98/99)	We propose that the investigation and implementation of flood warnings (if practical) will be complete by September 1998 for the Hillfarrance Brook.

NEW ISSUE

Our chemical water quality monitoring shows that water quality has been degraded on the Hillfarrance Brook and Westbrook Stream. We will be investigating the causes during the summer of 1998.

5. Appendices

5.1 Integrated Pollution Control

We are the statutory authority in England and Wales for regulating the largest and most complex industrial processes which discharge potentially harmful substances to air, water and land. To do this we use a system known as Integrated Pollution Control (IPC).

We are required to ensure that the best available techniques not entailing excessive cost (BATNEEC) are used to prevent release of particular substances into the environment or where not practicable to minimise their release and render them harmless. Where a process is likely to involve releases into more than one medium, we ensure that this principle is used to ensure that the best practicable environmental option (BPEO) is adopted.

Under the Water Industry Act 1991, referrals of special category effluent for discharge to sewer from processes which are not subject to Integrated Pollution Control are managed by the Agency on behalf of the Secretary of State for the Environment.

5.2 Air quality

Air quality is an indicator of environmental quality; poor air quality can damage flora and fauna and buildings, and have significant effects on soils and water. Some pollutants, such as acidic gases, can also cause serious problems for those with asthma, bronchitis and other respiratory diseases.

We need to work closely with others if improvements are to be achieved. This is particularly important with regard to local air quality where we are only one of a number of regulatory bodies, with a role in helping to achieve the Government's air quality strategy.

We have set National targets to reduce emissions of sulphur dioxide and nitrogen oxides from Agency-regulated processes. These reductions will contribute to reducing impacts at a local level.

5.3 Radioactive substances

We are the principal regulator in England and Wales under the Radioactive Substances Act 1993. This statute is concerned with the storage, use and disposal of radioactive substances, and in particular, the regulation of radioactive waste.

We regulate the accumulation, keeping and use of radioactive materials, and its disposal, including that from licensed nuclear sites. Certificates of registration are issued for keeping and using radioactive materials and certificates of authorisation for the accumulation and disposal of radioactive waste.

5.4 Waste management

We enforce the majority of legislation which governs the management of waste generated from house-hold, commercial or industrial sources, and are also involved in ensuring that controlled wastes are transported in a proper manner by registering all carriers of waste. Wastes which are regarded as particularly hazardous are categorised as *special waste* and become the subject of a strict tracking procedure under the Special Waste Regulations 1996 to ensure that they are disposed of at an appropriate site.

We prevent pollution of the environment, harm to human health or serious detriment to the amenities of the locality from waste management activities. Sites are principally controlled by issuing waste management licences for the storage, treatment, handling and disposal of waste. Each licence contains conditions on the construction, maintenance and operation of sites, and stipulates monitoring requirements where we deem it necessary. The environment is protected by appropriate conditions which are agreed internally and circulated to external bodies as a consultation exercise prior to the issue of a licence. We actively enforce the conditions placed on a licence by regular inspection and monitoring visits to the wide range of sites, and we take action against illegal disposal activities like fly tipping.

licence by regular inspection and monitoring visits to the wide range of sites, and we take action against illegal disposal activities like fly tipping.

The Department of the Environment White Paper *Making Waste Work* sets out the Government's policy framework for the management of waste. It sets out ways in which waste can be managed in a more sustainable way, and sets targets for achieving that aim.

This strategy is based on three key objectives: reducing the amount of waste that society produces, making the best use of the waste produced, and choosing waste management practices which minimise the risks of immediate and future harm to the environment and to human health.

The Producer Responsibility Regulations were introduced in 1997 to place responsibility on some businesses that handle packaging to recover and recycle certain proportions of packaging materials. This initiative will be a key tool for promoting the recovery of value from waste. It is designed to ensure that industry assumes an increased share of the responsibility for the waste arising from the disposal of its products. The target is to recover 50-65% of packaging waste by 2001.

We will play a lead role in implementing, monitoring and enforcing this legislation. Businesses will have to register with us and provide data by August 1997, start to meet interim recovery and recycling targets in 1998-99, meet an interim recycling target by 2000 and full targets by 2001. All businesses involved in the packaging chain will share the responsibility if they:

- have a turnover of more than £5 million and handle more than 50 tonnes of packaging each year during 1997-99
- have a turnover of more than £1 million and handle over 50 tonnes of packaging materials each year from the year 2000

5.5 River Quality Objectives

We manage water quality by setting River Quality Objectives which are intended to protect current water quality and future use. We use them as a basis for setting consents for new discharges and planning future water quality improvements. Our River Quality Objectives use a classification scheme known as River Ecosystem (RE) which was introduced in 1994.

RQO (RE Class)	Class Description
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

The River Quality Objectives we set must be achievable and sustainable; we must be able to identify what needs to be done to meet them, and to ensure as far as practicable that water quality can be maintained at this level in the future.

Where we are unable to identify solutions or resources to resolve current water quality problems, we can also set a visionary or Long Term River Quality Objectives; we will use this visionary target as a basis for setting consents for new discharges. This will ensure that future developments will not hinder our efforts to improve water quality.

6. 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
TDBC	Taunton Deane Borough Council
WLMP	Water Level Management Plan
WRA	Waste Regulatory Authority, now part of the Environment Agency
WTW	Water Treatment Works
WWSL	Wessex Water Services Ltd

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