

**FIRST ANNUAL REVIEW**  
**of the**  
**TAW/TORRIDGE ESTUARY**  
**CATCHMENT MANAGEMENT PLAN**  
**(1996)**



**ENVIRONMENT  
AGENCY**

April 1996

## SOUTH WEST REGION

### TAW-TORRIDGE ESTUARY CATCHMENT MANAGEMENT PLAN - ACTION PLAN FIRST ANNUAL REVIEW (1996)

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## **INTRODUCTION**

The first Annual Review of the Action Plan summarizes the progress made by the National Rivers Authority (NRA) and others, from March 1995 to March 1996. This is the first year of the five year Action Plan.

It is recommended that this report is read in conjunction with both the Taw-Torridge Estuary Catchment Management Plan Action Plan (Ref.1) and the Consultation Report (Ref.2).

The progress outlined in this report will be discussed at meetings of both the Torridge and Taw Catchment Steering Groups, which include representatives of external interests, to be held in May and June.

## **THE NRA AND THE ENVIRONMENT AGENCY**

The Environment Act brought together the NRA, Her Majesty's Inspectorate of Pollution and the local Waste Regulation Authorities into a single Environment Agency in April 1996.

The Environment Agency provides an integrated approach to the protection and management of the land, air and water environment. Its main functions include pollution prevention control, waste regulation, flood defence, water resources, fisheries, recreation and conservation.

The preparation of Catchment Management Plans (CMPs) will continue to be undertaken but enhanced to include the responsibilities of the other organizations within the new Agency.

## **VISION FOR THE CATCHMENT**

In an area of such high amenity and ecological value as the Taw-Torridge Estuary, our vision of the future is towards a catchment where:

- the biodiversity of the waters and associated lands of the estuary is maintained and extended
- improvements continue to be made to existing discharges, meeting the most stringent appropriate standards
- an agricultural and forestry system develops which minimizes the risk of diffuse pollution and improves the physical habitat of the river system and wetlands for wildlife
- everyone's enjoyment and appreciation of the estuary continues to grow
- there is minimal risk to people and property from flooding
- there are sustainable salmonid, sea and shell fisheries within the estuary.



## **SUMMARY OF PROGRESS**

This year has seen an important review of fisheries data. The review will help guide us to safeguard the spring stocks of salmon and sea trout and salmon populations in general in the combined catchments of the Rivers Taw and Torridge.

This work involved extensive consultation with those involved with the salmonid fishery. We are most grateful to all those who gave their time to participate and comment.

### ***Taw and Torridge Net Limitation Order Proposals***

In November 1995, the Ministry of Agriculture Fisheries and Food (MAFF) lawyers advised the NRA that, before applying for a net closure byelaw, all other measures must have been considered. Thus the closure byelaw was not implemented and MAFF advised the Authority to apply for a two year Net Limitation Order (NLO) with a reducing factor. However, following consultation with their lawyers, the reducing factor was removed and a two year NLO of 14 nets was granted in February 1996.

This is regarded as an interim measure and it is still the Environment Agency's intention to bring in measures to maintain levels of escapement in conjunction with improvements to the habitat. We shall therefore be basing a further package of measures on a net limitation order and will be looking for constraints on the netting effect, together with measures to control the rod catch to a reasonable level. In the meantime, voluntary proposals for both net and rod fishing to give some protection to 1996 stocks have been suggested.

### ***South West Water Services Limited's Clean Sweep Scheme***

Improvements at Ashford Sewage Treatment Works (STWs), which form part of South West Water Services Limited (SWWSL) Clean Sweep Scheme are now operational and treating sewage from Barnstaple with the result that effluent quality has improved. Currently an extension of the Biologically Activated Flooded Filter (BAFF) unit is being carried out. This will allow sewage from Braunton to be treated in 1997.

### ***Reducing Pollution Incidents***

At Deep Moor landfill site, a system is now in operation which collects leachate and runoff from the site in a lagoon. The contents of the lagoon are then pumped to the waste water treatment works at Great Torrington. This prevents the re-occurrence of such pollution incidents and enables the effluent to be treated prior to its discharge into the River Torridge, giving much greater control over the impact of the site on the catchment.

Wastes commonly spread to land in Devon include sewage sludge from sewage treatment works (STWs) and industrial wastes such as whey, milk washings and cider making waste. Spreading operations need to be carefully monitored by the Environment Agency as they have the potential to cause pollution and damage to wildlife habitats if they are not carried out correctly. Prior to the formation of the Environment Agency, Waste Regulation Authorities in the South West region were working on a code of practice for land spreaders in conjunction with the Agricultural Development and Advisory Service (ADAS). The Agency will continue with this project.

This will further ensure that land spreading operations are not carried out in or near to protected wildlife habitats, such as wetlands. It will also enable the more efficient control of land spreading to prevent nutrient enrichment in sensitive areas.

### *Taw and Torridge Estuary Manager*

A close working relationship has been maintained with the Taw and Torridge Estuary Manager, Andrew Bell, who has now been in the post for one year. Progress so far includes trial recreation zoning, an application for European money and development of local nature reserves. Andrew will present an update at the Torridge Catchment Steering Group meeting in May.

### *Flood Defence Schemes*

A review of flood defence operations together with flood defence schemes at a number of locations around the estuary are progressing.

### *Braunton Marsh (Water Level Management Plan)*

The preliminary report on the hydrology and management of Braunton Marsh has shown that the system requires careful management to ensure that the land is agriculturally productive, but also that the conservation value of the wetland habitat and the more fragile adjoining Braunton Burrows sand dune system is maintained. Furthermore, the role of the Internal Drainage Board (IDB) in the management of inputs to the system, is critical in maintaining water levels and conserving the wildlife interests of the area.

Analysis of statistical and graphical information suggests that the marsh drainage improvement scheme and the deepening of West Boundary Drain has had repercussions of the hydrology of the adjoining slack and sand dune system. There are a number of recommendations which should be considered for the future management of the Marsh drainage system. To encourage the wildlife of the Marsh the winter water levels of the drainage channels should be held high and localised flooding encouraged to attract wintering wildfowl. Pilot studies and a monitoring programme within the buffer zone would help evaluate the effectiveness of these recommendations.

### **AMP2 SCHEMES**

No progress was made with implementing any of the Sewage Treatment Works (STW) improvement - AMP2 Schemes until the Monopolies and Mergers Commission's review of South West Water Services Limited's (SWWSL) AMP2 programmes was completed. We have now agreed the timing of the improvement schemes with SWWSL.

### **FUTURE REVIEWS**

The Action Plan for the Taw-Torridge Estuary will be monitored annually when further annual reviews will be produced.

We will review progress again in May 1997 when we will publish our second Annual Review of the Taw-Torridge Estuary Catchment Management Plan - Action Plan.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 1: POOR EFFLUENT QUALITY</b>					
a) ● DOE to decide on proposed review of existing Ashford STW consent	DOE		None	*	DoE have indicated that the Agency can proceed. The issuing of a consent is imminent.
b) ● Agency to determine consent for South scheme discharge to ensure compliance with the EC BWD (Ref 3) and EC UWWTD (Ref 4)	Agency			*	Consent issue is imminent.
● SWWSL to carry out capital works to ensure consent compliance on South scheme discharge	SWWSL		None	*	
c) ● Agency to determine consent for Croyde STW to ensure compliance with EC UWWTD (Ref 4)	Agency			By 2005	The scheme options are still under appraisal. Under a local agreement SWWSL will be implementing the scheme by 1999.
● SWWSL to carry out capital works at Croyde under AMP2 to ensure compliance with new consent.	SWWSL		None	By 2005	

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 2: FURTHER CONSERVATION OF IMPORTANT SPECIES &amp; HABITATS</b>					
<ul style="list-style-type: none"> <li>Support initiatives that encourage less intensive land management, especially those targeted on wetlands</li> </ul>	Agency	MAFF, CoCo, EN, LAs	£400 p.a.	*	Braunton Marsh now identified as a priority area for Countryside Stewardship. Funding also targeted through Rivers and Wetlands Project to achieve pilot agreements in 1996/7.
<ul style="list-style-type: none"> <li>Encourage restoration of wetland habitats when consenting or advising on development proposals or other activities affecting the water environment</li> </ul>	Agency	LAs Landowners Developers	£100 appropriate application	*	Ongoing. Agency has continued to comment and advise on habitat protection and recreation in all proposals screened.
<ul style="list-style-type: none"> <li>Seek collaborative opportunities with others to enhance wetland habitats</li> </ul>	Agency	LAs NGOs	Unknown	*	Agency investigating possibilities of future management of new borrow pit at Braunton TDS.
<b>ISSUE 2: DECLINE IN ECOLOGICAL VALUE OF DITCHES ON BRAUNTON MARSH</b>					
<ul style="list-style-type: none"> <li>Carry out special field investigations:                             <ul style="list-style-type: none"> <li>rapid biological appraisal</li> <li>follow up water quality assessment where necessary</li> <li>undertake a full biological survey (including macro-invertebrates, macrophytes, river corridor and habitats) at selected sites in Braunton Marsh to provide baseline data</li> <li>assess results of survey</li> </ul> </li> </ul>	Agency		Unknown	*	This work will be combined with the full biological survey. Survey will be carried out soon (1996), together with water quality assessment (1996).
	Agency		Unknown	*	
	Agency		Unknown	96	
	Agency			97	

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 2: LOSS OF SALTMARSH HABITAT</b>					
<ul style="list-style-type: none"> <li>Set biodiversity target for saltmarsh; aim to increase area in estuary</li> </ul>	EN	Agency DWT	£200	*	National targets now set. County targets likely through DCC Nature's Place initiative. Agency has contributed to cost of surveying two potential saltmarsh restoration sites (£200) in association with Estuary Manager of Torridge District Council.
<ul style="list-style-type: none"> <li>Contribute to technical studies investigating replenishment of pebble ridge and possible link with sand encroachment on Skern</li> </ul>	EN TDC	Agency Others	Unknown	*	Devon County Council preparing tender document.



ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 3: ABSENCE OF COMPREHENSIVE ECOLOGICAL DATA</b>					
• Aerial survey interpretation of estuary area	Agency		Allocated to River Taw Catchment	94	Survey of interpretation complete. Awaiting progress on GIS to enable use.
• Develop appropriate macro-invertebrate monitoring programme in estuary	Agency		Unknown	*	Programme to be developed Summer 1996, with a resource-dependant survey expected Spring 1997.
- Implement programme	Agency			96	The survey in 1996 is likely to be in the form of an impact assessment of Brannoc Fibres.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 4: WATERSPORT PRESSURES ON THE ESTUARY</b>					
<ul style="list-style-type: none"> <li>Initial support for the Taw/Torridge Estuary Manager</li> </ul>	Agency	TDC EN NDDC DCC	£5000	94	Completed.
<ul style="list-style-type: none"> <li>Participate in the Estuary Manager Steering Group</li> </ul>	Agency	TDC EN NDDC DCC TTEF	£800 p.a.	*	Agency participated in discussions. Andrew Bell (Estuary Manager) to give a short presentation on his major achievements in the post at the next Catchment Steering Group meeting. Close working relationship maintained with Taw/Torridge Estuary Manager.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 5: RESTRICTED SHELLFISH FARMING</b>					
<ul style="list-style-type: none"> <li>Determine management protocols for shellfish including export of spat etc.</li> </ul>	Agency	MAFF EHOs EN Commercial fishermen	Unknown	*	No progress (as currently no shell fishing in the Estuary).
<ul style="list-style-type: none"> <li>Agency to contribute through its national R&amp;D programme to a SNIFFER research project to investigate the relationship between levels of bacteria in shellfish and water quality</li> </ul>	SNIFFER	Agency	£9000	*	Work completed and report due June 1996. Phase 2 work due to start 96/97 with Agency £8,000 contribution (total £22,000).

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 6: IMPACT OF DREDGING OPERATIONS AND SAND AND GRAVEL EXTRACTION</b>					
<ul style="list-style-type: none"> <li>● Seek to halt gravel extraction off Crow Point when licence expires and ensure no new sites are introduced</li> </ul>	Agency	DCC	Unknown	97	<p>No data are available within the Agency to be able to determine the long term effects of sand/gravel extraction.</p> <p>DCC are currently putting together a proposal to investigate sediment movement in the estuary to assess the potential impact of extraction. We intend to be partners in this project.</p>

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 7: REDUCE POLLUTION INCIDENTS</b>					
<ul style="list-style-type: none"> <li>Carry out task force visits on Woolacombe Stream, Croyde Stream, River Caen, Knowle Water and Bradiford Water</li> </ul>	Agency		£4000	*	Visits in the River Caen, Knowle and Bradiford Waters completed in 1995. Several farm waste disposal problems found and rectified. One domestic sewage problem with septic tanks remains at Chaddiford Lane. Visits for the Croyde Stream are planned for Spring 1996. Woolacombe Stream will be covered in the North Devon Streams CMP.
<ul style="list-style-type: none"> <li>'Hot spot' visits at sites of known pollution risk</li> </ul>	Agency		£1000 p.a.	*	9 sites visited (all farms). 3 problems found and rectified. Visits to continue and other sites to be considered.
<ul style="list-style-type: none"> <li>Consider LPA development proposals to ensure no deterioration of existing pollution problems occur and to prevent new risks arising</li> </ul>	Agency	LPA	£30 per application	*	Proposals considered routinely. A 100 house development at Bideford was objected to and the proposal is currently in abeyance.
<ul style="list-style-type: none"> <li>Enforce the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 (Ref 5)</li> </ul>	Agency		£5000	*	The number of sites where we have an input has reduced with the loss of grant. Following task force operations on Bradiford Water (94/95) and Barnstaple Yeo (95/96) 6 farms identified with problems that later required works, which had to be constructed to Silage, Slurry and Agricultural Fuel Oil Regulations standards.
<ul style="list-style-type: none"> <li>Draw up contingency plans for holders of significant quantities of polluting material</li> </ul>	Agency	Traders	£3400	*	No progress so far but work to start soon at Brannoc Fibres at Braunton.
<ul style="list-style-type: none"> <li>Monitor and liaise with dischargers and South West Water Services Ltd</li> </ul>	Agency	Traders SWWSL	£1500 p.a.	*	Work continuing.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 8: IMPLEMENT WATER RESOURCES STRATEGY TO MEET FUTURE NEEDS - PRODUCE A REGIONAL WATER RESOURCES STRATEGY</b>					
<ul style="list-style-type: none"> <li>The consultation document for Cornwall and Devon Area was published in August 1992 with consultation until 31 October 1992</li> </ul>	Agency		Completed	94	
<ul style="list-style-type: none"> <li>Regional Water Resources Strategy will be published by April 1995</li> </ul>	Agency		Not available	94	Tomorrow's Water (Ref 6) published copies are available.
<b>ISSUE 8: IMPLEMENT WATER RESOURCES STRATEGY TO MEET FUTURE NEEDS - IMPLEMENT STRATEGY LOCALLY FOR THE TAW TORRIDGE ESTUARY</b>					
<ul style="list-style-type: none"> <li>The implications of the strategy for the estuary will be reviewed</li> </ul>	Agency		Not available	*	The 1995 drought highlighted the need to develop long term plans to meet the increasing demand for water in North Devon. As part of this we are investigating the possibility of extra winter abstraction.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 9: MINIMIZE IMPACT OF ABSTRACTIONS</b>					
<ul style="list-style-type: none"><li>• No further action at present</li></ul>					

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 10: REPORTED FALLING GROUNDWATER LEVELS IN BRAUNTON AND NORTHAM BURROWS</b>					
<ul style="list-style-type: none"> <li>● Continue to contribute to a phased research project 'The Sand Dunes Project' being carried out by Plymouth University:-                             <ul style="list-style-type: none"> <li>- review existing data</li> <li>- identify groundwater level trends</li> <li>- develop a management plan for the whole system to remedy any groundwater level lowering and prevent further deterioration</li> </ul> </li> </ul>	EN	Agency DCC NDDC IDB	£1000 p.a. for project and £2000 for staff time	*	Work continuing to schedule. Work on the management plan has started.  See also Issue 14.
<ul style="list-style-type: none"> <li>● Agency will assist in the implementation of the management plan where appropriate</li> </ul>	Agency	DCC NDDC IDB EN	Unknown	97	



ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 11: IMPACT OF NUTRIENT ENRICHMENT</b>					
<ul style="list-style-type: none"> <li>Collect and analyse chemical and biological monitoring data to investigate the potential nomination of the estuary as a 'Sensitive Area' under the UWWT Directive (Ref 4)</li> </ul>	Agency		Chemical £8000 + continuous monitoring if blooms develop + macro-algae surveys + phytoplankton surveys £6400	*	<p>1995 survey work completed.</p> <p>A report on biological methods used in this and other catchments, and their effectiveness, is currently being compiled.</p>

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 12: DECLINE OF SALMON, SEA TROUT AND TROUT STOCKS</b>					
<ul style="list-style-type: none"> <li>Maintain catch controls (netting in estuary, rod fishing in both catchments) for the agreed period and then review</li> </ul>	Agency	Netsmen Riparian owners	Unknown	*	Review completed. NLO of 14 nets for two years confirmed by MAFF (1996). Voluntary restrictions for rods being discussed. Further restrictions to be sought later in 1996 following complete negotiation with all parties.
<ul style="list-style-type: none"> <li>Introduce a bye-law to control estuary sea fishing - gather data and review</li> </ul>	Agency		£16,000 p.a.	*	Data gathered and review in progress.
<ul style="list-style-type: none"> <li>Conduct a review of Agency SW policy on spring fish in South West (cropping controls etc)</li> </ul>	Agency	Netsmen Riparian owners	Unknown	94	Review completed. Voluntary measures being discussed with rods and nets.
<ul style="list-style-type: none"> <li>Enforce salmonid fisheries legislation in estuary and out to six mile limit at sea</li> </ul>	Agency		£20,000 p.a.	*	Continuing No significant enforcement needed in the last year.
<ul style="list-style-type: none"> <li>Introduce bye-law to control sea fishing in the tidal Barnstaple Yeo</li> </ul>	Agency		Unknown	*	Byelaw in place.
<ul style="list-style-type: none"> <li>Introduce legislation with DSFC to limit fixed netting on Saunton Sands</li> </ul>	Agency	DSFC	Unknown	*	No progress.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 13: PRESSURE ON BASS FISHERIES</b>					
<ul style="list-style-type: none"> <li>Extend the boundaries of the bass nursery area to cover the whole estuary. Gather data and review</li> </ul>	Agency	MAFF	£16,000 p.a.	*	MAFF are now reviewing bass nursery measures in the Taw/Torridge Estuary and elsewhere. The Agency are contributing to that review.
<ul style="list-style-type: none"> <li>Control 'ground lining' in joint estuary</li> </ul>	Agency	MAFF		*	Under control.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 14: REVIEW FLOOD DEFENCE OPERATIONS</b>					
<ul style="list-style-type: none"> <li>Carry out River Corridor Survey (RCS) of main river on Braunton Marsh</li> </ul>	Agency		Completed		
<ul style="list-style-type: none"> <li>Carry out ecological surveys of all areas subject to scheduled flood defence maintenance</li> </ul>	Agency		Completed		
<ul style="list-style-type: none"> <li>Incorporate conservation requirements identified by the above actions into the Service Level Agreement</li> </ul>	Agency		£4000	*	No progress so far.
<ul style="list-style-type: none"> <li>Complete Service Level Agreement for routine flood defence maintenance operations around the estuary</li> </ul>	Agency		£4000	*	Completed for 1995/96. Similar programme for 1996/97.
<ul style="list-style-type: none"> <li>Annual inspection of sea defences</li> </ul>	Agency		Unknown	*	Crow Point inspection completed. No immediate work necessary.
<ul style="list-style-type: none"> <li>Agency to hold discussions with IDB and EN in order to contribute to the production of a Water Level Management Plan for Braunton Swanpool</li> </ul>	Agency	EN IDB	Unknown	*	Survey of Boundary Drain completed. Proposals discussed informally with IDB & EN on water level management. Priority raised. WLMP includes all of Braunton Marsh. Draft WLMP produced.

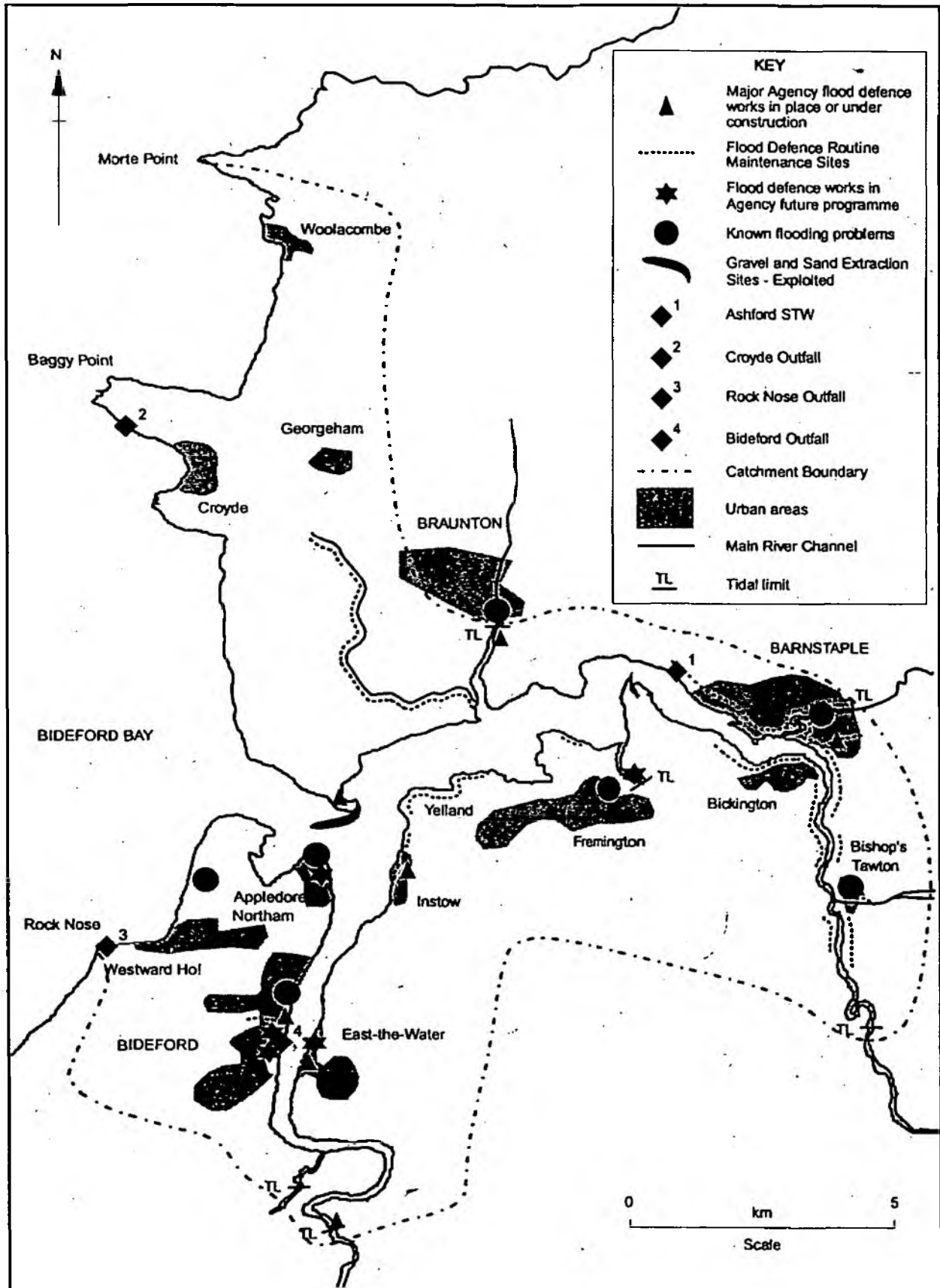
ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<ul style="list-style-type: none"> <li>● Consider relevance of Estuary to the Shoreline Management Plan for Bridgwater and Bideford Bay               <ul style="list-style-type: none"> <li>- Phase 1 Complete Scoping Study</li> <li>- Phase 2 Additional data collection, coastal process modelling, recommended strategies</li> <li>- Phase 3 Agree draft strategies consultation</li> </ul> </li> </ul>	Agency	EN SCC ACC DCC WDC SDC WSDC TDC NDDC MAFF	Agency £3700 Others £11,400 MAFF £16,000	94	Scoping study due to be completed in April 1996.  The current recommendations for the estuary limits are; on the River Torridge Instow Quay to Appledore and on the River Taw from Blackstone Point south.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 15: KNOWN FLOODING PROBLEMS - MUDDLEBRIDGE SCHEME</b>					
<ul style="list-style-type: none"> <li>• Planning application for preferred option at Muddlebridge submitted to NDDC</li> </ul>	Agency	Agency MAFF DCC	Agency £200,000 (less MAFF grant aid) DCC £12,000	*	All consents obtained.
<ul style="list-style-type: none"> <li>• Apply to MAFF following planning approval</li> </ul>		NDDC	NDDC £12,000	*	Awaiting final MAFF approval - decision expected late March. Anticipated start soon after.
<ul style="list-style-type: none"> <li>• Complete Braunton Tidal Defence Scheme</li> </ul>	Agency	Agency MAFF	Total £1.98 million Agency £875,000	*	Scheme completed except for minor work associated with safe access and automation of Penstock. Some landscaping still to be done. Wrafton Borrow Pit is of major wildlife benefit.
<b>ISSUE 15: KNOWN FLOOD PROBLEMS - APPLEDORE SCHEME</b>					
<ul style="list-style-type: none"> <li>• Submit planning application for preferred option for Appledore Scheme</li> </ul>	Agency	MAFF DCC	Agency £2.1 million	94	Planning permission given. Work on scheme started on 8 January 1996. Hard landscaping slightly contentious.
<ul style="list-style-type: none"> <li>• Complete other phases of Bideford Scheme                             <ul style="list-style-type: none"> <li>- Quay (4C)</li> <li>- Downstream of corporate (4D)</li> <li>- East-the-Water (3)</li> <li>- Urban (2)</li> </ul> </li> </ul>			Grant Eligible Costs £2.4m £120,000 £650,000 £250,000	96 95 94 96	Anticipated start date late 1997. Discussions ongoing. Discussions ongoing.

ACTIONS	RESPONSIBILITY		COST TO AGENCY	1995	PROGRESS
	LEAD	OTHER			
<b>ISSUE 15: KNOWN FLOOD PROBLEMS - KENWITH VALLEY</b>					
• Submit planning application to TDC	Agency			94	Planning permission given.
• Complete Kenwith Valley improvements	Agency	MAFF	£50,000	94	Completed.
• Obtain MAFF approval for Kenwith Valley Enhancement following planning approval	Agency	MAFF	£900,000	*	MAFF approval obtained. Work started 20 November 1995 and is due to be completed Autumn 1996.

# TAW/TORRIDGE ESTUARY CATCHMENT

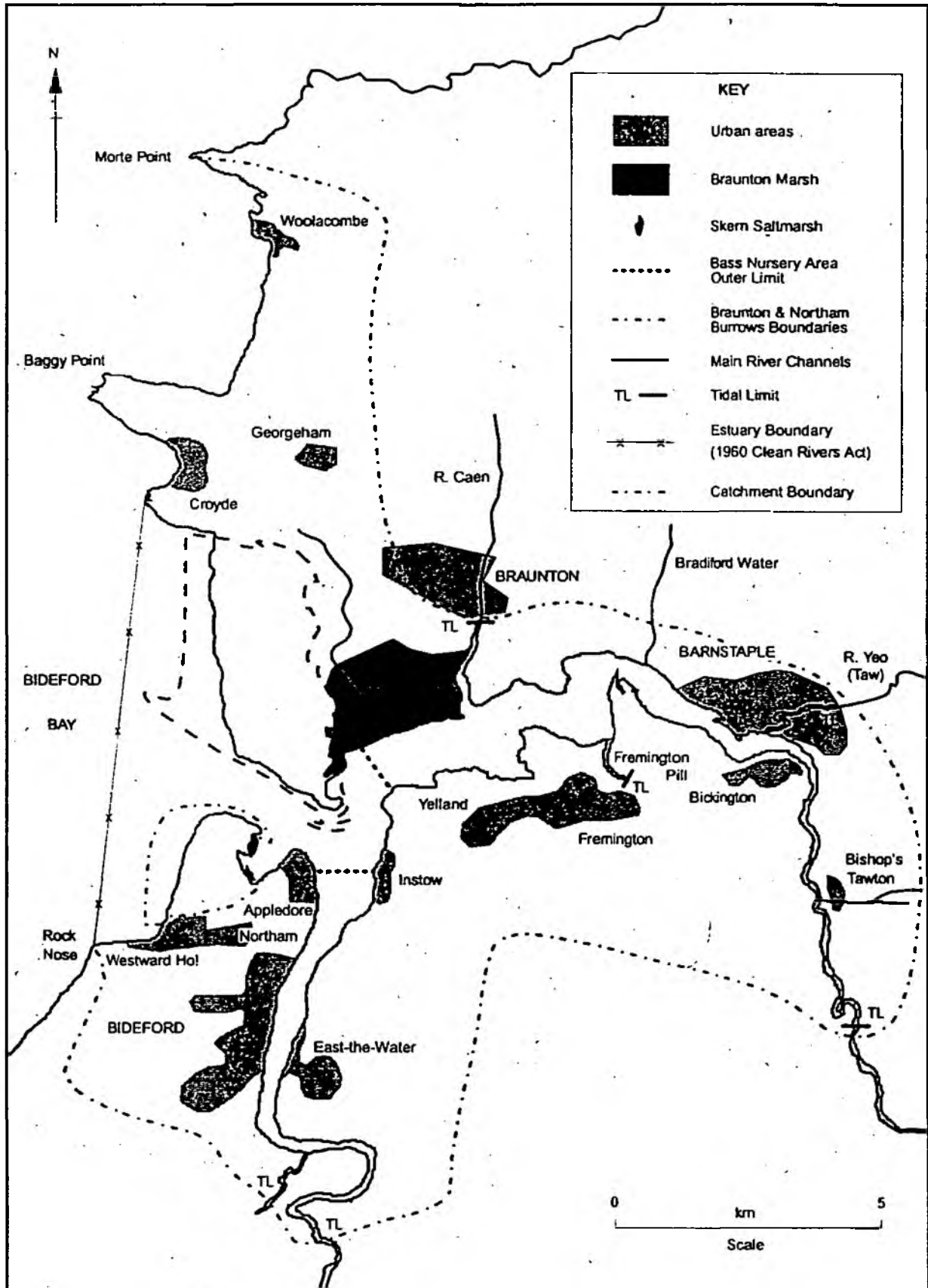
Figure 1 Effluent Disposal, Flood Defence and Mineral Extraction Issues Map





**TAW/TORRIDGE ESTUARY CATCHMENT**  
**Natural Resources Issues Map**

Figure 2



## APPENDIX 1

### GLOSSARY

**Biodiversity** - The total range of the variety of life on earth or any given part of it.

**Eutrophication** - The enrichment of a water body with plant nutrients which alleviates a shortage of a limiting substrate and thereby causes the excessive growth of algae which results in a general decline in water quality.

**Macroinvertebrates** - A large invertebrate, e.g. jellyfish, snail, fly.

**Macrophytes** - These are plants that are large enough to be easily seen, readily identifiable in the field without microscopes and are found submerged, emergent, floating or at the water's edge. They include large algae, lichens, bryophytes (liverworts and mosses), ferns, horsetails and all higher plants which are aquatic or associated with the water's edge.

**Net Limitation Order** - An order made by the Agency and confirmed by MAFF which defines the number of licensed nets which may operate in a fishery. This order allows the fishery to be regulated by restricting fishing effort.

**Polluted Water** - Under the EC Nitrates Directive (91/676/EEC) (Ref. 7) these are waters which are eutrophic in terms of nitrogen or at risk of shortly becoming so unless protective action is taken. They must be identified as polluted waters (eutrophic) and the areas of land draining to these waters, which contribute to their nitrate pollution, must be designated as vulnerable zones and restrictions on agricultural activities imposed.

**Salmonid** - Game fish of the salmon family, e.g. salmon, trout and sea trout.

**Sensitive Area** - Under the EC UWWT Directive (Ref. 4) these are areas which receive discharges serving population equivalents greater than 10,000 and also where surface waters are or may become eutrophic in the near future.

**Spat** - Shellfish larvae.

**Task Force** - an intensive investigation of possible sources of pollution following non-compliance with water quality objectives in the catchment.

### UNITS

km	kilometre
km <sup>2</sup>	kilometre squared
cm	centimetre
mm	millimetre

## ABBREVIATIONS

ACC	Avon County Council
ADAS	Agricultural Development and Advisory Scheme
AGENCY	Environment Agency
AMP2	Asset Management Plan 2
BAFF	Biologically Activated Flooded Filter
BOD	Biological Oxygen Demand
CoCo	Countryside Commission
DCC	Devon County Council
DoE	Department of the Environment
DSFC	Devon Sea Fisheries Committee
DWT	Devon Wildlife Trust
EC	European Community
EEC	European Economic Community
EHOs	Environmental Health Officers
EN	English Nature
IDB	Internal Drainage Board
LAs	Local Authorities
LPA	Local Planning Authority
MAFF	Ministry of Agriculture, Fisheries and Food
MMC	Monopolies and Mergers Committee
MOD	Ministry of Defence
NDDC	North Devon District Council
NGOs	Non-Government Organisations
NLO	Net Limitation Order
NRA	National Rivers Authority
RCS	River Corridor Survey
R&D	Research and Development
SCC	Somerset County Council
SDC	Sedgemoor District Council
SNIFFER	Scottish and Northern Ireland Forum for Environmental Research
STW	Sewage Treatment Works
SWWSL	South West Water Services Limited
TDC	Torridge District Council
TTEF	Taw and Torridge Estuary Forum
UV	Ultra-Violet
UWWTD	Urban Waste Water Treatment Directive
WDC	Woodspring District Council
WLMP	Water Level Management Plan
WSDC	West Somerset District Council

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