

NRA South West 366

Hampshire Avon
Catchment
Management
Consultation
Report
Summary



NRA

National Rivers Authority

Guardians of
the Water Environment

October 1992

INTRODUCTION

The National Rivers Authority (NRA) is responsible for managing all aspects of the water environment in rivers and underground waters, and also has wide responsibilities in estuaries and coastal waters. The NRA is responsible for:

- conserving water resources and controlling abstraction
- improving water quality and controlling pollution
- providing flood defences and flood warning systems
- protecting and improving fisheries and recreation facilities
- promoting nature conservation in water related habitats

The natural geographical unit within which these responsibilities are discharged is the **river catchment**.

The NRA recognises that it can only carry out its work by adopting the concept of **integrated catchment management**. This means that a river catchment must be considered as a whole and the actions in each of the NRA's areas of responsibility must have due regard for the impacts on other areas.



The water environment is affected by all the activities which take place within the catchment. The NRA does not have control over all these. It must therefore cooperate with a wide range of other people and organisations if its work is to be effective.

The NRA has determined that, in carrying out its duties, it should reflect the needs and aspirations of the general public and in particular all those who are 'users' of the water environment.

The prime means of promoting these objectives is by the preparation of **Catchment Management Plans**.

The '**Hampshire Avon Catchment Management Plan**' is the first to be prepared in this Region; and this document is a summary of the Consultation Report which represents the NRA's initial analysis of the issues within the catchment.



YOUR VIEWS

The Hampshire Avon Catchment Management Consultation Report is our analysis of all the issues facing the catchment. The most important issues and some options for action are listed in this summary.

We want to hear your views.

- Have we identified all the issues?
- Have we identified all the options for solutions?
- Have you any comments on the issues and options listed?

If so, we would like to hear from you.

To comment on the Hampshire Avon Catchment Management Consultation Report, or to obtain a copy of the full document please write to:

**Catchment Planning
Department,
National Rivers
Authority,
Wessex Region,
Rivers House,
East Quay,
Bridgwater,
Somerset, TA6 4YS**

If you wish to discuss the report please ask for the "Avon Study Desk". Phone Bridgwater (0278) 457333

One of our team will be on duty during office hours to speak to you.

Comments are best sent in writing and should be received by Friday January 29, 1993.



ENVIRONMENT AGENCY



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THE CONSULTATION REPORT

The first stage of the catchment management plan process, which is being adopted by the NRA throughout England and Wales, is an analysis of the catchment by NRA staff.



- Information is collated on:
 - known and possible uses of the river, estuary and adjacent coastal waters
 - the environmental requirements of these uses, in terms of water quantity, water quality and the physical environment

A comparison is made between these environmental requirements and the current state of the catchment. Deficiencies emerge, and important factors are identified as the study proceeds. Finally, a list of issues is produced.

These issues are then considered and some options for resolving problems are identified and listed. In this report the issues have been listed under the following headings:

- water quality
- water resources
- physical features
- fisheries
- multifunctional/conflicts
- development
- visionary - this final heading aims to look ahead at the way the catchment might be managed in the future

The above headings show that some issues involve a number of aspects of catchment management. If conflicts are to be resolved a balance must be struck between them.

One of the most important issues is the need to bring together development control policies in the catchment because the catchment includes parts of several different planning authority areas. There are also a number of other public bodies with interests in the catchment.

The NRA intends that the final Catchment Management Plan will provide a framework for its work in the catchment. That is why we have not just considered existing problems; the plan must have a vision for the future.

THE HAMPSHIRE AVON CATCHMENT

Although the river is generally known as the Hampshire Avon, its catchment includes parts of the counties of Dorset, Hampshire and Wiltshire.

Most of the catchment drains the chalk downland of Salisbury Plain and the South Wiltshire Downs. The lower part of the catchment includes part of the New Forest.



In addition to the River Avon river itself, the report also covers Christchurch Harbour (which is effectively an estuary of the rivers Avon and Stour) and coastal waters off Christchurch. The River Stour itself will be the subject of a future Catchment Management Plan.

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CATCHMENT STATISTICS

GENERAL

Area	1701 sq km
Population	200,000

WATER RESOURCES

Average annual rainfall	770mm (at Salisbury)
Average flow from catchment at Knapp Mill	19.7 m ³ /sec
Dry Weather flow from catchment (5%ile flow) at Knapp Mill	6.0 m ³ /sec
Total licensed abstraction	466,400 ML/a
Nett licenced abstraction	112,450 ML/a

WATER QUALITY

(from 1990 River Quality Survey)

Length in Class A	284 km
Length in Class 1B	78 km
Length in Class 2	6 km

FLOOD DEFENCES

Length of statutory main river	322 km
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Abbreviations: - sq km = square kilometres, m³/sec = cubic metres per second, ML/a = megalitres (million litres = thousand m³) per annum.

LAND USE

The catchment is predominantly rural. The largest towns are Amesbury, Christchurch, Fordingbridge, Pewsey, Ringwood, Salisbury, and Warminster.

The population living within the catchment is about 200,000. Some 60% live in the larger towns.

Industry is mostly light and located in the towns. There are a number of Ministry of Defence establishments which also include engineering facilities.

HAMPSHIRE AVON CATCHMENT: SHOWING SIMPLIFIED GEOLOGY



Agriculture in the catchment is diverse with arable land predominantly in the upper catchment and grassland in the valleys and lower catchment. The Avon Valley is highly regarded in terms of its nature conservation interest.

Tourism is important particularly in the Christchurch area and at Salisbury. In both cases, the water environment is a feature.

DEVELOPMENT

Within the catchment, current Structure Plan proposals indicate an additional 7000 dwellings by 2001.

In addition to developments within the catchment itself, the Hampshire Avon is a major potential source of water for development in adjacent areas such as Bournemouth, Poole and East Dorset.

WATER QUALITY

RIVER QUALITY SURVEY OF RIVERS IN THE HAMPSHIRE AVON CATCHMENT

River Classification	Length (km)	% of river
Class 1A - Good	284	77
Class 1B - Good	78	20
Class 2 - Fair	6	2
Class 3 - Poor	0	0
Class 4 - Bad	0	0

The River Water Quality Survey in 1990 showed that, of the 368km of rivers in the Hampshire Avon catchment, 97% were classified as 'Good'.

Rivers in the catchment receive the effluents from 32 significant sewage works. There is only one industrial process discharge direct to the river.

Some headwater stretches, notably on the Western Avon and Nadder, are affected by farm discharges.

There are EC identified bathing waters off the beaches at Christchurch and Bournemouth and bathing water quality is generally good.

Groundwater from the chalk aquifer within the catchment is of excellent quality. It forms a major part of the base flow of the river. Winter rains, collected underground, form a major part of the summer flows.

WATER RESOURCES

There are important abstractions for public water supplies from both ground and surface waters in the catchment. As would be expected from the geology, groundwater is used mostly in the upper part of the catchment. Large quantities of water are taken from the lower stretches of the river between Ringwood and Christchurch.

Other major abstractions are made for fish farming, although in these cases the water is returned relatively close to its point of abstraction.

The total licensed nett abstraction is about 20% of the water available by recharge in an average year or 30% in a drought year. (This includes the major surface water abstractions from the lower catchment).

The impact of groundwater abstraction has been emphasised in the recent dry years. A separate study of abstraction and river flows in the Upper Avon Catchment is underway. To meet increasing water use it will be necessary to take more water for public water supply from the Hampshire Avon. New schemes will require careful management.

FLOOD PROTECTION

The NRA is responsible for protecting land and property from both river and tidal flooding. Over the years a number of schemes to reduce flooding in towns have significantly reduced flood risks.

Improved defences might be considered for Christchurch Harbour and in the area where the Avon and Stour join. These are at risk to flooding through the combination of high river flows and tidal surges.

The emphasis of improved drainage of agricultural land has changed in recent years. The proposed Avon Valley Environmentally Sensitive Area (ESA) may lead to some land being managed to maintain or increase the wetness and seasonal flooding.

The annual cutting of river weed (mainly *Ranunculus spp*) has been a feature of river management for many years. Whilst it has been carried out mainly for drainage purposes, weedcutting may help fly fishing but could harm other nature conservation interests.

FISHERIES

The Hampshire Avon is renowned for the quality of its fisheries. Salmon fishing is important below Salisbury and there is high quality trout fishing on the Upper Avon and the main tributaries. The river is famous for its coarse fishing downstream of Salisbury.



There are concerns about the salmon fishery with suggestions of decline particularly in large 'spring' fish. Arising from discussions about the coarse fishery during the mid 80's, the NRA has been comprehensively monitoring stocks in recent years.

There is a commercial salmon netting fishery in Christchurch Harbour.

CONSERVATION

Nature conservation is a particularly important issue in the Hampshire Avon. Large areas in the Lower Avon valley are scheduled as Sites of Special Scientific Interest (SSSI's) and these include sections of the river itself. This part of the valley is also important for birds.



An important nature conservation factor in the Lower Avon is the high water table and periodic flooding. Drainage and development in the catchment are seen by conservationists to have caused some decline in the quantity and quality of valuable habitats in recent decades. As a result of renewed awareness of environmental issues, the Lower Avon Valley was recently identified as one of the proposed new ESA's.

ISSUES AND OPTIONS

The following list of 30 issues have been identified by the NRA in its examination of the catchment. They are grouped under the following headings: Water Quality (issues 1 - 10), Water Resources (issues 11 - 12), Physical Features (issues 13 - 14), Fisheries (issues 15 - 18), Multifunctional/Conflicts (issues 19 - 25), Development (issues 26 - 27), and Visionary (issues 28 - 30).

We would like to hear from you if:

- You think there are additional issues which we have not identified.
- You think there are additional options for action which we have not identified.
- You have any views on the options suggested.
- You have any other relevant comments on the catchment and its future management.

SUMMARY OF ISSUES AND OPTIONS

WATER QUALITY ISSUE

ISSUE 1: IMPACT OF SEWAGE TREATMENT WORKS WARMINSTER AND SALISBURY			
Options	Responsibility	Advantages	Disadvantages
WARMINSTER			
1 Review discharge consent conditions for Warminster STW and storm overflows	NRA	Improved water quality	
2 WWS to undertake survey of sewerage system	WWS	Provide data for correct decision making	Costs
3 WWS to update Warminster STW	WWS	Improved water quality	Costs
4 WWS to update sewerage system (dependent on outcome of item 3)	WWS	Improved water quality	Costs
SALISBURY			
1 Undertake detailed survey of impact of Salisbury STW (particularly DO impacts)	NRA	Provide data for correct decision making	
2 Review consent conditions for STW and storm overflows	NRA	Improvement in water quality	
3 WWS to undertake survey of sewerage system	WWS	Provide data for correct decision making	
4 WWS to uprate Salisbury STW	WWS	Improved water quality	Costs
5 WWS to uprate sewerage system (especially SSO's) (dependent on the outcome of item 3)	WWS	Improved water quality	Costs

ABBREVIATIONS USED IN ISSUES TABLES

- STW - Sewage Treatment Works
- WWS - Wessex Water Services
- NRA - National Rivers Authority
- DO - Dissolved Oxygen
- R&D - Research and Development
- MAFF - Ministry of Agriculture, Fisheries and Food
- Biwater - Biwater Limited, parent company of West Hampshire Water Company and Bournemouth and District Water Company
- MOD - Ministry of Defence
- DoT - Department of Transport
- ESA - Environmentally Sensitive Area

WATER QUALITY ISSUE

ISSUE 2: IMPACT OF FARM DISCHARGES-WESTERN AVON, EASTERN AVON, R. SEM AND NADDER			
Options	Responsibility	Advantages	Disadvantages
1 Review current situation with farm discharges	NRA/Farmers	Improved basis for decision making	
2 Determine realistic water quality objectives	NRA	Avoid unattainable targets/ inappropriate cost penalties	Less than pristine quality would have to be accepted
3 Undertake further pollution control initiatives	NRA/Farmers	Improved water quality	Costs to farmers
4 Explore scope for 'extensification' or changed farming activities in problem catchments	NRA/MAFF Farmers	Improved water quality	Would require incentive compensation schemes

WATER QUALITY ISSUE

ISSUE 3: PESTICIDES IN LOWER AVON AND NADDER			
Options	Responsibility	Advantages	Disadvantages
1 Investigate occurrence and endeavour to identify sources	NRA	Improved data for decision making	Costs and uncertainty of identification of controllable sources
2 Discuss survey results with Water Companies	NRA/WWS/ Biwater		
3 Ensure improved Water Supply treatment to remove pesticide	WWS/Biwater	Compliance with EC Standards	Costs
4 Attempt to control sources in catchment	NRA	Improved quality/ compliance with EC Standards	Uncertainty of positive outcome - possible costs to agriculture and other pesticide users
5 Lobby central Government for improved national controls on problem pesticides	NRA/Water Co's	Long term elimination of problem	Uncertainty - may take long time for effects

WATER QUALITY ISSUE

ISSUE 4: GROUNDWATER CONTAMINATION				
	Options	Responsibility	Advantages	Disadvantages
1	Maintain liaison and data exchange between NRA and Water Companies	NRA/Water Companies	Exchange of information for decision making	
2	Investigate sources of pesticide contamination	NRA	Improved data for decision making	Uncertainty of positive outcome
3	Investigate other sources of contamination (including MOD sites)	NRA/ Abstractors	Improved data for decision making	
4	Influence pesticide users re quantities, methods and types of pesticides used	NRA	Reduce risks, improve compliance with EC Standards	Costs to users and slow results
5	Provide appropriate additional treatment where necessary	Water Companies	Compliance with EC Standards	Costs

WATER QUALITY ISSUE

ISSUE 5: MINISTRY OF DEFENCE BASES				
	Options	Responsibility	Advantages	Disadvantages
1	Improve liaison with MOD establishments and survey current pollution risks	NRA/MOD	Increase awareness of issues in MOD and improve data for decision making	
2	Improve (1) pollution control practices and (2) pollution control infrastructure at MOD sites	MOD	Reduction of pollution risks and improved water quality	Costs

WATER QUALITY ISSUE

ISSUE 6: STORM SEWAGE OVERFLOWS AND SURFACE WATER DISCHARGES				
	Options	Responsibility	Advantages	Disadvantages
1	Improve monitoring to identify problem storm overflows and surface water discharges	NRA	Improved basis for decision making	Cost
2	Continue and extend sewer survey programme	WWS	Improved basis for decision making	
3	Uprate sewerage systems and eliminate unsatisfactory overflows	WWS	Improved water quality	Cost
4	Improve safeguards/treatment on problem surface water discharges	WWS	Improved water quality, reduced no. pollution incidents	Costs, and maintenance problems
5	Ensure that new surface water drainage systems for domestic and industrial developments have adequate safeguards and treatment	NRA/WWS Planning Authorities	Protection of water quality	Costs, and maintenance problems

WATER QUALITY ISSUE

ISSUE 7: BLASHFORD LAKES INTAKE			
Options	Responsibility	Advantages	Disadvantages
1 Monitor operation of intake	NRA/WS	Identification of future problems	
2 NRA to issue consent for backwash operations	NRA	Appropriate controls established	Difficulties of drafting consent
3 WWS continue to operate frequent backwash regime	NRA/WWS	Minimise silt accumulation and disturbance	

WATER QUALITY ISSUE

ISSUE 8: IMPACT OF WATERCRESS FARMS			
Options	Responsibility	Advantages	Disadvantages
1 NRA to issue consents to discharge	NRA	Control of discharge quality, protection of water quality	Costs
2 Settlement facilities to be installed	Watercress growers	Control of suspended solids	
3 Growers to use only pesticides with MAFF approval for off-label use	Watercress growers	Protection of water quality	

WATER QUALITY ISSUE

ISSUE 9: WATER QUALITY IN CHRISTCHURCH HARBOUR IN RELATION TO RECREATION			
Options	Responsibility	Advantages	Disadvantages
1 Consider inclusion of Public Health related microbiological standards in Statutory Water Quality Objectives	NRA (Nationally)	Development of sound basis for setting quality targets	Technically difficult. May not be possible to develop robust standards
2 Set appropriate use related standards (following consultation)	NRA	Clear public agreed targets	Bacteriological quality may not be controlled adequately by point discharges
3 Install appropriate disinfection plant at relevant STW's (if found to be appropriate)	WSS	Improved bacteriological quality	Costs, and may not ensure adequate quality at all times-diffuse sources

WATER QUALITY ISSUE

ISSUE 10: EUTROPHICATION OF THE RIVER (DIATOM ALGAL BLOOMS)			
Options	Responsibility	Advantages	Disadvantages
1 Review nutrient data	NRA	Provide basis for decision making	
2 Undertake investigation of algal growth	NRA	Provide basis of decision making	Cost
3 Consider designation as vulnerable zone or sensitive area under EC Nitrate or Urban Waste Water Directive	NRA	Provide framework for the control of inputs	Cost (WWS and agriculture)
4 Develop programme for nutrient reduction (if feasible). Might include nutrient reduction at STW and agricultural controls	NRA/WWS/ MAFF	Reduction in nutrient inputs	Cost Uncertainty of outcome

WATER RESOURCES ISSUE

ISSUE 11: SUSPECTED IMPACTS OF ABSTRACTION ON FLOWS IN SOME UPPER TRIBUTARIES			
Options	Responsibility	Advantages	Disadvantages
1 Investigate impact of a abstraction in Upper Avon and tributaries	NRA	Provide basis for decision making	
2 Bed lining to reduce leakage through river bed	NRA	Improve flow regime in affected stretches	Cost and benefits may be very limited
3 Provide (additional) compensation flows	NRA/Water Companies	Improve flow regime in affected stretches	Cost, and may only be genuinely useful in conjunction with 4
4 Development of alternative resources	NRA/Water Companies	Improve flow regime in affected stretches	Cost, and limited opportunities
5 Revocation of modification of existing licences	NRA	Provide statutory remedy	Cost-compensation and would require alternative sources

WATER RESOURCES ISSUE

ISSUE 12: PRESSURE ON WATER RESOURCES IN LOWER AVON CATCHMENT			
Options	Responsibility	Advantages	Disadvantages
1 Enhanced leakage control by Water undertakers	Water Companies	Reduced demand	Costs, and diminishing benefits
2 Introduction of water metering	Government/ Water Companies	Reduced demand	Costs, and benefits uncertain
3 Identification of potential storage basins in Lower Catchment	NRA/Water Companies	Potential for winter storage	Costs, and other environmental constraints
4 Comprehensive water resources scheme for catchment	NRA/Water Companies	Sensitive management of catchment resources	Costs, and long term nature of solution

PHYSICAL FEATURES ISSUE

ISSUE 13: POSSIBLE IMPACT OF EARLIER FLOOD DEFENCE SCHEMES AND DREDGING, RESULTING IN DEGRADATION OF THE RIVERINE ENVIRONMENT IN SOME LOCATIONS			
Options	Responsibility	Advantages	Disadvantages
1 Identify areas with potential for restoration and determine costs	NRA	Provide basis for decision making	
2 Undertake restoration schemes (if identified and cost effective)	NRA	Improve habitats and landscape	Costs

PHYSICAL FEATURES ISSUE

ISSUE 14: SILTATION AND COMPACTION OF SALMONID SPAWNING GRAVELS			
Options	Responsibility	Advantages	Disadvantages
1 Undertake investigation of condition of spawning gravels	NRA	Provide basis for decision making	
2 Undertake investigation of sources of silt reaching river	NRA	Provide basis for decision making	
3 Investigate benefits of rehabilitation of gravels and methods available	NRA	Provide basis for remedial activities	Possible impacts on other river interests
4 Prepare guidelines for silt management	NRA	Improve river conditions	Reduce negative impacts of remedial work

Abbreviations: see page 11

PHYSICAL FEATURES ISSUE

ISSUE 14 CONT.: SILTATION AND COMPACTION OF SALMONID SPAWNING GRAVELS				
Options	Responsibility	Advantages	Disadvantages	
5	Consider possible long term policies to reduce silt inputs (land use changes, buffer zones)	NRA/MAFF	Improve river conditions	Costs, economic implications of land use changes

FISHERIES ISSUE

ISSUE 15: DECLINE IN CATCHES OF LARGE SPRING SALMON				
Options	Responsibility	Advantages	Disadvantages	
1	Restrict net fishing for salmon in Christchurch Harbour to the period 15 April - 31 July	NRA/MAFF	Promote spawning of 3 sea winter fish	Economic implications for netmen
2	Restrict rod fishing to fly only before 15 May	NRA/MAFF	Promote spawning of 3 sea winter fish	Economic implications for fishery owners/managers
3	Assist in national investigation of declining 3 sea winter fish	NRA/MAFF	Provide basis for decision making	
4	Investigate genetic implications of restocking and feasibility of restocking programme	NRA	Provide basis for decision making	
5	Investigate condition of gravels for spawning in Avon catchment (see Issue 14)	NRA	Provide basis decision making	

FISHERIES ISSUE

ISSUE 16: THE COARSE FISHERY BETWEEN DOWNTON AND FORDINGBRIDGE				
Options	Responsibility	Advantages	Disadvantages	
1	Further detailed investigation to identify the causes of observed uneven distribution of juvenile fish	NRA	Provide basis for decision making	

FISHERIES ISSUE

ISSUE 17: ILLEGAL FISHING IN CHRISTCHURCH HARBOUR			
Options	Responsibility	Advantages	Disadvantages
1 Fishery owners maintain and increase patrols to combat poaching	Fishery owners	Control poaching, reduce impact on spawning population	Costs
2 NRA to maintain surveillance and patrols and improve techniques using new technology	NRA	Control poaching, reduce impact on spawning population	Costs

FISHERIES ISSUE

ISSUE 18: IMPACT OF SWANS AND PREDATORS			
Options	Responsibility	Advantages	Disadvantages
1 Monitor numbers, distribution uses and impact of swans on river uses	NRA/Riparian owners	Provide basis for decision making	Action must comply with relevant legislation eg Wildlife and Countryside Act
2 Cull or translocate swans from problem areas	Riparian Owners/MAFF	Reduce numbers swans in areas of nuisance	
3 Await outcome of NRA R&D project on impact of predators	NRA	Provide basis for decision making	

FISHERIES ISSUE

ISSUE 19: CONFLICT BETWEEN ABSTRACTION FROM THE LOWER AVON AND THE FLOW REQUIREMENTS FOR THE MIGRATION OF SALMON			
Options	Responsibility	Advantages	Disadvantages
1 Develop prescribed flow thresholds and operating rules applicable to further development of abstraction from Lower Avon	NRA	Permit increased abstraction whilst allowing salmon movement	
2 Identify and develop additional bank-side storage on Lower Avon	NRA/Water Companies	Permit operation of prescribed flow operating rules	

MULTIFUNCTIONAL ISSUE/CONFLICT

ISSUE 20: WEEDCUTTING				
Options	Responsibility	Advantages	Disadvantages	
1	Review 'code of practice' on Weedcutting	NRA	Monitor impact and performance of weedcutting practice	
2	Consider reduction of weedcutting programme	NRA/ Operators	Raise water levels re ESA, improve habitats for birds, improve habitats for coarse fish	Interference with salmon fishing
3	Improve disposal arrangements for cut weeds	NRA/Riparian Owners	Prevent pollution and nuisance	Costs

MULTIFUNCTIONAL ISSUE/CONFLICT

ISSUE 21: LACK OF WEED AT NETHERAVON				
Options	Responsibility	Advantages	Disadvantages	
1	Monitor weed distribution and growth and other relevant environmental parameters	NRA	Provide basis decision making	May be difficult to establish cause and effect relationships

MULTIFUNCTIONAL ISSUE/CONFLICT

ISSUE 22: IMPACT OF LARGE TROUT FARMS ON THE HAMPSHIRE AVON				
Options	Responsibility	Advantages	Disadvantages	
1	Continue monitoring and rigorous enforcement of statutory controls	NRA	Protection of river flow and quality	
2	Encourage improved treatment and flow monitoring at fish farms	NRA/ Operators	Improved compliance with controls, protection of water quality	Costs
3	Continue to improve screening of intakes and fish passes	NRA/ Operators	Less interference with fish movements	Costs
4	Resist development of further large fish farms	NRA	Precautionary approach to environmental protection	Objections subject to appeal

MULTIFUNCTIONAL ISSUE/CONFLICT

ISSUE 23: BRITFORD AREA - FLOW APPORTIONING			
Options	Responsibility	Advantages	Disadvantages
1 Limit number of control operators	NRA/Riparian Owners	Clear operational responsibility	Will require agreement of all parties
2 Improve maintenance of control structure	Riparian owners	Improve ease of precision of control	Costs
3 Survey of bed profile re dredging	NRA	Provide basis for decision making	Costs
4 NRA to maintain co-ordination role	NRA	Potential for agreement of improved operating rules	Requires co-operation of all riparian owners
5 Construction of fish pass(es)	NRA	Improved fish migration	Costs

MULTIFUNCTIONAL ISSUE/CONFLICT

ISSUE 24: THE OPERATION OF WATER LEVEL STRUCTURES			
Options	Responsibility	Advantages	Disadvantages
1 Identify opportunities for beneficial raising of water levels	NRA/Riparian owners	Potential habitat improvements for nature conservation and fish, landscape enhancement	Care to avoid negative impacts on fish migration and habitat

MULTIFUNCTIONAL ISSUE/CONFLICT

ISSUE 25: GLOBAL WARMING AND SEA LEVEL RISE			
Options	Responsibility	Advantages	Disadvantages
1 Build in adequate freeboard provision for future raising of new sea defences	NRA	Provide for predicted sea level rises	Costs
2 Prevent new development in vulnerable areas	NRA/Planning Authorities	Avoid new development in risk areas	

DEVELOPMENT ISSUE

ISSUE 26: DEVELOPMENT CONTROL				
Options	Responsibility	Advantages	Disadvantages	
1	Include relevant policies in Structure and Local Plans	NRA/Planning Authorities	Protection of water environment and NRA interests	Costs
2	Encourage enhancement of river corridor features in Structure and Local Plans	NRA/Planning Authorities	Enhancement of the water environment and landscape	
3	Encourage cross boundary consistency between Planning Authorities within catchment	NRA/Planning Authorities	Consistent policies for catchment	
4	Improve liaison between NRA and Planning Authorities	NRA/Planning Authorities	Improved understanding of NRA's interest	

DEVELOPMENT ISSUE

ISSUE 27: NEW ROADS AND BYPASSES (IMPACT OF SALISBURY BYPASS)				
Options	Responsibility	Advantages	Disadvantages	
1	Incorporate flood protection measures into all new schemes	NRA/Highway Authorities/ DoT	Avoid increased flood risk	DoT
2	Incorporate pollution control measures into all new road schemes	NRA/Highway Authorities/ DoT	Avoid pollution risks	
3	Ensure nature conservation and landscape aspects of river corridors are protected in all new road schemes	NRA/Highway Authorities/ DoT	Protect nature conservation and landscape	Costs

VISIONARY ISSUE

ISSUE 28: MANAGEMENT OF WATER LEVELS TO IMPROVE HABITAT FOR NATURE CONSERVATION AND REINSTATEMENT OF WATER MEADOW SYSTEMS				
Options	Responsibility	Advantages	Disadvantages	
1	Promote ESA Scheme for Avon Valley	MAFF	Provide financial support for environmentally sensitive farming	Economic impacts on farmers/ landowners
2	Propose areas for participation in ESA	Landowners	Support ESA initiative improve habitats	Costs
3	Respond to requests for assistance in development of ESA schemes for specific farms or parcels of land	NRA	Support ESA initiative	Costs, resource implications

VISIONARY ISSUE

ISSUE 28 CONT.: MANAGEMENT OF WATER LEVELS TO IMPROVE HABITAT FOR NATURE CONSERVATION AND REINSTATEMENT OF WATER MEADOW SYSTEMS			
Options	Responsibility	Advantages	Disadvantages
4 Identify areas with potential for raising water levels as part of ESA	MAFF/NRA	Support ESA Tier 2 initiative	Costs, resource implications
5 Identify watermeadow areas suitable for restoration	Landowners NRA	Restore landscape of valley and improve habitats	Costs, resource implications

VISIONARY ISSUE

ISSUE 29: INCREASE PUBLIC ACCESS			
Options	Responsibility	Advantages	Disadvantages
1 Investigate potential for increased land based public access to rivers and river corridors	NRA/ Highway Authorities	Provide basis decision making	
2 Investigate potential for increased water based public access to rivers	NRA/Riparian owners/Local Authorities/ Sport bodies	Provide basis for decision making	
3 Promote selected access initiatives	NRA/Relevant interests	Improve public access to river in selected areas	Potential conflict with other river uses

VISIONARY ISSUE

ISSUE 30: BUFFER ZONES			
Options	Responsibility	Advantages	Disadvantages
1 Investigate potential use of riverside buffer zones to improve river corridor habitats and determine potential benefits for water quality/silt control	NRA	Provide basis for decision making	
2 Promote buffer zone schemes	NRA/MAFF Landowners	Improved river corridor habitats, possible water quality benefits	Economic impacts will probably require financial support mechanism



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