



NRA

WARWICKSHIRE AVON
CATCHMENT MANAGEMENT PLAN

FIRST ANNUAL REVIEW
October 1994 - October 1995



National Rivers Authority

SEVERN-TRENT REGION
LOWER SEVERN AREA

CONTENTS

		Page No
Section 1.0	Vision for the Catchment	1
Section 2.0	Introduction	2
Section 3.0	Summary of Progress	3
Section 4.0	Future Review	6
Section 5.0	Monitoring Report	7
Appendix 1	Current State of Development Plans	23
Appendix 2a	Notes on implementation of new River Water Quality Schemes	24
Appendix 2b	RE objectives - Warwickshire Avon and its Tributaries	25

EXECUTIVE SUMMARY

This Annual Review summarises the progress made in achieving targets to improve the water environment in the Warwickshire Avon Catchment in the year since publication of the Final Plan in October 1994. There has been good progress generally by all responsible parties in carrying out the actions planned for this year. It is particularly pleasing to note that many actions have been carried out by organisations working in collaboration with others.

There were 34 issues highlighted in the Plan with a total of 83 actions over the 5 year plan period. Of these 17 have been completed, plus 3 ahead of schedule. A total of 59 actions are currently on target with 18 of these in partial completion (i.e. specific interim targets have been achieved) and 3 in the Plan for post 1995/96. 1 action will not go ahead (as a result of a feasibility study recommendation). 2 actions have been deferred to a later date within the Plan.

ENVIRONMENT AGENCY



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The following documents relating to the Warwickshire Avon Catchment Management Plan are available:

Consultation Report March 1994
Final Plan October 1994

If you wish to make enquiries about or would like copies of any of these documents please contact:

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1.0 VISION FOR THE CATCHMENT

- * To maintain and improve water quality and to safeguard the high environmental quality of the rivers used for drinking water purposes - River Avon upstream of Rugby, River Leam and River Severn downstream of the confluence at Tewkesbury.
- * To reduce nitrate and phosphate input from sewage treatment works and agricultural sources such that the ecology of the river is closer to the natural state and to reduce the potential for blue-green algae formation.
- * To ensure that present and future navigation and other recreational pursuits are environmentally acceptable.
- * To ensure that the flow in the watercourses is not taken below an environmentally acceptable level by abstractions from the river or groundwater sources.
- * To ensure that there is an agreed water resource strategy for the river and canal system which protects their ecology and established uses. This should allow for future development.
- * To ensure that the river corridor and groundwater resources in the catchment are protected from the effects of new development by close liaison with Local Authorities and developers.
- * To ensure that new development does not increase the risk of flooding by increased run-off or loss of flood plain.
- * To conserve and enhance all components of the river corridor landscape.
- * To provide flood defences to protect people and property at risk from flooding where this is cost effective and environmentally acceptable.
- * To maintain and develop the existing good coarse and trout fisheries and to improve fish stocks by the provision of passes for eels, elvers and coarse fish.
- * To conserve and, where possible, enhance the quality of riparian and wider catchment wildlife habitats of all kinds, including species of special conservation interest in the Avon Catchment.
- * To seek the removal of unsatisfactory storm sewage overflows in urban areas.
- * To identify, and work towards the elimination of, pollution from contaminated land.
- * To maintain weirs and other structures which are essential for navigation and conservation interests by assisting the owners in all practical ways.

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- * To encourage further recreation and conservation use of the catchment where this is compatible with other uses of the river.

Establishing strong NRA involvement and links with local communities and their representatives is seen to be necessary to ensure local views are respected and future development decisions respect this vision for the catchment. We will therefore:

- * work with all relevant parties to implement the principles of sustainable development.

2.0 INTRODUCTION

The process of Catchment Management Planning is used by the NRA to provide an integrated framework for the planning of river catchments especially where one activity may have an impact on another elsewhere in the catchment. Through the involvement of local interests, the process realises the environmental potential of a catchment by identifying the activities and priorities of a wide variety of partners involved in the water environment. The first stage is the production of a Consultation Report. This outlines the Issues within a catchment and options for their solution. Following a period of consultation, an Action Plan is produced. This includes an activity plan for improvements to the water environment. It outlines areas of work and investment proposed by the NRA and others. For the Warwickshire Avon CMP, the Consultation Report was published in March 1994 and the Final (Action) Plan in October 1994.

An important part of the CMP process is to monitor the Action Plan to ensure that targets and actions are achieved and that the plan continues to address relevant and significant issues in the catchment in an appropriate manner. This report summarises the progress made since the publication of the Final (Action) Plan in October 1994. It is recommended that this report is read in conjunction with the Final Plan.

The Environment Agency

In April 1996 the NRA will merge with Her Majesty's Inspectorate of Pollution and the Waste Regulation Authorities to form the Environment Agency.

This new body will be responsible for the environmental protection of water, air and waste and will continue to seek to prevent and control pollution.

The partnerships which the NRA has made with others in this catchment will continue as will this CMP. This Annual Review is the first of four up to the major review in October 1999.

2.1 The Catchment

The Warwickshire Avon Catchment drains an area of approximately 2,900 square kilometres. Although mostly rural in character, the City of Coventry and the towns of Rugby, Leamington Spa, Warwick, Stratford upon Avon, Evesham, Lutterworth, Kenilworth, and Redditch all lie within the catchment. The population is around 900,000.

The Avon is a river of great natural beauty representing the best in English landscape and is recognised as a river of very special environmental importance. The river and its tributaries have often been used as a source of water supply as well as a source of power. It is a major amenity and the local economy benefits greatly from the tourism that the river generates.

While there are many problems to overcome the river quality is in a better condition now than it has been for many decades. Only 20 years ago there were no fish present in large stretches but today there are fish along the whole river.

2.2 Assessment of the Catchment and Major Changes since Publication of the Final Plan

The function of this Annual Review is to assess the relevance of the actions in the Final Plan and report on changes in the catchment that have significantly affected the CMP.

The actions in the Final Plan are still considered appropriate, and it has not been necessary to rewrite the CMP. Where any major changes have been made to actions, costs or timescales, these have been highlighted in the tables in Section 5.

There have been considerable changes in the status of Local Authority Development Plans in the catchment since the publication of both the Consultation Document (March 1994) and the Final Plan (October 1994). The current status of Development Plans within the catchment area is summarised in the table in Appendix 1.

The NRA encourages the inclusion of policies in Development Plans which reflect its concerns and responsibilities. Several of the Issues in this Plan have highlighted the importance of this ongoing liaison between the NRA and Local Authorities.

3.0 SUMMARY OF PROGRESS

Considerable progress has been made on a number of issues within the Plan.

There were 34 issues highlighted in the Plan with a total of 83 actions over the 5 year plan period. Of these 17 have been completed, plus 3 ahead of schedule. A total of 59 actions are currently on target with 18 of these in partial completion (i.e. specific interim targets have been achieved) and 3 in the Plan for post 1995/96. 1 action will not go ahead (as a result of a feasibility study recommendation). 2 actions have been deferred to a later date within the Plan.

The following is a summary of significant achievements in this review period October 1994 to October 1995. As noted it should be read in conjunction with Section 5 which details the programmed activities and with reference to the Final Plan document.

Water Quality

Considerable investment has been made in the Catchment to improve water quality. The NRA has invested in specific studies and is stepping up its environmental monitoring activities. These include:

- A project to evaluate impacts of Eutrophication on the Avon: Evaluation accepted and funding acquired for Study which has actually commenced. The Report will be due before the 2nd Annual Review of this CMP.
- Extension of continuous monitoring
 - New station - Saxon Mill Warwick
 - New station - Evesham

Severn Trent Water Limited as part of their ongoing investment programme have progressed in the following areas under the EC Urban Waste Water Treatment Directive:

- Coventry Sewage Treatment Works improvements to:
 - Replace all secondary treatment by March 2000
 - Increase storm tankage by 1998
 - Install Chemical Nutrient Removal by 1998
- Warwick Sewage Treatment Works:
 - Closure of Heathcote WRW has been announced. This will entail diversion to Warwick. Discussions on implications have commenced between the NRA and Severn Trent Water Ltd.

New NRA Schemes

Since publication of the Final Plan the NRA has introduced new schemes for reporting and planning river quality. The new "General Quality Assessment" Scheme (GQA) has replaced the National Water Classification Scheme (NWC) for assessment of quality. Along with the GQA, "River Quality Objectives" (RQOs) are set for individual stretches. Details of these schemes are available in other NRA documents but a brief description is given in Appendix 2, which also contains the GQA and River Quality Objectives for the Avon Catchment.

Water Resources

The NRA has concentrated on the major issues of resource capacity and maintenance of river flows. Actions include:

- Assessment of water resource capacity of groundwaters - new monitoring sites in Cotswolds (wells and springs).
- Enforcement of Bevan Jones Agreement to ensure correct flow in Upper Avon.
- Refurbishment by British Waterways of the Naseby Feeder to alleviate low flows.
- Refurbishment of gauging stations at Besford and Offenham.

Flood Defence

The NRA has an ongoing programme of new flood defence schemes and maintenance of existing facilities. Refurbishment of river structures by Weir and Navigation Trusts have played a significant part in the plans for the Avon. Principle actions of note are:

- Floodplain modelling on River Avon, Arrow and Alne nearing completion.
- Extension of Main river at Battleton Brook, Glebe Farm Brook and Guilders Brook.
- Construction of Beoley Floodbank.
- Feasibility study on a Flood Alleviation Scheme for Stratford (Outcome - Scheme not viable).
- Feasibility study for Bridgend, Warwick ongoing.
- Agreement on a trial period of Avon sluice operations to set control range.
- Sluice and weir refurbishment in conjunction with Avon Weirs Trust: Abbey Mill, Chadbury and Evesham complete, Fladbury ongoing.
- Study of hydropower possibilities at 4 sites on the Avon.

Fisheries, Recreation, Conservation and Navigation

Major achievements have been:

- Compilation of a database of conservation and navigation facilities.
- Publication of Avon Users Handbook.
- User forum set up to resolve conflicts between user groups.

- Completion of an Avon Navigation Warning Scheme 24 hour Flood Warning.
- Provision of sanitary stations.
- New overnight mooring stations in collaboration with UANT and LANT at Weirbrake, Stratford, Barton. (Other sites planned).
- Programme of river corridor rehabilitation. Sites at Leek Wootton, Tocil and Brailes completed and a demonstration site at the Royal Agricultural Society of England Showground at Stoneleigh.
- Extensive river corridor surveys completed.
- River Severn Otter Project (also included in the River Severn Lower Reaches CMP).
- Vale Wildlife project - footpath completed.
- Review of designated areas under the EC Freshwater Fish Directive.
- Gravel scarification at Pennyford Mill and trout restocking.
- Installation of fish passes at Evesham and Chadbury Weirs.

4.0 FUTURE REVIEWS

Annual review reports will be published each year for the period October to October to report progress.

A more comprehensive review will be done at the end of the 5 year Plan period.

5.0 MONITORING REPORT

The following Action Plan tables have been taken from the Final Plan document, and updated to show progress and any changes that have occurred since the Final Plan was published. Progress for each action is summarised in the column on the right hand side. Any changes from the Final Plan are highlighted in bold text.

Notes on Abbreviations

AMP2	Asset Management Plan 1995-2005
APCO	Association of Pleasure Craft Operators
AWT	Avon Weirs Trust
BW	British Waterways
CoCo	Countryside commission
DoE	Department of the Environment
EC	European Community.
EH	English Heritage
EN	English Nature.
FAS	Flood Alleviation Scheme
H & W CC	Hereford & Worcester County Council
LAs	Local Authorities
LANT	Lower Avon Navigation Trust
MAFF	Ministry of Agriculture Fisheries & Food
OFWAT	Office of Water Services
pa	per annum
P Rosewater	Purac-Rosewater
RSPB	Royal Society for the Protection of Birds
STW Ltd	Severn Trent Water Ltd
UANT	Upper Avon Navigation Trust
WCC	Warwickshire County Council
WDC	Wychavon District Council

Notes on Additions and Alterations to the Plan Table

As indicated previously, this is an ongoing Plan and it has been necessary to make some adjustments to it as a result of the past year's activities.

Three actions have been added to Issues 14, 30 and 31 - these are indicated in bold in the Action Plan tables.

Also indicated in bold are any changes to expenditure. Where appropriate there are explanatory notes.

Changes to the programme for some actions have been indicated using the following symbols:

- * Actions within year indicated no longer in plan.
- () Actions added to year indicated.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
1	Changes in the ecology of the river by increasing nutrient levels derived from sewage effluents and agriculture.	a) Research and monitoring of eutrophication in Lower Severn Area. Subject to evaluation of year 1 and funding availability.	N	H	412	=====	=====	=====	=====			
		b) Treatment of sewage effluent for phosphorus and/or nitrogen. EC Directive including AMP II spending by STW LTD.	O STW Ltd	M	>50,000	=====	=====	=====	=====			
2	Compliance of river reaches with River Quality Objectives.	a) Extension of existing sewage works. Work not fully covered by AMP II extend to AMP III.	O	L	U	=====	=====	=====	=====	=====	TO 2010	a) Future action.
		b) Recommend planning restraint to LA's where existing sewage works are unable to take further development.	NRA/ LAs	M	U	=====	=====	=====	=====	=====	Ongoing	b) Restraints recognised in Redditch/Wychavon Local Plans. Objections to individual applications being made on this basis.
		c) Encourage remedial measures on contaminated land.	NRA/ LA's	H	1000-2000	=====	=====	=====				c) Ongoing liaison & preparation of development brief by NRA for specific sites
3	Effect of agricultural activity on compliance with EC Directive on quality of water abstracted for drinking water and general river ecology.	a) Full use of and support for National and EC legislation to protect environment.	NRA/ Land-owners	M	30pa (NRA)	=====	=====	=====	=====	=====		a) Ongoing activity.
		b) Promotion of Good Agricultural Practice.	NRA/ MAFF/ Land-owners NFU	M	60pa (NRA)	=====	=====	=====	=====	=====		b) Ongoing activity.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
4	Pollution of rivers and groundwater arising from urban storm overflows.	a) Improve modelling of storm overflows.	NRA	H		*	*	(=)				a) No progress. ¹
		b) Better liaison with Water Companies on sewerage matters.	NRA/ Water Cos	H		=	=	=	=	=		b) Cf. a).
		c) Control of "first flush" storm sewage.	NRA/ Water Cos	M	U		=	=	=	=		c) Agreement for enhanced storm tank facilities at Finham.
		d) Objection to development in areas of inadequate sewerage.	NRA/ LAs	M	U							d) Objections by NRA to individual planning applications being made as appropriate.
5	Pollution of rivers and groundwater arising from contaminated land sites and industrial sites	a) Environmental assessment and study on planning applications concerning contaminated land sites, maintain liaison with Waste Regulation Authority and impose planning conditions & Section 106 agreements.	NRA/ LAs	H	90pa	=	=	=	=			a) Co-operation with WCC to ensure S106 agreement for development of gas works site at Leamington. Other specific sites in Coventry area being investigated as part of NRA Planning Liaison
		b) Encourage Engineering & Waste Management solutions	Industry/ Others	M	U							b) Cf. a)

1 Study not underway owing to project priorities for STW Ltd in other areas to achieve appropriate milestones within AMP2 program. Urban Pollution Monitoring for Finham will be drawn up for 1996/97 implementation.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
6	Determination and enforcement of consent conditions for major sewage treatment works.	a) Maintain monitoring capability with possible new continuous monitors on Arrow and Lower Avon.	NRA	H	60	=====	=====	=====	(=====)	(=====)		a) Saxon Mill & Evesham Mobile monitor online. (£50K) A further monitor in 1996/97 (£10K)
		b) Use high quality data in consent review dependent on need and AMP II restrictions.	NRA	M	U				=====	=====		
7	Pollution from inadequate rural sewerage.	a) Identify impact of inadequate rural sewerage in Catchment.	NRA	H	20	=====						Ongoing
		b) Identify methods of funding provision for rural sewerage and lobby for new legislation.	NRA/ LAs/ Others	L	U		=====	=====	=====	=====	=====	
8	Foaming at weirs in the Lower Avon.	Continue analysis of detergents in sewage works and rivers. Sewage works samples from Coventry, Warwick, Rugby and Redditch and river samples from below Evesham.	NRA	H	20	=====	=====	=====	=====	=====		Ongoing
9	Water quality issues associated with canals and river navigation.	a) Control quality of canal overflow discharges, diversion of overflows to less sensitive watercourse, press for polluting discharges from vessels to become an offence and compliance of boats with British Waterways standards	NRA/ BW	M	10	=====	=====	*	*	*		a) Boat Standards now in place. Other actions proved not feasible except by voluntary co-operation of dischargers.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
10	Operation of the Avon sluices for maximum benefit to river users.	a) Interested parties to review operating guidelines for Avon sluices.	NRA/ Nav Ints/ NFU/ Land-owners	H	U	=====	(=====)	(=====)				Meeting September 1995 between navigation interests, NFU, NRA and landowners. Agreement on a trial period for Winter 1995. Review April 1996.
		b) Farmers to be made aware of risks in growing high value cash crops in flood plain.		M	U		=====					
11	Inadequate definition of the flood plain.	a) Install more level and flow gauging stations.	NRA	H	U		=====					Installation complete and recording of data in progress. Surveys nearing completion. Computer modelling completed. Surveys not yet started.
		b) Ground level surveys and computer modelling.	NRA	M	361	=====	=====	=====				
		c) Update flooding Survey for S105 Water Resources Act 1991.	NRA LAs	M	U							
12	Control of development, including caravan sites, in flood plain.	a) Press for policies to be included in local plans to protect flood plain from development.	NRA/ LAs	M	U	=====	=====	=====	=====	=====		(a) & (b) Good progress on inclusion of policies in plans. Policies forwarded as part of consultation as new Local Plans arise. Progressed under 11 above.
		b) Press for policies in local plans to remove redundant structures from flood plain.	NRA/ LAs	L	U	=====	=====	=====	=====	=====		
		c) Define flood plain better.	NRA	M	U	=====	=====	=====	=====	=====		

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
13	Flooding problems on Ordinary Watercourses.	<p>a) Encourage riparian landowners to maintain watercourses.</p> <p>b) Local Authority to serve notice on landowners for the removal of illegal structures.</p> <p>c) District councils to carry out flood alleviation.</p> <p>d) Improve control of new structures through planning liaison.</p>	NRA/ LAs Land-owners	L	U							Ongoing liaison.
			LAs	M	U							Good response from Local Authorities.
			DCs	L	U							Some schemes under way. Ongoing liaison with Local authorities.
			LAs/ NRA	M	U							Support given by Inspectors at planning appeals. Monitoring decision notices now in place to facilitate discussion of NRA objections
14	Extensions to Main River.	<p>a) Variation to the 'main river' map to include watercourses currently designated 'ordinary'. Battleton Brook, Glebe Farm Brook, Guilders Brook. Further candidate stretches are being assessed</p>	NRA	M	U							Notified October 1995. Further candidate stretches are being assessed.
			NRA	M	U							
15	Provision of Flood Alleviation Schemes on Main River.	<p>Protection schemes</p> <p>i) Beoley -floodbank constructed.</p> <p>ii) a) Stratford & b) Bridgend FAS.</p> <p>iii) Ongoing programme of maintenance on all main River.</p>	NRA	M	21							i) Completed.
			N	M	Full costs N/A		a) =	*	*	*		ii) a) Feasibility study has indicated that scheme is not justified.
			N	H	500pa		b) =					b) Feasibility ongoing.
												iii) Ongoing.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS	
			LEAD	ACHIEVE									
16	Maintenance of weirs and other structures.	i) Abbey Mill Sluice reconstruction	NRA	H	1950 ¹	=====						i) Completed.	
		ii) Lucy's Mill Sluice, Pershore, Nafford & Stanchard Pit sluices reconstruction	NRA/ AWT	H	782 ²	•	•	=====					ii) Deferred to 1996.
		iii) Fladbury weir Reconstruction	NRA/ AWT	H	435	=====	=====	(=====)					iii) 1st phase completed. 2nd phase will start April 1996.
		iv) Evesham & Chadbury reconstruction	NRA/ AWT	H	668	=====							iv) Completed.
		v) Berwick Brook & Harvington weirs	NRA/ AWT	H	200 ³		•	(=====)					v) Deferred to 1996.
		vi) Alscot Park feasibility	NRA/ AWT	H	219	=====					(=====)		vi) Outline feasibility report completed and initial costs. Scheme in programme for 1998/99.
		vii) Avon Weirs Trust	NRA/ AWT	H	1701							(=====)	vii) Ongoing programme. ⁴
17	Increased pressure for the Development of Hydropower.	a) Development of National Policy and Guidance document.	NRA/ Others	M	U	=====	=====					a) Guidance document completed. Policy being formulated.	
		b) Viability and impact assessments on other users at 4 sites on Avon in connection with proposed Capital refurbishment.	NRA	H	13.	=====							b) Assessment complete. 1 possible site at Pershore of the 4 studied. Owner will pursue feasibility.

¹ Original figure indicated prior to feasibility study and detailed design. Works more extensive than originally estimated.

² Figure increased to include Stratford Weir.

³ Initial estimate was for the feasibility study only.

⁴ Works completed in 1993-95 costs 96+93+110+668K = £986K

Work at Fladbury ongoing. Harvington, Berwick Brook and Stratford to come in 96/97 at cost of £715K.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
18	Responsibility for Flood Defence duties & powers.	a) Provide information on duties, powers and responsibilities for flood defence to all responsible parties.	NRA/ LAs/ MAFF	L	U	=====	=====	=====				a) Enquiries answered as received.
		b) Encourage all responsible bodies to exercise their powers & responsibilities.	NRA/ LAs	M	U	=====	=====	=====	=====			
19	Mineral Extraction leading to increased flood risk and possible loss of local water supplies.	i) Increase input to Mineral Local Plans	NRA	H	U	=====	=====	=====	=====			i) Full input to Hereford & Worcester Local Plan.
		ii) Investigate use of Conservation Notices where appropriate.	NRA	H	U	=====						
20	Assessment of the water resources capacity of the Cotswold Limestones and Offenham River Gravels.	a) Hydro-geological investigation of Cotswold Aquifer with identification of suitable springs and boreholes for monitoring.	NRA	H	5	=====						a) Completed. Monitoring commenced June 1994. 4 new boreholes constructed.
		b) Hydro-geological investigation of Offenham gravels with identification of monitoring wells and boreholes.	NRA	H	5		=====					
21	Abstraction licence policy in the Coventry Groundwater Unit.	a) Review aquifer recharge to assess water balance for each sandstone horizon.	NRA	H	10		=====					Started November 1995.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
22	Groundwater abstractions for potable supply affecting surface water flows in the River Sherbourne and Bow Brook.	<p>a) Identify possible compensation boreholes to provide flow in rivers under dry weather conditions.</p> <p>(i) Bow Brook support</p> <p>(ii) Sherbourne support</p> <p>b) Consider other options such as large balancing ponds associated with developments. Feasibility study</p>	NRA									
			NRA	H	19*		=====					a)i) Feasibility study completed for Bow Brook and Badsey Brook combined.
			NRA	M	50			=====				ii) Future
			NRA	H		=====						b) Cf. a).
23	Lack of water for spray irrigation in summer months particularly in the Vale of Evesham	<p>a) Provision of flow support for Badsey Brook.</p> <p>Feasibility study for Badsey Brook flow support</p> <p>b) Feasibility study into local abstraction rotas.</p>	NRA	M				=====				Cf. 22*a)i)
			NRA	H		=====						
			NRA	M				=====				

* £19k= Expenditure for 22 a) (i) and (b), 23a) and b).

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS	
			LEAD	ACHIEVE									
24	Improved data required for better management of flood warnings, low flows and the setting of consents to discharge to watercourses.	a) Improvement to existing gauges	NRA	M									
		(i) Besford Bridge	NRA	H	58	=====							i) Rebuild completed - gauging station now in service.
		(ii) Offenham (Badsey Brook)	NRA	H	111		=====						ii) Rebuild completed - gauging station now in service.
		b) Review number of interrogable river level, flow and rain gauges.	NRA	H	115 (Alne) 60 (Swift)			=====	(=====)	(=====)			
25	Specification of environmental requirements of the river and its plant, animal and fish life for setting prescribed conditions.	Fundamental research into in-stream flow requirements.											
		i) Feasibility on Bow Brook .	NRA	H	5	=====							i) Study complete.
26	Low flows on the Upper Avon.	a) Subject to satisfactory cost/benefit analysis negotiate operating agreements with British Waterways or Severn Trent Water to provide more in-river flow.	NRA/ BW/ STW	M	U			=====					a) Future
		b) Ensure compliance with original agreements. British Waterways Scheme for Naseby Feeder.	BW	H	170	=====	=====	=====	=====	=====			

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS
			LEAD	ACHIEVE								
27	Diversion of sewage treatment works effluents to lower reaches of the catchment.	a) Be sure that consent review considers low river flow implications.	NRA/ STW Ltd	H	U	=====	=====	=====	=====			1 Specific example only this year = closure of Heathcote Sewage Treatment Works & diversion of flows to Longbridge Sewage Treatment Works. No firm details at this stage - ongoing discussions between NRA & STW Ltd
28	Optimising the use of Draycote Water support to the River Leam for the benefit of the river and the quality of abstracted water at Leamington.	a) Encourage use of shared quality data on the Leam and investigate possibility of further continuous monitors.	NRA	H	U		=====					a) Monitor now operational.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS	
			LEAD	ACHIEVE									
29	Creation of a management Strategy to resolve conflicts between recreation, navigation and conservation uses and to ensure sustainability of the resource.	a) Survey recreation, conservation and navigation uses and facilities and maintain database of records.	NRA	H	5							a) Completed.	
		b) Evaluate conflicts and devise a strategy to deal with them assisted by the setting up of user groups with clear objectives and terms of reference to produce output such as codes of practice/conduct, user leaflets, calendars of events.	NRA/ User Groups/ LAs/EN EH/Wild- life/ Trusts/ Land- owners	M	U								b) Code of Conduct published - Avon Users Handbook. User Forum set up. Inaugural meeting - Sept 1995. Meeting to be quarterly
		c) Promotion of footpaths for walkers where it does not conflict with conservation. Establish options and opportunities for riverside regional routes and local footpaths in the Lower Avon catchment in collaboration with owners, occupiers and LA's eg.H&WCC, W DC and W CC	NRA/ Land- owners	M	U								c) Liaison has continued between NRA & LAs. e.g. River Arrow circular route at Alcester Nature Reserve in collaboration with Stratford District council - interpretation boards, enhancement etc. Other collaborative projects being developed.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS	
			LEAD	ACHIEVE									
30	Navigation and boating on inland waters	a) Support for Avon Weirs Trust. Weir refurbishment between Stratford & Tewkesbury.	NRA/ AWT	H	Cf. Issue 16							a) Civil works will now extend to 1996/97. Evesham & Fladbury Weirs complete. Harvington, Bewick Brook and Stratford to be completed 1996/97.	
		b) Avon navigation Warning Scheme. Provision of notices & 24 Hour flood warning.	NRA/ LANT/ UANT APCO	H	U		*	*	*	*		b) Scheme operational.	
		c) Provision of sanitary stations on Lower Avon.	NRA	H	2-5pa		*	*	*	*		c) Scheme operational.	
		d) Overnight moorings at Navigation Trusts sites.	NRA/ UANT/ LANT	H	33								d) Sites now provided at Weirbrake, Stratford, EH Billington Lock, Barton. Other improvements at Wyre Lock & Robert Aickman Lock. LANT objective to provide additional moorings in vicinity of Wyre, Pershore and Comberton.
		e) Assess impact on river of existing and proposed weirs (including effects of storm overflows).	NRA/ LANT	M	45 (NRA)								e) Ongoing
		f) Provision of canoe pass at Chadbury Weir.	NRA/ AWT			2							

** Cf. Issue 16

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS		
			LEAD	ACHIEVE										
31	Conservation and rehabilitation of river corridors and wetlands.	a) Assess impact of NRA's operational work on the environment including secondary impacts.	NRA	H	300	=====	=====	=====	=====	=====		a) Ongoing operations.		
		b) Extend programme of river & pool rehabilitation at Arrow Valley, R Alne and Swift/Avon valley, Hewell Grange, Leek Wootton, Tocil and Brailes.	NRA	H	101	=====	=====						b) Bow Brook at Huddington, Leek Wootton, Tocil, Brailes completed plus site at Royal Agricultural society of England showground at Stoneleigh. Phase I study completed for others.	
		c) Collaborate with other organisations in production of Water Level Management Plans and with English Nature, Co Co and LA's to produce action plan for improving nature conservation status of riparian land.	NRA/ EN/ Others	M	U				=====	=====				c) sites agree with EN = Upham Meadow & Summer Leasow; Avon Valley
		d) Re-survey river corridor habitats periodically.	NRA	H	5-10	=====	=====	=====	=====	=====			d) 1995/96 programme = Berwick Brook, Canley Brook, River Stowe & Isbourne. River Leam, River Avon from Evesham to Warwick completed.	

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS	
			LEAD	ACHIEVE									
31	Conservation and rehabilitation of river corridors and wetlands. (Continued)	e) Promotion of rare or threatened species. (i) River Severn Otter Project	NRA/ WWT/ STW Ltd Fuji Hunt/P Rosewater	H	18*	=====	=====	=====	=====	=====		e)i) Continuing.	
		(ii) Vale Wildlife	NRA		3	=====							ii) Footpath completed.
		f) Production of Species Action Plan for agreed priority species with English Nature & others (eg RSPB, Wildlife Trusts)	NRA/ EN/ WT	M	U								
		g) Restoration of floodplain meadow. River Stour Clifford Chambers.	NRA/ Land-owner		18	=====							
32	Requirement for a review of EC designated areas for salmonid and cyprinid fisheries.	a) Investigate possible designation of river lengths currently fished but not designated. EC designation dependent on DOE approval.	NRA	L	U								a) Study report completed.

* Also accounted in River Severn Lower Reaches CMP as the project covers both catchments.

NO	ISSUE	ACTIONS	RESPONSIBILITY		TOTAL COST (£K)	1994/95	1995/96	1996/97	1997/98	1998/99	FUTURE	PROGRESS	
			LEAD	ACHIEVE									
33	The protection, maintenance and development of trout, coarse fish and eel stocks.	a) Maintain and improve brown trout populations. (i) Pennyford Mill project R. Alne includes gravel scarification, restocking of young brown trout in many tributaries eg Bow Brook, Stour, Finham Brook, Isbourne	NRA/ Land-owners	M	20	=====	=====	=====	=====	=====		a)i)Gravel scarification completed. Trout stocking carried out 1994/95 and 1995/96.	
		b) Enhance coarse fishery by improvements. 1 (i) Predator removal (ii) Monitoring (iii) Restocking	NRA	H	5pa 10pa 6-10pa	=====	=====	=====					b)1 i) Completed. ii) Completed. iii) Completed.
		2 Installation of multi-species fish passes in weirs to facilitate movement of gravel spawners- chub, dace,barbel as part of Avon Weirs Refurbishment.	NRA/ LANT	H	90	=====	=====						2. 4 fish passes installed; 2 at Evesham Weir, 2 at Chadbury Weir. Single 2 Stage pass planned for Fladbury in spring 1996.
		3 Produce policy on mink control in consultation with MAFF EN & Wildlife Trusts.	NRA/ MAFF/ Wildlife Trusts	H	U		=====					National Policy in preparation to be followed by local document.	
34	Effect on the water environment of urban and infrastructure development.	a) Source control of run-off by balancing ponds or soakaways.	NRA/LAs	M	U							a) Discussions with H&WCC re: H,000 Millennium Bid.	
		b) Ensure relevant comments are made on appropriate planning consultations	NRA/LAs	M	U							b) Timely replies being made.	

APPENDIX 1 CURRENT STATE OF DEVELOPMENT PLANS

District Council	Estimated Population in Catchment	Current Status of Development Plan	Dwellings	Employment Land (Ha)
Bromsgrove	8,000	Public Inquiry	NS	NS
Cheltenham	30,000	Modifications following Public Inquiry	NS	NS
Cherwell	1,000	Modifications following Public Inquiry	NS	NS
Cotswold	10,000	Public Inquiry completed	NS	NS
Daventry	10,000	Public Inquiry completed	NS	65.3
Harborough	5,000	Deposit Draft	NS	NS
Malvern Hills	NS	Public Inquiry completed	NS	NS
Nuneaton	20,000	Adopted	-	22.3
Redditch	79,000	Modifications following two Public Inquiries	2,250	60
Rugby	86,000	Public Inquiry completed	3,000	80
Stratford-On-Avon	106,000	Public Inquiry completed	4,406	75
Tewkesbury	40,000	Draft	1,700	32.5
Warwick	115,000	Modifications following Public Inquiry	6,900	90
Worcester	2,000	Public Inquiry	NS	NS
Wychavon	102,000	Modifications following Public Inquiry	5,500	20
Unitary Council Coventry	300,000	Adopted	5,000	162

APPENDIX 2a: NOTE ON NEW RIVER WATER QUALITY SCHEMES

Two new schemes for the reporting and management of river water quality were introduced in 1994. The new schemes will replace the National Water Council (NWC) Scheme, which was first introduced in the late 1970s. In May 1994, the River Ecosystem (RE) use of the Statutory Water Quality Objectives (WQOs) was introduced by *The Surface Waters (River Ecosystem) (Classification) Regulations 1994*. At the same time the NRA introduced the General Quality Assessment (GQA) Scheme.

WQOs will be used for long term planning and target setting for the use of the river. The GQA classification will be used to make periodic assessment of overall water quality in order to monitor both geographical trends and trends over time.

Until WQOs are formally established by legal notice served by the Secretary of State (and therefore exist on a statutory basis), they will be applied on a non-statutory basis through translation of River Quality Objective (RQOs) from NWC classes to appropriate RE classes with target dates. These new non-statutory RQOs will form the basis from which to develop WQOs.

Five uses have been proposed for rivers under the WQO scheme, of which the River Ecosystem (RE) use is the first to have been introduced. The five uses include; River Ecosystem (general river health); Special Ecosystem (for example SSSI); Abstraction for Potable Supply; Agricultural/Industrial Abstraction; and Watersports.

Five Classes have been established for the RE use:

- Class RE1: Water of very good quality (suitable for all fish species).
- Class RE2: Water of good quality (suitable for all fish species).
- Class RE3: Water of fair quality (suitable for high class coarse fish populations).
- Class RE4: Water of fair quality (suitable for coarse fish populations).
- Class RE5: Water of poor quality (which is likely to limit coarse fish populations).
- Unclassified: Water of bad quality (in which fish are unlikely to be present), or insufficient data available by which to classify water quality.

The introduction of WQOs will require full public consultation, and the timetable will be set by the Government. CMPs will provide the framework within which the NRA can implement the new system, and we will use the Annual Review as well as other approaches to inform you of progress on this matter.

APPENDIX 2b: RE OBJECTIVES - WARWICKSHIRE AVON AND ITS TRIBUTARIES

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH. DESIG.
RIVER AVON	NASEBY RES TO WELFORD SP66307790 TO SP64558078 AT A30 ROAD BRIDGE 04809770 4.5KM	0	B	RE2	
RIVER AVON	WELFORD TO CONF. CLIFTON BK SP64558078 TO SP51537648 AT CLIFTON 04805580 21KM	B	B	RE2	C
RIVER AVON	CLIFTON BK TO NEWBOLD STW O/F SP51537648 TO SP49427635 AT RIVER AVON MILL, RUGBY 04802820 3KM	C	C	RE3	C
RIVER AVON	NEWBOLD STW O/F TO LITTLE LAWFORD SP49427635 TO SP46877718 AT NEWBOLD 04800980 5.2KM	D	C	RE4	
RIVER AVON	LITTLE LAWFORD TO CONF. R. SOWE SP46877718 TO SP32427238 AT STARE BRIDGE 04796740 22.6KM	C	B	RE4	
RIVER AVON	CONF. R. RIVER SOWE TO FB ASHOW VILLAGE SP32427238 TO SP31307016 AT STONELEIGH PARK 04796150 6KM	E	D	RE4	
RIVER AVON	FB NR. ASHOW VILLAGE TO RIVER LEAM SP31307016 TO SP30146567 AT BLACKDOWN 04794530 8KM	0	D	RE4	
RIVER AVON	RIVER LEAM TO GOG BK. SP30146567 TO SP26226088 AT LEAFIELDS 04791460 5.5KM	D	C	RE3	
RIVER AVON	CONF. GOG BK. TO A429, BARFORD SP26226088 TO SP26796097 AT BARFORD 04790980 3KM	E	C	RE3	
RIVER AVON	A429 BARFORD TO CONF. R. DENE SP26796097 TO SP25855632 AT HAMPTON LUCY 04788950 9.3KM	0	C	RE3	
RIVER AVON	R. DENE TO A34 CLOPTON BR. S.O. RIVER AVON SP25855632 TO SP20675482 AT STRATFORD 04787440 9KM	C	C	RE3	
RIVER AVON	A34 CLOPTON BR. S.O. RIVER AVON TO R. ARROW SP20675482 TO SP08285076 AT BIDFORD 04782020 20.5KM	C	C	RE3	C
RIVER AVON	R. ARROW TO CONF. BADSEY BK SP08285076 TO SP04994542 AT EVESHAM BYPASS 04779270 9.5KM	C	C	RE3	C
RIVER AVON	BADSEY BK TO CONF. R. ISBOURNE SP04994542 TO SP03104310 AT EVESHAM 04778460 4KM	C	C	RE3	C
RIVER AVON	R. ISBOURNE TO CONF. BOW BK SP03104310 TO SO92042526 AT ECKINGTON 04772460 29.5KM	C	B	RE3	C
RIVER AVON	BOW BK TO OLD RIVER AVON CONF. R. SEVERN SO92042526 TO SO88863311 AT TEWKESBURY 04767100 13KM	C	C	RE3	C
RIVER AVON	MILL RIVER AVON ABBEY SLUICE TO R. SEVERN SP89423337 TO SO88003173 AT DS TEWKESBURY STW 04766040 1.8KM	C	C	RE3	C

Fisheries Designations: s - salmonid
c - cyprinid

WATERCOURSE	STRETCH DETAILS	GQA	GQA	RQO	FISH. DESIG.
		1990	1994		
CLAYCOTON/YELVERTOFT B	FOOTPATH AT WINWICK TO CONF. R. AVON SP62457390 TO SP56407778 CONFLUENCE R. RIVER AVON 124580720 10.6KM	C	B	RE2	
CLIFTON BROOK	CRICK-YELVERTOFT RD TO MI/AS JUNCTION SP59057349 TO SP57577280 AT POST HOUSE HOTEL 12386880 2KM	F	E	RE4	
CLIFTON BROOK	MI/AS JUNCTION TO CONF. UNNAMED TRIB SP77577280 TO SP54537513 AT AS BRIDGE 12386140 4KM	0	C	RE4	
CLIFTON BROOK	TRIB/SUB-BRANCH TO CONF. R. AVON SP54537513 TO SP51537648 AT CONFLUENCE R. RIVER AVON 12385020 4.1KM	C	E	RE4	
RIVER SWIFT	KIMCOTE RD BR TO TRIB FROM POULTNEY FM SP58828641 TO SP58318512 AT US KIMCOTE STW 12183510 1.8KM	0	C	RE2	
RIVER SWIFT	TRIB FROM POULTNEY FM TO LUTTERWORTH STW SP58318512 TO SP53588310 AT LUTTERWORTH 12182180 4.7KM	B	B	RE2	
RIVER SWIFT	LUTTERWORTH STW OUTFALL TO AS RD BRIDGE SP53588310 TO SP51928223 AT US BITTESWELL BROOK 12181480 2.4KM	C	D	RE3	
RIVER SWIFT	AS RD BRIDGE TO CHURCHOVER SLUICE SP51928223 TO SP50728067 AT US B. GAS, CHURCHOVER 12179620 3.6KM	B	B	RE3	
RIVER SWIFT	CHURCHOVER SLUICE TO CONF. R. AVON SP50728067 TO SP50547679 AT BROWNSOVER HALL 12178180 5KM	B	B	RE2	C
SOW BROOK	OVERSLADE LN BR BILTON TO CONF. R. AVON SP49187361 TO SP48557603 AT BILTON ROAD BRIDGE 12152080 2.8KM	B	B	RE3	
RIVER SOWE	US NEWDIGATE COL. TO NEWDIGATE COLLIERY SP32888704 TO SP33588700 AT ASTLEY LANE 11563998 0.8KM	B	E	RE2	
RIVER SOWE	NEWDIGATE COLLIERY TO CONF. BREACH BK SP33588700 TO SP34218494 AT SCHOOL LANE, EXHALL 11563460 3.7KM	D	C	RE3	
RIVER SOWE	BREACH BK TO A444 RD BRIDGE, LONGFORD SP34218494 TO SP34968325 DS CONFLUENCE HALL, BROOK 11562960 2.1KM	C	D	RE4	

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH. DESIG.
RIVER SOWE	A444 RD BRIDGE, LONGFORD TO BELL GREEN SP34968325 TO SP35958161 AT TACKFORD BRIDGE 11562180 3.2KM	E	D	RE4	
RIVER SOWE	BELL GREEN TO A4082 ROAD BRIDGE SP35958161 TO SP36467789 AT BINLEY ROAD BRIDGE 11560780 5.4KM	B	C	RE4	
RIVER SOWE	A4082 ROAD BRIDGE TO CONF. R. SHERBOURNE SP36467789 TO SP34577549 AT A45 ROAD BRIDGE 11559820 11KM	D	C	RE4	
RIVER SOWE	R. SHERBOURNE TO CONF. FINHAM BK SP34577549 TO SP33647380 BAGINTON MILL 11559580 3.4KM	C	C	RE4	
RIVER SOWE	FINHAM BK TO CONF. R. AVON SP33647380 TO SP32427238 AT STONELEIGH 11559060 2.6KM	E	E	RE5	
BREACH BROOK	TRIB MARY LANDY WOOD TO CONF. R. SOWE SP31428607 TO SP34218494 AT EXHALL CHURCH 12036180 3.8KM	E	C	RE4	
HALL BROOK	WATERY LN BR, KERESLEY TO ROWLEYS GREEN SP32218365 TO SP34008310 AT MANOR FARM 12028240 2.3KM	O	F	RE3	
HALL BROOK	SELWORTHY RD, ROWLEYS GN TO R. SOWE SP34008310 TO SP34838331 AT CONFLUENCE R. SOWE 12027020 0.8KM	F	E	RE4	
WITHY BROOK	ABOVE HALL PARK WOOD TO CONF. R. SOWE SP39888200 TO SP38468019 AT HIGH BRIDGE 11973120 2.5KM	D	C	RE2	
SMITE BROOK	US OF BELL INN LN TO B4027 RD BRIDGE SP46788295 TO SP46058224 AT DS MONKS KIRBY STW 11829620 1.3KM	C	B	RE2	
SMITE BROOK	B4027 BR TO FB NR. SMEATON LANE SP46058224 TO SP42918059 AT B4029 ROAD BRIDGE 300M 11828480 4.7KM	O	B	RE2	
SMITE BROOK	FB NR SMEATON LANE TO COOMBE POOL OUTLET SP42918059 TO SP38487922 AT COOMBE ABBEY 11828390 4.8KM	O	B	RE2	
SMITE BROOK	COOMBE POOL OUTLET TO CONF. R. SOWE SP38487922 TO SP38007948 AT CONFLUENCE WITH R. SOWE 11827020 0.8KM	C	D	RE3	
RIVER SHERBOURNE	FB AT ALLESLEY TO CONF. HOCKLEY TRIB. SP30238096 TO SP31477951 AT KINGSBURY ROAD 11708880 3.2KM	B	B	RE4	
RIVER SHERBOURNE	HOCKLEY TRIB. TO QUEEN VICTORIA ROAD SP31477951 TO SP32817884 AT RUDGE ROAD 11708390 1.3KM	C	D	RE4	

WATERCOURSE	STRETCH DETAILS	QQA 1990	QQA 1994	RQO	FISH. DESIG.
RIVER SHERBOURNE	QUEEN VICTORIA ROAD TO CONF. R. SOWE SP32817884 TO SP34577549 AT CHARTERHOUSE 11707580 5.7KM	B	C	RE4	
PICKFORD BROOK	"THE CHASE" ALLESLEY TO R. SHERBOURNE SP28418108 TO SP30788024 AT HOLYHEAD ROAD 11745040 2.7KM	C	C	RE3	
FINHAM BROOK	FB NR CHASE FM TO COMMON LN, KENILWORTH SP26707360 TO SP30047293 AT COMMON LANE 11570720 5KM	A	B	RE2	
FINHAM BROOK	COMMON LN, KENILWORTH TO CONF. R. SOWE SP30047293 TO SP33647380 AT FINHAM BRIDGE 11570240 10.5KM	B	B	RE2	
INCHFORD BROOK	HASELEY MILL TO CONF. WITH FINHAM BROOK SP23516841 TO SP27747217 AT US KENILWORTH CASTLE 11653020 6.3KM	O	B	RE2	
CANLEY BROOK	ABOVE TILE HILL STN TO TRIB, WESTWOOD GD SP27107750 TO SP31147728 AT SIR HENRY PARKES ROAD 11581920 4KM	C	C	RE4	
CANLEY BROOK	TRIB, WESTWOOD GD TO CONF. FINHAM BK SP31147728 TO SP30667304 AT COVENTRY ROAD 11581220 6KM	C	B	RE2	
CATTLE BROOK	WEDGNOCK OLD PARK TO CONF. R. AVON SP26076794 TO SP30326944 B4115 ROAD BRIDGE 11474040 4.8KM	O	B	RE2	
RIVER LEAM	A425, NR. STAVERTON TO BRAUNSTON BK SP52306154 TO SP53066568 AT US BRAUNSTON STW 10932840 6.5KM	B	B	RE2	C
RIVER LEAM	BRAUNSTON BK TO TRIB, BR TON CLEVES SP53066568 TO SP52166628 AT DS BRAUNSTON STW 10932780 1KM	D	B	RE3	
RIVER LEAM	TRIB, BR TON CLEVES TO WILLOUGHBY BK SP52166628 TO SP49806679 AT SAWBRIDGE 10932420 3KM	B	B	RE3	C
RIVER LEAM	WILLOUGHBY BK TO A423 RD BR, MARTON SP49806679 TO SP40716926 AT US MARTON 10930720 6.2KM	O	B	RE2	C
RIVER LEAM	A423 RD BR, MARTON TO HUNNINGHAM RD BR. SP40716926 TO SP37296853 AT HUNNINGHAM BRIDGE 10929340 20.7KM	B	B	RE2	C
RIVER LEAM	HUNNINGHAM RD BR. TO WILLES BR, A425 SP37296853 TO SP32286578 WILLES MEADOW FOOTBRIDGE 10928150 11.4KM	B	B	RE2	C
RIVER LEAM	WILLES BR, A425 TO CONF. R. AVON SP32286578 TO SP30156566 AT PRINCES DRIVE 10927160 1.8KM	C	C	RE3	C

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH. DESIG.
RAINS BROOK	DITCH TRIB. FROM BARBY TO KILSBY STW SP5537067 TO SP55507120 AT US KILSBY STW 11296360 0.6KM	0	B	RE2	
RAINS BROOK	KILSBY STW OUTFALL TO BARBY NORTOFT SP55507120 TO SP54697190 AT DS KILSBY STW 11296300 1KM	0	E	RE5	
RAINS BROOK	BARBY NORTOFT TO CONF. R. LEAM SP54697190 TO SP48776862 AT A45 DUNCHURCH 11294580 9.5KM	C	C	RE3	
RIVER ITCHEN	ROAD BR., LOWER RADBURN TO HARBURY STW SP43875691 TO SP39975980 AT DEPPERS BRIDGE 11055720 12.5KM	B	B	RE2	
RIVER ITCHEN	HARBURY STW OUTFALL TO CONF. R. STOWE SP39975980 TO SP40616204 AT A425 THORPE BRIDGE 11054980 2.2KM	B	C	RE2	
RIVER ITCHEN	R. STOWE TO OLD FORD BRIDGE SP40616204 TO SP40446266 AT FORD FARM 11054620 0.6KM	E	B	RE3	
RIVER ITCHEN	OLD FORD BRIDGE TO SNOWFORD BRIDGE SP40446266 TO SP39346637 AT US LONG ITCHINGTON 11053760 7.2KM	E	B	RE2	
RIVER ITCHEN	SNOWFORD BRIDGE TO CONF. R. LEAM SP39346637 TO SP40536901 AT MARTON 11053180 4.8KM	B	B	RE2	
RIVER STOWE	OXFORD CANAL BR. TO CONF. STOCKTON BK SP45796079 TO SP43676209 AT DS NAPTON STW 11092280 3.5KM	D	C	RE4	
RIVER STOWE	STOCKTON BK TO CONF. R. ITCHEN SP43676209 TO SP40616204 AT BROWNS BRIDGE 11091180 4.5KM	B	B	RE2	
STOCKTON BROOK	FB AT NEW ZEALAND FM. TO CONF. R. STOWE SP44286307 TO SP43676209 AT DS STOCKTON STW 11108140 1.5KM	G	C	RE4	
RADFORD BROOK	FOSSE WAY BRIDGE TO CONF. R. LEAM SP34846109 TO SP33846511 AT A425 ROAD BRIDGE 10948020 5.5KM	B	A	RE2	
TACH BROOK	FB HIGHDOWN FM TO LEAMINGTON STW SP32066062 TO SP30656234 AT A452 ROAD BRIDGE 10863900 6.6KM	0	C	RE2	
TACH BROOK	LEAMINGTON STW OUTFALL TO CONF. R. AVON SP30656234 TO SP28476332 AT A41 ROAD BRIDGE 10863220 2.6KM	C	C	RE3	
GOG BROOK	RD BR AT BUDBROKE TO CONF. R. AVON SP26266525 TO SP27736298 AT STRATFORD ROAD 10817080 4.6KM	B	B	RE3	

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH. DESIG.
HORSE BROOK	LITTLEWORTH FM BRIDGE TO CONF. R. AVON SP23766339 TO SP26846098 AT M40 POLL. POND 10762280 4.6KM	D	B	RE3	
SHERBOURNE BROOK	BELL BK TO CONF. R. AVON SP23676125 TO SP26226088 AT SHERBOURNE VILLAGE 10680080 5.5KM	B	B	RE2	S
BELL BROOK	SNITTERFIELD TO FB NR OLD HOUSE FARM SP22246045 TO SP22486066 AT NORTON LINDSAY BRIDGE 10707180 0.2KM	E	E	RE3	
BELL BROOK	FB NR OLD HOUSE FARM TO SHERBOURNE BK SP22486066 TO SP23676125 AT HEATH END 10707130 1KM	C	D	RE3	
THELSFORD BROOK	FIRTREE HILL COTTAGES TO R. AVON SP28655818 TO SP25995735 AT CONFLUENCE R. RIVER AVON 10579020 4KM	B	A	RE2	
CHARLECOTE	STAPLE HILL LN FM BR TO CONF. R. AVON SP29035552 TO SP25855662 AT HAMPTON LUCY ROAD 10561050 4.1KM	B	B	RE2	
RIVER DENE	FB AT NORTHEAD TO FB NR KINETON P.O. SP38915308 TO SP33855093 AT KINETON (B4086) 10325700 1.1KM	B	B	RE2	
RIVER DENE	FB NR KINETON P.O. TO FB BELOW KINETON SP33855093 TO SP32345073 AT DS KINETON STW 10325540 6.1KM	D	B	RE3	
RIVER DENE	FB BELOW KINETON TO TRIB. FROM THORNTON SP32345073 TO SP28465083 AT FOSSE WAY ROAD BRIDGE 10325060 4.1KM	B	A	RE2	C
RIVER DENE	TRIB. FROM THORNTON TO WELLESBOURNE MILL SP28465083 TO SP28425444 AT WALTON FORD DS W. VILLAGE 10324400 5.4KM	D	C	RE2	C
RIVER DENE	WELLESBOURNE MILL TO CONF. R. AVON SP28425444 TO SP25855632 AT CHARLECOTE (B4088) 10324230 4.8KM	C	C	RE2	C
RADWAY BROOK	FB BELOW RADWAY TO CONF. R. DOVE SP37134854 TO SP34505074 AT RADWAY 10534250 3.3KM	C	B	RE2	
RIVER STOUR	TRAUTORS FORD TO MITFORD BRIDGE SP33643643 TO SP26313714 AT CHERINGTON 09569250 4.5KM	D	A	RE2	S
RIVER STOUR	MITFORD BR TO CHURCH LN, ALDERMINSTER SP26313714 TO SP22964858 AT HONINGTON BRIDGE 09566780 24KM	B	B	RE2	S
RIVER STOUR	CHURCH LN, ALDERMINSTER TO R. AVON SP22964858 TO SP18265337 AT CLIFFORD CHAMBERS 09563180 12.4KM	A	B	RE2	C

WATERCOURSE	STRETCH DETAILS	GQA 1990	CQA 1994	RQO	FISH. DESIG.
KNEE BROOK	THE CAM TO CONF. STOUR SP17683916 TO SP25903793 AT HIGH FURZE 09834100 11.8KM	A	A	RE2	S
THE CAM	CHIPPING CAMPDEN TO KNEE BK SP14603887 TO SP17683916 AT DS CHIPPING CAMPDEN STW 09947100 3.2KM	C	C	RE2	
BLOCKLEY BROOK	DOVEDALE TO "THE LIMES", BLOCKLEY SP16133443 TO SP17103544 AT BLOCKLEY INN 09882890 1.3KM	O	A	RE1	
BLOCKLEY BROOK	"THE LIMES", BLOCKLEY TO CONF. KNEE BK SP17103544 TO SP19223705 AT STAPENHILL FARM 09882040 3KM	A	B	RE2	S
MARCHFONT BROOK	GRAN BK TO CONF. R. AVON SP16865109 TO SP15955202 AT WESTON ON RIVER AVON 09443030 1.9KM	D	B	RE2	
GRAN BROOK	WHITE HOUSE BARN TO MICKLETON BK SP16834487 TO SP16604530 AT US MICKLETON BROOK 09454530 1KM	D	B	RE2	
GRAN BROOK	MICKLETON BK TO TRIB LONG MARSTON DEPOT SP16604530 TO SP16234741 AT DS MICKLETON BROOK 09454530 2.6KM	E	B	RE3	
GRAN BROOK	LONG MARSTON DEPOT TO LONG MARSTON STW SP16234741 TO SP16084864 AT DS REME CAMP 09453550 1.4KM	C	B	RE2	
GRAN BROOK	LONG MARSTON STW TO CONF. MARCHFONT BK SP16084864 TO SP16865109 AT MARCHFONT BROOK 09453020 2.4KM	D	B	RE3	
NOLEHAM BROOK	TRIB NR. LONG MARSTON TO CONF. R. AVON SP14624810 TO SP11745145 AT WELFORD PASTURE 09253100 1.9KM	B	B	RE2	
RIVER ARROW	COFTON HACKETT TO OUTLET BITTEL RESERVOIR SP01157588 TO SP02407406 AT OUTLET BITTEL RESERVOIR 08023980 2.3KM	O	D	RE2	
RIVER ARROW	OUTLET BITTEL RES TO US ALVECHURCH STW SP02407406 TO SP03307200 AT LYE MEADOWS 08023080 2.6KM	C	C	RE2	
RIVER ARROW	US ALVECHURCH STW TO GRANGE LANE SP03307200 TO SP03097090 AT GRANGE LANE 08022560 0.9KM	C	C	RE3	
RIVER ARROW	GRANGE LANE TO DAGNELL BK SP03097090 TO SP05246888 AT A441 BRIDGE REDDITCH 08022000 3.0KM	C	D	RE3	
RIVER ARROW	DAGNELL BK TO "THE OLD CASTLE", STUDLEY SP05246888 TO SP08056363 AT CASTLE ROAD, STUDLEY 08019580 9.0KM	D	C	RE3	

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH. DESIG.
RIVER ARROW	THE OLD CASTLE, STUDLEY TO R. ALNE SP08056363 TO SP09335734 AT LOWER SPERNAL FARM 08019230 8.8KM	D	D	RE3	
RIVER ARROW	R. RIVER ALNE TO BIFURCATION AT BROOM SP09335734 TO SP08665353 AT WOXFORD 08017430 4.3KM	O	C	RE3	
RIVER ARROW	BIFURCATION AT BROOM TO CONF. R. AVON SP08665353 TO SP80285076 AT SALFORD PRIORS 08017220 5.2KM	C	C	RE3	
CAIN BROOK	FB ABOVE SAMBOURNE TO CONF. R. ARROW SP06196261 TO SP08456070 AT CAIN BRIDGE 08805080 3.3KM	B	B	RE1	
RIVER ALNE	DANZEY GREEN TO FB NR. FIELD FARM SP12706950 TO SP15336280 AT A34 WOOTTON WAWEN 08102620 9.1KM	B	C	RE2	S
RIVER ALNE	FB. NR. FIELD FM TO PENNYFORD LN SP15336280 TO SP14906200 AT DS WOOTTON WAWEN STW 08102060 1.6KM	C	D	RE2	S
RIVER ALNE	PENNYFORD LN TO ROAD BR, LITTLE RIVER ALNE SP15046212 TO SP14176113 AT LITTLE RIVER ALNE 08101500 1.8KM	C	C	RE2	S
RIVER ALNE	ROAD BR, LITTLE RIVER ALNE TO FB AT HOO MILL SP14176113 TO SP10575781 AT KINWARTON 08100160 11.4KM	B	C	RE2	C
RIVER ALNE	FB. AT HOO MILL TO CONF. R. ARROW SP10575781 TO SP09325735 AT ALCESTER 08100050 1.6KM	O	C	RE2	C
OLDBERROW BROOK	BARRELS PK, ULLENHALL TO CONF. R. ALNE SP12256630 TO SP15336337 AT B4480 ROAD BRIDGE 08658380 3.6KM	O	C	RE4	
PRESTON BAGOT BROOK	CONF. TRIB AT BUSHWOOD TO CONF. R. ALNE SP17316860 TO SP15776381 AT PRESTON BAGOT 08366820 8KM	B	C	RE1	S
KINGSWOOD BROOK	STRATFORD CANAL TO PRESTON BAGOT BK SP18606960 TO SP18246618 AT LOWSONFORD BRIDGE 08432580 4.8KM	C	E	RE3	
CLAVERDON BROOK	CULVERT, HATTON TO PINLEY FM SP22646638 TO SP22026571 AT HATTON 08179840 1KM	B	C	RE3	
CLAVERDON BROOK	PINLEY FM TO CONF. R. ALNE SP22026571 TO SP14456132 AT DS COLLEGE FARM BROOK 08177350 13KM	E	E	RE4	
BAN BROOK	RD BR AT IRON CROSS TO CONF. R. ARROW SP06245267 TO SP08165115 AT SALFORD PRIORS 08036030 2.3KM	C	C	RE2	

WATERCOURSE	STRETCH DETAILS	CQA 1990	CQA 1994	RQO	FISH. DESIG.
HARVINGTON BROOK	LEYS BARN FM BR TO HARVING STW SP04244934 TO SP06024849 AT US HARVINGTON STW 07957180 2KM	0	A	RE2	
HARVINGTON BROOK	HARVING STW TO CONF. R. AVON SP06024849 TO SP05674736 AT DS HARVINGTON STW 07957020 1.4KM	0	D	RE4	
BADSEY BROOK	BUCKLANDWOOD HOUSE TO B4632 BRIDGE SP09663569 TO SP09023762 AT BURY END 07689420 2KM	C	A	RE2	
BADSEY BROOK	BROADWAY STW TO TRIB FROM MOCHO SP07833777 TO SP06483894 AT CHILDSWICKHAM 07689100 3KM	C	C	RE2	
BADSEY BROOK	TRIB FROM MOCHO TO A44 WICKHAMSTEAD SP06483894 TO SP06554136 AT DS CHILSWICKHAM 07688980 2.8KM	B	B	RE2	
BADSEY BROOK	A44 WICKHAMSTEAD TO BLACKMINSTER STW SP06554136 TO SP06514470 AT B4035 ALDINGTON 07687720 4.3KM	0	B	RE2	
BADSEY BROOK	BLACKMINSTER STW TO CONF. R. AVON SP06514470 TO SP04994542 AT OFFENHAM 07687380 2KM	C	C	RE3	
BRETFORTON BROOK	DITCH FROM WILLERSEY BARN TO BADSEY BK. SP09994180 TO SP06784433 AT LOWER BLACKHEATH 07708180 5KM	C	B	RE2	
COW HONEYBOURNE BROOK	DS COW HONEYBOURNE RD TO BRETFORTON BK. SP09874360 TO SP08124441 AT CLAYFIELDS FARM 07797050 3KM	B	B	RE2	
RIVER ISBOURNE	QUARRY CLEVE COMMON TO US OF P. MILLS SO99642636 TO SP00802716 AT US POSTLIP MILLS 07429620 1.3KM	A	A	RE1	
RIVER ISBOURNE	US OF POSTLIP MILLS TO DS OF P. MILLS SP00802716 TO SP01642742 AT POSTLIP HOUSE 07429100 1KM	B	B	RE2	
RIVER ISBOURNE	DS OF POSTLIP MILLS TO RD TO ALMBURY FM SP01642742 TO SP02402812 AT A46 BRIDGE 07428820 1KM	B	B	RE2	
RIVER ISBOURNE	RD BR TO ALMBURY FM TO WINCHCOMBE STW SP02402812 TO SP03052952 AT FOOTBRIDGE WINCHCOMBE 07428080 1.5KM	B	B	RE2	
RIVER ISBOURNE	WINCHCOMBE STW TO MILL FARM BR, GREET SP03052952 TO SP03293034 AT GREET 07427580 1KM	C	C	RE3	
RIVER ISBOURNE	GREET TO TRIB, ASTON SOMERVILLE SP03293034 TO SP03313811 AT WORMINGTON 07424580 6.6KM	0	B	RE2	

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH. DESIG.
RIVER ISBOURNE	TRIB, ASTON SOMERVILLE TO CONF. R. AVON SP03313811 TO SP03104310 AT EVESHAM 07423020 9KM	C	B	RE2	
LAVERTON BROOK	NW RUSHBROOKE WOOD TO CONF. R. ISBOURNE SP06163673 TO SP03313813 AT BUCKLANDS FIELDS 07464380 4KM	O	B	RE2	
MERRY BROOK	FB NR HASELOR HOUSE TO CONF. R. AVON SP01734255 TO SP00064561 AT CHARLTON CEMETERY 07252100 5KM	C	B	RE2	
ELMLEY CASTLE	FB AT NETHERTON TO CONF. R. AVON SO98864205 TO SO99484484 AT A44 BRIDGE 07166220 3KM	O	A	RE2	
PIDDLE BROOK	US OF KINGTON FB TO CONF. WHITSUN BK SO99335602 TO SO96185103 AT SEAFORD 06611280 9KM	B	B	RE2	C
PIDDLE BROOK	WHITSUN BK TO CONF. R. AVON SO96185103 TO SO95414645 AT WYRE MILL 06610020 9KM	C	B	RE2	C
WHITSUN BROOK	THE LOW*, CHURCH LENCH TO PIDDLE BK SP03015183 TO SO96185103 AT DS DEAN LODGE FARM 06701220 9KM	B	A	RE2	
BOW BROOK	DS ELCOCK'S BK TO DUNSTALL COURT SP01076458 TO SP01056191 AT BUNKER'S HOLE 06114820 3.2KM	B	B	RE2	
BOW BROOK	DUNSTALL COURT TO PRIEST BR. STW O/F SP01056191 TO SO99265983 AT US PRIEST BRIDGE STW 06114240 3.8KM	B	B	RE2	S
BOW BROOK	PRIEST BR. STW TO FB NR PIGEONHOUSE FM SO99265983 TO SO98605989 AT PRIEST BRIDGE 06114120 1KM	B	B	RE2	S
BOW BROOK	FB NR PIGEONHOUSE FM TO CONF. LITTLE BK SO98605989 TO SO94515793 AT SHELL FORD 06112780 8.4KM	B	B	RE2	S
BOW BROOK	LITTLE BK TO A422 BR AT UPTON SNODSBURY SO94515793 TO SO93405440 AT BROUGHTON HACKETT 06111920 3.4KM	C	B	RE2	S
BOW BROOK	A422, UPTON SNODSBURY TO PERSHORE STW SO93405440 TO SO92544512 AT BESFORD BRIDGE 06109520 15.4KM	B	A	RE2	C
BOW BROOK	PERSHORE STW TO CONF. R. AVON SO92544512 TO SO91934252 AT DEFFORD BRIDGE 06109220 3.5KM	E	D	RE4	C
BRANDON BROOK	CONF. DOE BANK BK TO CONF. BOW BK SP01606035 TO SO00786024 AT CONFLUENCE BOW BROOK 06363030 1KM	B	B		

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH. DESIG.
STOULTON BROOK	FB AT STOULTON TO CONF. BOW BK SO91184993 TO SO92654663 AT CHEVINGTON FARM 06127140 5KM	C	C	RE2	
CARRANT BROOK	ASHTON UNDER HILL TO GRAFTON RD BR. SO99893723 TO SO99153669 AT ASHTON UNDER HILL 05351580 1KM	0	C	RE3	
CARRANT BROOK	GRAFTON RD BR. TO CONF. WASHBOURNE BK. SO99153669 TO SO97713562 AT BECKFORD 05350780 1.9KM	C	B	RE2	
CARRANT BROOK	WASHBOURNE BK TO B4079 ASTON ON CARRANT SO97713562 TO SO93953478 AT ASTON MILL 05348780 5KM	B	A	RE3	
CARRANT BROOK	B4079 ASTON ON CARRANT TO CONF. R. AVON SO93953478 TO SO89503340 AT TEWKESBURY 05348020 5.5KM	C	C	RE2	C
WASHBOURNE BROOK	DDXTON BK TO TRIB DS LITTLE WASHBOURNE SO99403303 TO SO98653372 AT LITTLE WASHBOURNE 05491520 0.9KM	0	C	RE4	
WASHBOURNE BROOK	TRIB DS LITTLE WASHBOURNE TO CARRANT BK SO98653372 TO SO97713562 AT BECKFORD CROSS 05491060 3KM	C	C	RE2	
WYMANS BROOK	IMJIN RD TO ALBERT ROAD SO97032270 TO SO95632345 AT US PITTVILLE LAKE 04833420 0.3KM	C	E	RE2	
WYMANS BROOK	ALBERT RD TO LANE BR. MARLE HILL SO95632345 TO SO94702370 AT DS PITTVILLE LAKE 04833900 1.7KM	0	B	RE2	
WYMANS BROOK	LANE BR. , MARLE HILL TO SWINDON SO94702370 TO SO93252480 AT DS OLD TIP ROMAN HACKLE AV. 04832750 1.7KM	0	E	RE2	
RIVER SWILGATE	SWINDON TO HYDE BK SO93252480 TO SO91782771 AT SWINDON 04832580 2.3KM	E	E	RE2	
RIVER SWILGATE	HYDE BK TO CONF. DEAN BK SO91782771 TO SO91132828 AT DS HYDE BROOK , STOKE 04832180 5.6KM	C	C	RE2	
RIVER SWILGATE	DEAN BK TO CONF. TIRLE BK SO91132828 TO SO89733248 AT TREDINGTON 04831840 2.8KM	C	D	RE2	
RIVER SWILGATE	TIRLE BK TO CONF. R. AVON SO89733248 TO SO88672228 AT TEWKESBURY 04831100 1.2KM	C	C	RE2	C
HYDE BROOK	FB AT "LUTSOMS" TO BROCKHAMPTON STW SO96052549 TO SO94552588 AT US BROCKHAMPTON STW 05217560 2KM	B	B	RE2	

WATERCOURSE	STRETCH DETAILS	GQA 1990	GQA 1994	RQO	FISH DESIG.
HYDE BROOK	BROCKHAMPTON STW TO TRIB. ENG. WORKS SO94552588 TO SO93782625 AT DS BROCKHAMPTON STW 05217440 1KM	F	E	RE4	
HYDE BROOK	TRIB. FROM ENG. WORKS TO RIVER SWILGATE SO93782625 TO SO91702770 AT STOKE ORCHARD 05217080 3KM	0	C	RE4	
TIRLE BROOK	FB AT LOWER FARM TO A435 RD BRIDGE SO95303087 TO SO95513252 AT OXENTON 04851780 1.5KM	E	C	RE2	
TIRLE BROOK	A435 RD BRIDGE TO TRIB FROM SMOW FM SO95513252 TO SO93222307 AT PAMINGTON 04851160 4.3KM	D	C	RE2	
TIRLE BROOK	TRIB FROM SMOW FM TO CONF R. SWILGATE SO93222307 TO SO89733248 AT TEWKESBURY 04850020 4.5KM	0	D	RE2	