

THE BLYTHE/COLE/BOURNE
CATCHMENT MANAGEMENT
PLAN (CMP)

First Annual Review

July 1994 To July 1995

Previous Blythe/Cole/Bourne CMP Documents

Blythe/Cole/Bourne CMP Consultation Report - January 1994 (out of stock).

Blythe/Cole/Bourne CMP Final Plan - July 1994 (copies available).

If you wish to discuss any matters arising from this document or require a copy of the Final Plan please contact:-

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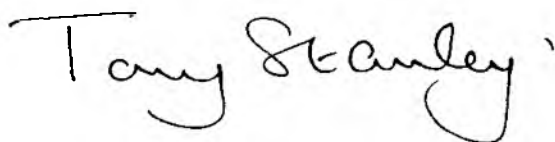
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Foreword

The National Rivers Authority (NRA) was created in 1989 to conserve and enhance the natural water environment and to reduce the risks to people and the developed and natural environment from flooding. As "Guardian of the Water Environment", the NRA is committed to preparing a sound plan for the future management of the Region's river catchments.

This is the first Annual Review of the Blythe/Cole/Bourne CMP and its purpose is to highlight the progress that has been made by the NRA and others in tackling the issues and problems identified in the Consultation Report and the Final Plan.

The next annual review will be carried out by the Environment Agency. In April 1996, the NRA together with its partners Her Majesty's Inspectorate of Pollution (HMIP) and waste regulation personnel from local authorities will come together to form the new Agency.



Tony Stanley
Area Manager - Upper Trent Area

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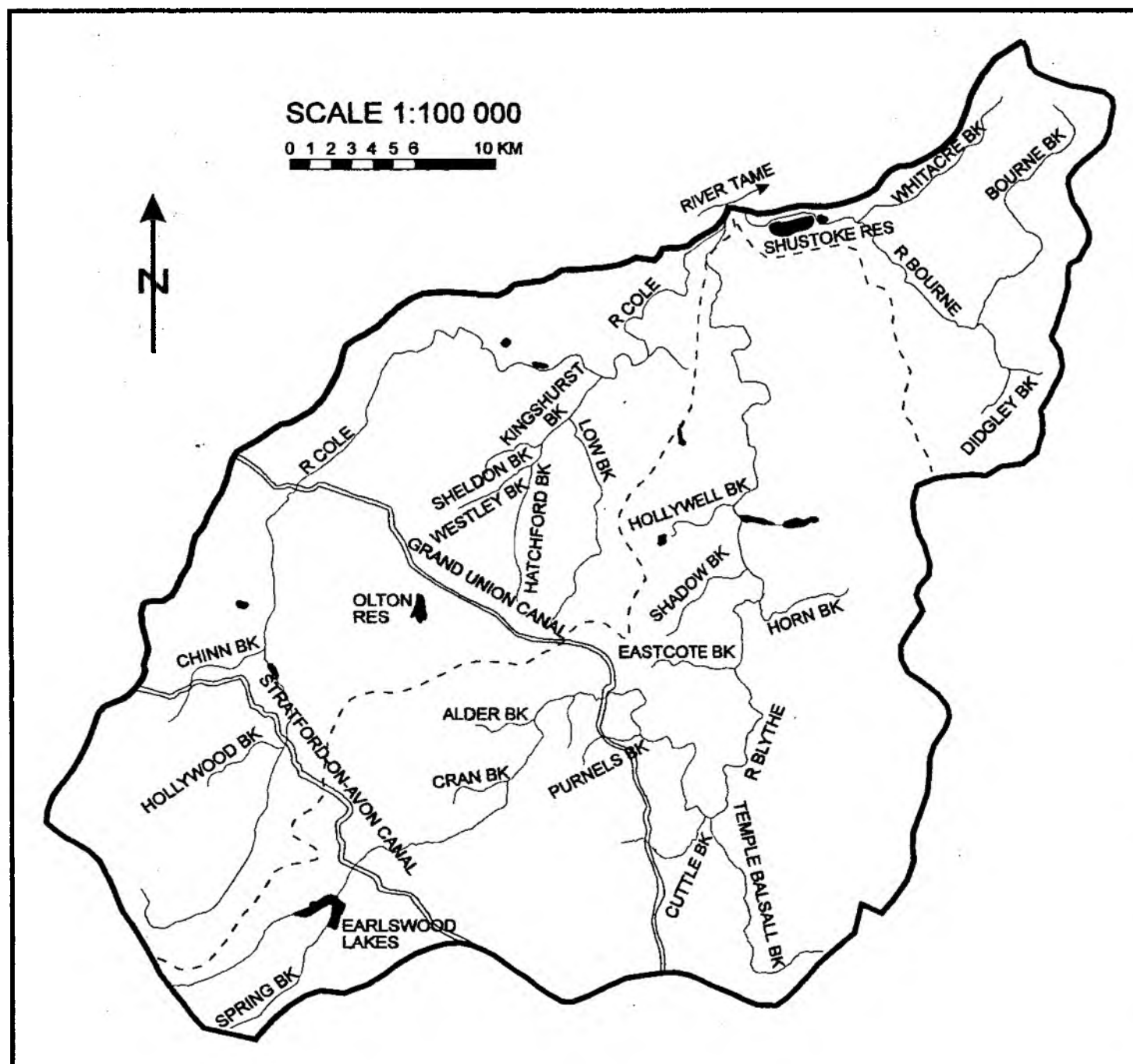
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Map of the Catchment

Rivers and Tributaries



key		CATCHMENT BOUNDARY				
		SUB CATCHMENT BOUNDARY				
		PRINCIPAL WATER COURSES				
		CANAL				

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1 The NRA's Vision for the Blythe/Cole/Bourne Catchment

The Blythe/Cole/Bourne catchment covers part of the West Midlands conurbation and a large part of the Birmingham Green Belt, south and east of the city. The Blythe and the Bourne are predominantly rural rivers and flow through attractive countryside, while the Cole, the major tributary of the Blythe, passes through built up areas in south Birmingham. The Blythe and the Cole rise in the south west corner of the catchment and flow in a north easterly direction and the Bourne rises in the east and flows in a westerly direction. The Blythe and the Cole converge north of Coleshill and flow into the River Tame. The Bourne joins the Tame 0.4km downstream of the Blythe/Tame confluence.

The catchment is home to approximately 520,000 people who depend on the water environment as an amenity and as a means of water supply and effluent disposal. With good communication links and an attractive environment close to a major urban centre, the urban fringe and green belt areas of the catchment are under great pressure for development.

The NRA's vision for the catchment is to:-

- Safeguard the high environmental quality of the Blythe, to seek to improve water quality across the catchment and to protect river flows.
- Work in an integrated manner to meet the key objectives identified in the Plan.
- Ensure that demands on the water environment from both within and outside the catchment are planned and managed in a balanced and sustainable way for the benefit of all users.

The key objectives of this plan are to:-

- Protect base flows in the River Blythe.
- Seek to minimise the adverse effects of new development by working with local planning authorities (LPAs).
- Promote the concept of sustainable development through "source control" as a means of protection against flooding and to protect base flows in rivers.
- Protect sources of potable supply at Shustoke and Whitacre.
- Seek to improve water quality in the catchment by addressing the issues of blue/green algae, sewage effluent discharge, wrong sewerage connections, pesticides and nitrates.
- Remove, as far as possible, obstructions to fish movement.
- Seek to improve water quality in the Blythe downstream of Brueton Park Pool.

The realisation of the NRA's vision will be achieved through a balanced management approach to all activities in collaboration with all users of the catchment. It is our intention to work in partnership with all relevant agencies and representative organisations to promote and achieve an integrated approach to managing the catchment. The plan will ensure required improvements can be carried out, and future demands catered for, in a sustainable manner.

2 Introduction

The process of CMP is used by the NRA to make decisions in 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 in terms of water quality, water quantity and physical features. 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/Final 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.

An important part of the CMP process is to monitor the Action Plan/Final 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 summaries the progress made since the publication of the Final Plan in July 1994.

The activity tables have been reproduced as they appeared in the Final Plan. Notes on progress together with the name of an NRA lead officer have been added. Issue 17 does not appear, because further actions/activities were not required. In future Annual Reviews, only outstanding action/activities or new issues or actions will be included. This means that those activities or actions that have been completed will not appear in the next review.

There have been no major changes in the catchment since the publication of the Blythe/Cole/Bourne Final Plan to warrant new issues being raised at this time.

The measurement of water quality changed last year with the National Water Council system being replaced with the General Quality Assessment (GQA). New River Quality Objectives (RQOs) are being developed for the catchment and these will be reported in the second Annual Review.

The public inquiry into modifications to the Solihull Unitary Development Plan has been held and the outcome is awaiting the Inspector's report. The modifications increase the amount of land allocated for housing both to meet short term and long term housing needs. We are concerned that the increase in urbanisation will have a detrimental effect on the River Blythe and have objected to the modifications (Issue 18). Following a separate public inquiry, permission has been granted for the Blythe Valley Business Park, a large premium industrial site off Junction 4 of the M42. The site chosen is in line with the Solihull Unitary Development Plan and we have no objections in principle. Development will have to take into account the nearby river and will require source control and the moderation of run off.

3 Summary of Progress

3.1 Notable Achievements and Disappointments

Good progress has been made in addressing many of the issues in the catchment and we are particularly pleased with the close cooperation received from British Waterways, Severn-Trent Water Ltd, local industrial and commercial operators and the district, county and unitary local authorities. Of the 28 activities planned for the first year, progress has been made on 24.

Notable achievements include the following:-

- Agreement has been reached between the NRA and British Waterways on the future operation of Earlswood Lakes. The agreement will secure baseflows from the Spring Brook to the River Blythe and will minimise the adverse effects of blue/green algae on water quality.
- The diversion of the River Blythe around Brueton Park Pool. The work is now completed and included the dredging of the Pool. The overall cost was higher than originally estimated primarily due to the dredging of the Pool. Additional funds were secured by the NRA for this action.
- The construction of a fish chute at Cooks Lane on the River Cole.
- Investigations by Severn Trent Water and Birmingham City Council have resulted in the correction of many wrong sewer connections. Improvements in water quality are now apparent in the Cran Brook and in the River Cole at Trittiford Mill and Hay Barn Recreation Ground.
- NRA and Ready Mixed Concrete have agreed proposals for a major new flood defence to protect Coleshill Industrial Estate. An Environmental Statement on the proposals was put out for public consultation in October 1995. Detailed design has yet to be carried out and planning permission and Ministry of Agriculture Fisheries and Food approval must be obtained prior to an expected start in the financial year 1996/7.

There have been some disappointments:-

- The extent of bioconcentration of pesticides in fish cannot be accurately determined due to current scientific and technical constraints.
- There have been delays in undertaking feasibility work on flooding problems in Solihull and Cheswick Green, however the work has been inserted into the capital programme and is due to commence in 1996.
- It has proved impossible to modify the gauging weir at Moorend Avenue to allow the upstream movement of fish.

The overall picture of the first year is very positive and details are set out in the activity/action tables in Section 3.2.

The Final Plan has led to many changes on the ground. The work continues and much of the preparation work for remaining projects is now complete. This will ensure further

progress in the remaining years of the Plan.

3.2 Activities and Actions

The Action Plans from the Final Plan are reproduced here. Progress is highlighted for each activity together with the name of the NRA officer responsible for managing the activity or action. Actual costs have been included and these can be compared with the estimates made in the Final Plan.

Key

- > Greater than.
- < Less than.
- U Unknown.
- * NRA costs only.
- Final Plan timetable.
- Revised timetable.

Notes to Accompany Unknown (U) Costs

- Note i Costs of improved control will be identified during negotiation of an operating agreement.
- Note ii Costs of environmental improvements by the statutory water undertakers are subject to negotiation and agreement by OFWAT as part of the periodic review of asset management plans.
- Note iii Individual costs will be identified and agreed during negotiations.
- Note iv (Capital) costs will be identified during investigations or surveys.
- Note vi Cost will be divided between individual houses or businesses.
- Note vii Marginal increase in costs on all promoting bodies.

Abbreviations

BCC	=	Birmingham City Council.
BIA	=	Birmingham International Airport.
BW	=	British Waterways.
CC	=	County Council.
DC	=	District Council.
LPA	=	Local Planning Authority.
MAFF	=	Ministry of Agriculture, Fisheries and Food.
NFU	=	National Farmers Union.
NWDC	=	North Warwickshire District Council.
RMC	=	Ready Mixed Concrete.
RQO	=	River Quality Objective.
Solihull MBC	=	Solihull Metropolitan Borough Council.
STW Ltd	=	Severn Trent Water Limited.
Warks CC	=	Warwickshire County Council.

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
1	To seek to improve the quality of the Blythe to meet its RQO from Earlswood Lakes to its confluence with the Cole.	a) More detailed monitoring of water quality in the Blythe.	NRA		<5	•	•	•				D Freakley
		b) Investigations of methods to control blue/green algae in association with BW.	BW	NRA	<5 (NRA)	•	•	○				J Ratcliffe/ A Burton
		c) Negotiate with BW to achieve an operating agreement for Earlswood Lakes.	NRA	BW	U (i)	•	•					J Ratcliffe
Progress												
a) Changes in monitoring have taken place. Algae are now routinely monitored together with Biochemical Oxygen Demand. A new monitoring site upstream of Cheswick Green has been added.												
b) The experiment using barley straw at Engine Pool has been extended for another 12 months.												
c) BW have stated that they will seek to draw down the lakes in summer to reduce the likelihood of an algal soup flowing into the Blythe from Engine Pool.												
2	To seek to improve the water quality of the Blythe from Eastcote Brook to its confluence with the Cole.	a) Review consent at Barston STW to achieve objective.	NRA		(No cost)	•	•	•	•	•	2005	D Freakley
		b) Monitor to assess the improvement in water quality.	NRA		<20	•	•	•	•	•	2005	D Freakley
		c) Negotiate with STW Ltd on any required operational changes to meet objectives and to comply with the requirements of the Urban Waste Water Treatment Directive (91/271/EEC).	NRA	STW Ltd	U (ii)				•	•	2005	D Freakley
Progress												
a) The consent has been reviewed and a replacement drafted. The new consent will come into force soon.												
b) Monitoring of water quality is continuing.												
c) Monitoring of nutrient levels is now underway. It is likely that nutrient removal will be required at Barston STW from 1998. Nutrient removal should result in the Eastcote Brook meeting its RQO.												

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
3	To seek to ensure that pesticide levels in the Blythe do not compromise the EC Drinking Water Directive.	a) Identify, investigate and eliminate illegal sources of inputs.	NRA		150	•	•	•	•	•		D Freakley
		b) Negotiate with landowners and dischargers to reduce pesticides by changing work practices.	NRA	MAFF/NFU/CC	U (iii)	•	•	•	•	•	1999	D Freakley
		c) To determine the extent of bioconcentration of pesticides in the tissues of salmonid and coarse fish.	NRA		60	•	•					R Sedgwick

Progress

- a) The activity is ongoing.
b) This activity is ongoing.
c) There are scientific and technical difficulties which cannot be overcome. Current methods do not provide consistent results. No further action is expected on this point.

4	To eliminate polluting discharges from surface water sewers to the Cran Brook resulting from wrong sewerage connections.	a) Continuing investigations of wrong surface water sewerage connections and reconnections.	STW Ltd	Property Owners	U(vi)	•	•					D Freakley
		b) Generate increased public awareness.	STW Ltd	NRA	U(vii)	•	•	•	•	•	1999	D Freakley

Progress

- a) Work has been carried out by STW Ltd in conjunction with the NRA. The brookcourse has visually improved.
b) Current improvements may make this unnecessary.

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
5	Seek to quantify the effect of the proliferation of surface water balancing systems in Solihull which could lead to possible enhancement of flood levels on the Blythe.	a) Undertake a river mathematical modelling exercise to determine flood levels at various points in the subcatchment.	NRA		25	●	1	24				D Pettifer
		b) Resulting from the modelling exercise undertake flood prevention work.	NRA		U (iv)		●	● ○	● ○	○		
Progress												
a) Completion of the modelling work scheduled for January 1997.												
b) Further action is dependant on 5a.												
6	Potential flooding from the Blythe of a housing development at Cheswick Green.	a) Appraise the need for a flood protection scheme.	NRA		0.5	●		○				K Boulton
		b) Consider undertaking any identified work.			U (iv)		●	●	○	○		
Progress												
a) Project appraisal due to start in January 1997.												
b) Further action is dependant on 6a.												
7/8	To ensure that river flows are maintained in the Blythe.	Discuss water resource management of Earlswood Lakes and the Cuttle Brook with BW.	NRA	BW	U (i)	●	○	○				J Ratcliffe/ A Burton
Progress												
i) Earlswood Lakes - Discussions held with BW. Agreement has been reached on a 12 month trial period for baseflows from the Spring Brook to flow direct into the River Blythe. Floodwater will flow into the lakes as well as along the Spring Brook.												
ii) Cuttle Brook - Discussions are ongoing with BW and STW Ltd regarding the use of flows from Norton Green STW.												

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
9/10	To seek to improve the water quality of the Blythe below Brueton Park Pool and to remove an obstruction to the upstream movement of fish.	a) Confirm the extent of pollution by wildfowl.	NRA		<5	•						K R Grainger
		b) Diversion of river around Brueton Park Pool.	NRA	Solihull MBC	78*		78					M Cooper
Progress												
a) Completed.												
b) Completed and in addition the pool was dredged.												
11	Investigate the restoration of Blythe Mill Weir	a) Undertake structural survey of private weir.	NRA		6	•	6					M Cooper
		b) Consider feasibility of restoration.	NRA	Owner	U (iv)			•				M Cooper
Progress												
a) Completed.												
b) The costs of restoration are likely to be high (64K - 170K).												
12	To seek to improve the water quality of the Cole at Trittiford Mill and Hay Barn Recreation Ground.	a) Investigate and divert wrongly connected sewerage.	STW Ltd BCC	House-holders	U (vi)	•	•	•	•	•	1999	D Freakley
		b) Generate increased public awareness.	STW Ltd BCC		U (vii)	•	•	•	•	•	1999	
Progress												
a) Water quality has been improved. Work is ongoing with Birmingham City Council using dye tracing.												
b) The Council and STW Ltd are considering the best way forward.												

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
13	To seek to ensure that watercourses adjacent to Birmingham Airport are not polluted by de-icer chemicals.	a) Monitor watercourses to assess impact of 1st flush sewer diversion system.	NRA	BIA	<10 *	•	•	•				D Freakley
		b) Use NRA powers to identify further improvements as necessary.	NRA		<10	•	•	•	○	○		D Freakley

Progress

- a) The 1st flush sewer diversion system is working.
b) The NRA is working closely with BIA over the planned expansion of the airport. A new system will be required to cover most of the new work.

14	To seek to prevent possible future flooding of Station Road Industrial Estate, from the River Cole at Coleshill.	a) Mathematical modelling exercise undertaken in 1993/94.	NRA		25							K Boulton
		b) A capital flood defence scheme has been agreed subject to feasibility and prioritisation in the Capital Works Programme.	NRA	RMC	1563	15	48	365	635	500		
		c) The flood defence warning system was extended in the spring of 1994 to cover Station Road.	NRA	Warks CC	0.5 *							

Progress

- a) Completed.
b) The scheme has been inserted into the Flood Defence Capital Programme and feasibility work is in hand.
c) Completed.

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
15	To allow upstream movement of fish along the Cole above weirs at Cooks Lane and Moorend Avenue.	a) Determine the possibility of a fish chute to allow passage upstream at Cooks Lane.	NRA		U (iv)							M Cooper
		b) Investigate the possibility of modifying the gauging weir.	NRA		0.5	● May						
		c) Construction of fish chute at Cooks Lane.	NRA		15		●					
Progress												
a) Completed. b) It is not possible to modify the existing weir. c) The fish chute is completed and its operation is being assessed.												
16	To seek to improve the fishery in the Bourne.	Carry out an extensive investigation to determine the underlying causes of poor fishery status.	NRA		10	●	5	5				R Sedgwick
Progress												
Work planned for 1995/96.												

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
18	Seek to minimise the impact of urban development on all aspects of the water environment. Encourage appropriate measures through our role as a statutory consultee in development plans and planning applications.	Direct influences in the planning process by seeking the adoption of NRA policies and proposals in Development Plans.	NRA	LPAs/ Developers	U (v)	•	•	•	•	•	Ongoing	P Swain
Progress Work is ongoing. Standard planning conditions have been revised and the regional planning liaison manual updated.												
19	Periodic discharge of high levels of inorganic solids into the Blythe from the Horn Brook.	Investigation into origin and cause of solids discharge. Determine effect of deposition on quality of gravel beds and consequences for spawning salmonids.	NRA		10	•	•					D Freakley
Progress The cause is part natural, (winter rainfall on bare fields); part agricultural, (livestock using the river to drink) and possibly quarry water. Tighter limits have been set to control quarry discharges.												
20	To establish the reason for the poor biological quality of the Temple Balsall Brook.	a) Investigate the poor biological quality. b) Take remedial action as necessary.	NRA NRA		<5 Un-known	•	•	•	○			G Fretwell D Freakley
Progress Biological surveys have been completed but the results are inconclusive. Further work is required.												

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
21	To seek to alleviate existing flooding from the Bourne at Old Arley (non main river watercourse at this point).	a) River channel survey has been carried out and limited channel capacity has been identified.	NRA		<0.5							V Brown
		b) Negotiate with Local Authorities, and Landowners to secure remedial channel works as necessary.	NRA	DC/CC/ Riparian Owners	U (iv)	●	●	○				V Brown
Progress												
a) Completed.												
b) NWDC have improved drainage associated with the highway. Improvements downstream are also required and although riparian owners have been contacted, no further action has been taken.												
22	To seek to address the reduction of baseflows in the Blythe due to increased urbanisation.	a) Promote development which sustains natural recharge to groundwater.	NRA	LPA	U (v)	●	●	●	●	●	Ongoing	V Brown
		b) To encourage LPAs not to release Green Belt land and to support restraint policies in urban fringe areas.	NRA	LPA	U (v)	●	●	●	●	●	Ongoing	P Swain
Progress												
a) The NRA is supporting "source control" as a means of maintaining the recharge of groundwater.												
b) The NRA has objected to the proposed increased housing allocation in the Solihull MBC Unitary Plan and the outcome is awaiting the Inspector's Report.												

No	Issue	Activity	Responsibility		Total Cost (£K)	94/95	95/96	96/97	97/98	98/99	Future	NRA Issue Leader
			Lead	Other								
23	To ensure accurate gauging of flows on the Blythe.	a) Review existing gauging stations and assess the need for new stations.	NRA		<5	●	○	○	○	○	2000	A Burrows
		b) Resulting from the review modify or install new gauging stations and/or equipment.	NRA		U (iv)		●					C Dobson

Progress

- a) No new stations have been installed. Low flow surveys have been undertaken in 1989, 1993, 1994 and 1995 and a special survey of the inputs and outputs from Earlswood Lakes has been completed. Flow monitoring for flood defence purposes has also taken place.
- b) No changes have been proposed.

NRA ISSUE LEADERS

K Boulton	Project Manager, Feasibility
V Brown	Senior Engineer, Flood Defence
A Burrows	Hydrometric Officer
A Burton	Water Resources Officer
M Cooper	Area Fisheries, Recreation, Conservation and Navigation Manager
C Dobson	Area Water Resources and Planning Manager
D Freakley	Senior Pollution Control Officer
G Fretwell	Area Biologist
K R Grainger	Area Environmental Quality Manager
D Pettifer	Engineer, Feasibility
J Ratcliffe	Senior Hydrologist
R Sedgwick	Fisheries Scientist
P Swain	Senior Planning & Liaison Officer

4 Future Reviews

We will review progress again next year and aim to publish our second Annual Review of the Blythe/Cole/Bourne CMP in October 1996. A major revision of the Consultation Report is not expected until 1998.

Appendix 1 River Quality Objectives

Set out below is the new General Quality Assessment (GQA) for water quality. It replaced the NWC system in 1994.

The NRA has strategic targets known as River Quality Objectives (RQOs) for all rivers. RQOs provide a basis for water quality management decisions and are based on a classification scheme known as River Ecosystem Classification. The River Ecosystem scheme comprises five quality classes which reflect the chemical water quality requirement of different types of river ecosystems.

Table 1 describes the Water Quality criteria of the River Ecosystem Classification. For each designated stretch short and long term RQOs will be proposed. They will be target River Ecosystem (RE) classes. Short term RQOs will include a date by which the target water quality should be achieved. They should be realistic, achievable and linked to planned expenditure and works within the catchment to maintain or improve water quality. Short term RQOs will be the basis of Statutory Water Quality Objectives (SWQOs) set by the Secretary of State. Long term RQOs are set for planning maintenance and improvement of water quality.

There are five classes within the RE scheme, one of which will be applicable to almost every stretch of classified river. The term 'Ecosystem' is used in recognition of the need to protect the ecosystem that is sustained in a healthy river.

RQOs are established for lengths of river (river stretches) defined according to their upstream and downstream limits. Physical features such as tributaries, weirs, or significant discharges often mark the ends of river stretches owing to their potential significant effects on water quality.

Details of the RQOs assigned to river stretches and compliance with RQOs including the monitoring data upon which compliance assessment is based is included on the Public Register.

Some Consents for water company sewage treatment plants are based on historical performance rather than target river quality and the targets can only be met by improvements in effluent quality. The NRA has negotiated a programme of improvements with the DoE and water companies under the terms of Asset Management Plans (AMP). The second stage of these plans (AMP2) was agreed in July 1994 with the industry regulator OFWAT. The plans will govern priorities for investment for the period covered by this plan.

Table 1 - River Ecosystem Classification : Water Quality Criteria

Class	Dissolved Oxygen % saturation 10 percentile	BOD (ATU) mg/l 90 percentile	Total Ammonia mg N/l 90 percentile	Un-ionised Ammonia mg N/l 95 percentile	pH lower limit as 5 percentile; upper limit as 95 percentile	Hardness mg/l Ca CO ₃ 95 percentile	Dissolved Copper µg/l 95 percentile	Total Zinc µg/l 95 percentile
RE1	80	2.5	0.25	0.021	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	30 200 300 500
RE2	70	4.0	0.6	0.021	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	30 200 300 500
RE3	60	6.0	1.3	0.021	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	300 700 1000 2000
RE4	50	8.0	2.5	-	6.0 - 9.0	≤ 10 > 10 and ≤ 50 > 50 and ≤ 100 > 100	5 22 40 112	300 700 1000 2000
RE5	20	15.0	9.0	-	-	-	-	-

Class RE 1: Water of very good quality (suitable for all fish species).

Class RE 2: Water of good quality (suitable for all fish species).

Class RE 3: Water of fair quality (suitable for high class coarse fish populations).

Class RE 4: Water of fair quality (suitable for coarse fish populations).

Class RE 5: 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.

Appendix 2 Glossary

Algae	Microscopic (sometimes larger) plants. Algae occur in water and are often discussed in the context of eutrophication.
Base Flow	The flow in a river derived from groundwater sources.
BOD	Biochemical Oxygen Demand. A measure of the amount of oxygen consumed in water (over 5 days), usually by organic pollution. Oxygen is vital for life so the measurement of the BOD tests whether pollution could affect aquatic animals.
BOD (ATU)	Biochemical Oxygen Demand measured in the presence of allyl thiourea. The allyl thiourea suppresses the oxidation of ammonia and the oxygen demand reflects the level of carbon based oxidation.
CaCO₃	Calcium Carbonate.
Coarse fish	Freshwater fish other than salmon and trout.
EC Directive	A type of legislation issued by the European Community which is binding on Member States in terms of the results to be achieved but which leaves to Member States the choice of method.
Eutrophication	Enrichment of water by nitrates and phosphates often leading to poor water quality.
Floodplain	Land adjacent to a watercourse that is subject to flooding.
HMIP	Her Majesty's Inspectorate of Pollution.
Main River	The watercourses shown on the statutory "Main River Maps" held by NRA and MAFF. The NRA has permissive powers to carry out works of maintenance and improvement on these rivers.
5 Percentile	Levels exceeded 5% of the time.
10 Percentile	Levels exceeded 10% of the time.
90 Percentile	Levels exceeded 90% of the time.
95 Percentile	Levels exceeded 95% of the time.
pH	A measure of acid or alkali.

River Quality Objective (RQO)	The statement of the category of water quality that a body of water should match, usually in order to be satisfactory for use as a fishery or water supply etc.
Salmonid Fish	Game fish of the Salmon family, eg trout and salmon.
Source Control	The collective term to describe the management of run-off at or near the point of impact of rainfall, before it reaches the traditional piped drainage and sewer systems of urban areas.
STW	Sewage Treatment Works.