
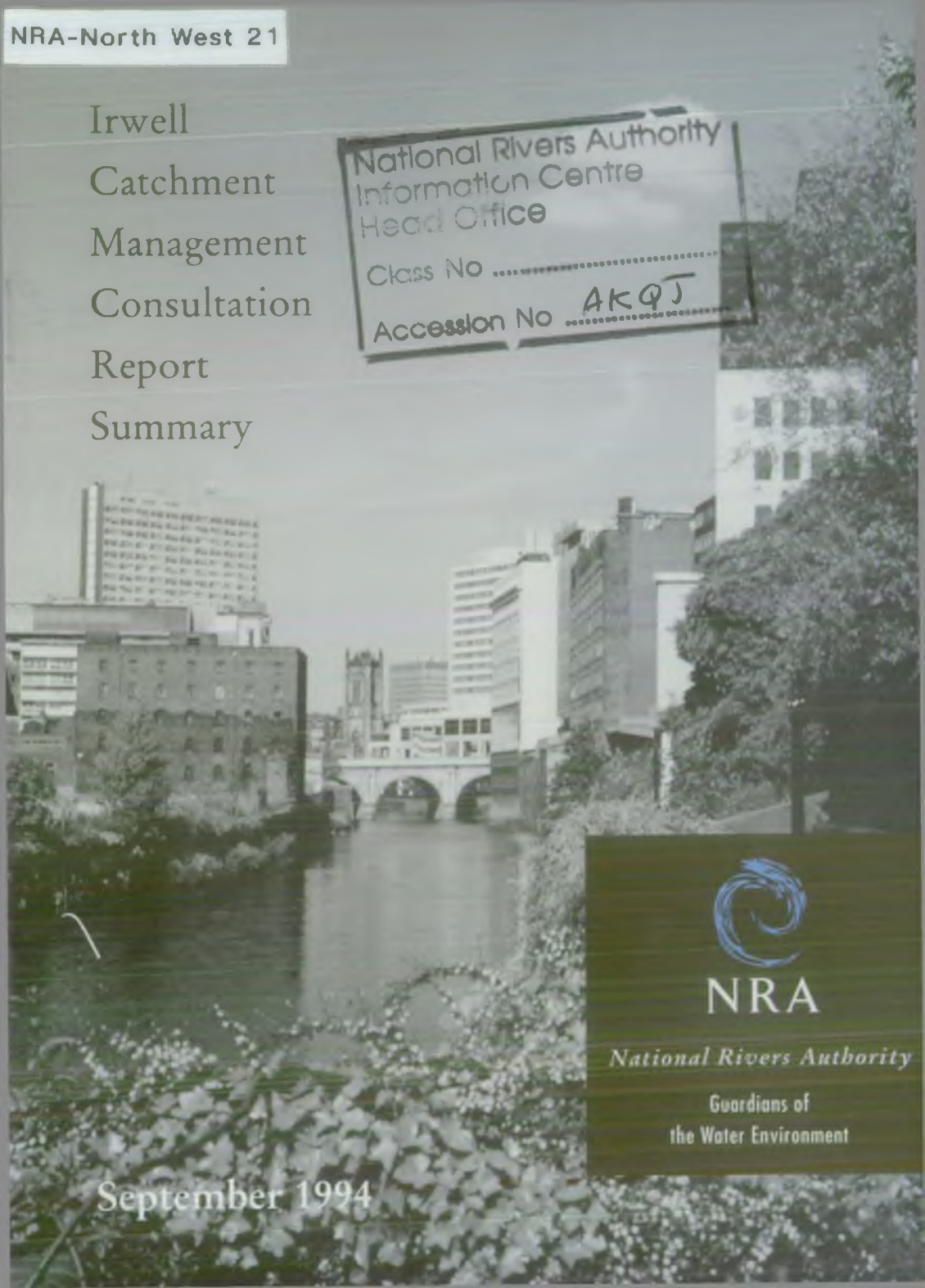


Irwell
Catchment
Management
Consultation
Report
Summary

National Rivers Authority
Information Centre
Head Office
Class No
Accession No AKQJ



NRA
National Rivers Authority
Guardians of
the Water Environment

September 1994

INTRODUCTION

Never before has there been such a pressing need to conserve our rivers, lakes and coastal waters to support the rapidly increasing recreational, domestic, agricultural and industrial demands placed upon them. On the other hand, the need to protect life and property from flooding has never been greater. The NRA has a wide range of responsibilities for the control of the water environment, and seeks to reconcile the conflicts raised by the competing needs for water.



River Irwell, Ramsbottom

In particular, the NRA is responsible for:

- conservation of water resources
- pollution control
- flood defence and flood warning
- maintenance and improvement of fisheries
- nature conservation in water and water related habitats
- conservation of river and riverside heritage and landscapes
- promotion of water based water-side recreation
- control of navigation, in some areas.

The NRA believes that it can best meet its responsibilities by adopting the concept of **integrated catchment management**. This means that a river catchment is considered as a whole and the actions in each of the NRA areas of responsibility must take account of the possible impact/interaction with other users of the catchment.

The NRA has decided to formally present its catchment management policies to the public via Catchment Management Plans which will be produced for all the rivers in England and Wales by 1998. The Plans are intended to provide a link between the NRA and the users of water catchments so that the Authority can better reflect their interests whilst carrying out its duties. For this reason each Plan includes a Consultation Phase during which all those with an interest are invited to comment on the NRA's proposal for the future management of the river catchment.

YOUR VIEWS

The Irwell Catchment Management Consultation Report is our assessment of the state of the catchment and identifies the problems which need to be resolved. The Catchment Wide Issues are outlined in the tables at the end of this summary report, whilst Site Specific Issues are detailed in the full Consultation Report.



River Roch, Rochdale

We need your views:

- what do you think about the Plan in general?
- have we identified all the uses?
- have we identified all the problems?
- what do you think about the options proposed?

The Irwell Catchment Management Consultation Report has been divided into six Sub-Catchments: the Upper Irwell, River Roch, River Croal, River Irk, River Medlock and the Lower Irwell; each Sub-Catchment has been produced as an independent chapter of the main document.

If you would like to comment on the Consultation Report, receive a copy of the full document or appropriate Sub-Catchment section please write to:-

Vicky Schofield
Area Catchment Planning Officer
National Rivers Authority
"Mirwell"
Carrington Lane
Sale
M33 5NL
Tel. 061 973 2237

The Plan considers the River Irwell catchment including its tributaries, lakes and reservoirs from the source of the river down to the confluence with the River Mersey. It is mainly in the counties of Lancashire and Greater Manchester. The Mersey Basin catchment will be covered in a subsequent document.

Comments are best forwarded in writing not later than 1st February 1995.

RIVER IRWELL CATCHMENT STATISTICS

General

Area	793 km ²
Population	1,533,000

Water Resources

Average annual rainfall (Varies from 1554 mm at Springs Reservoir to 855 mm at Weast (based on 1961 - 90 Average)	1200 mm
Average Daily Flow from Catchment	1949 -1990 18.14m ³ /s
Largest Abstraction	146 Ml/d
Largest Public Supply Abstraction	71 Ml/d
Total Licensed Abstraction (excluding canals)	551 Ml/d

Water Quality

(From 1993 Classification Assessment using NWC scheme)

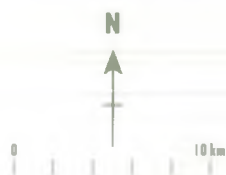
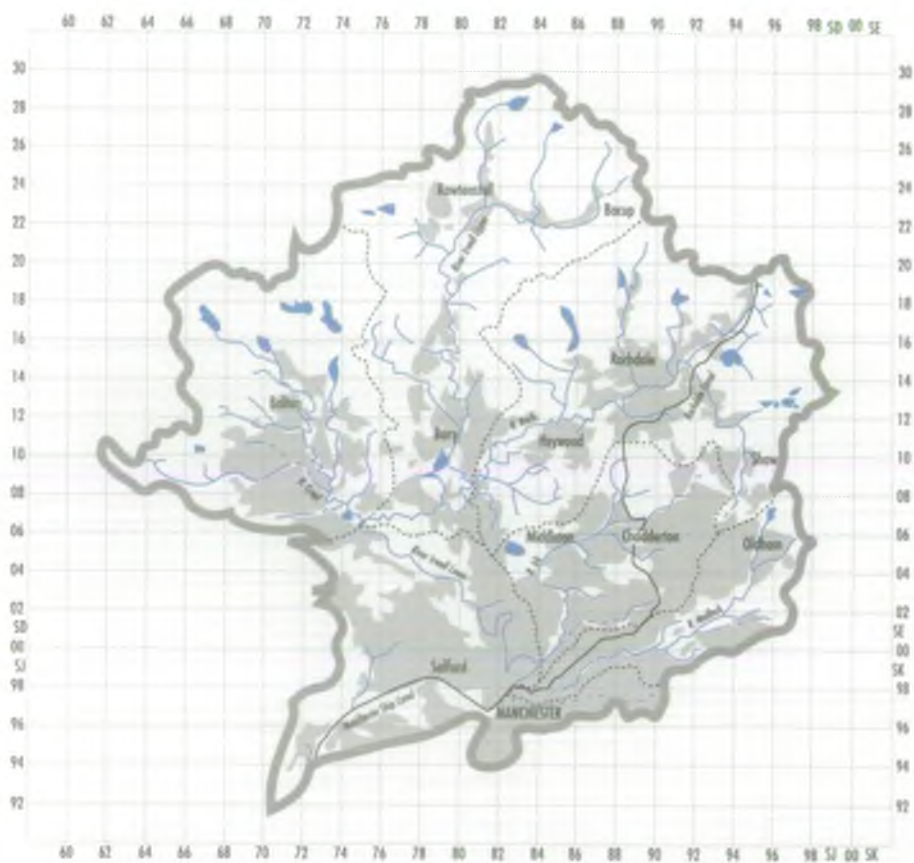
Length in Class 1A (v. good)	9.0 km
Length in Class 1B (Good)	29.0 km
Length in Class 2 (fair)	116.5 km
Length in Class 3 (poor)	133.7 km
Length in Class 4 (bad)	40.7 km

Flood Defence

Length of Statutory main river	363 km
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Abbreviation: Ml/d = Megalitres per day
m³/s = Cubic Meters per second (cumecs)
NWC = National Water Council

RIVER IRWELL CATCHMENT AREA MAP



IRWELL LOCATION	
KEY	
-----	Catchment boundary
■	Built up area
—	Watercourse
- - -	Culverted Section
—	Canal
Irwell Catchment Management Plan	
Irwell catchment	
June 1994 Map 1	

DEVELOPMENTS AND LAND USE

The River Irwell rises on Deerplay Moor, Bacup and winds its way through an area displaying upland scenery and deep cut valleys before entering the conurbation of Greater Manchester. The catchment area's population of approximately 1,533,000 is centred mainly in the towns of Oldham, Bolton, Bury, Rochdale and the Cities of Manchester and Salford.

The Irwell catchment is largely urban and industrial but with some mixed farming in the upper reaches. It suffers from urban decay and industrial discharges causing pollution and poor water quality unable to support river life for much of its length. Many of the problems are historic caused by the area's industrial past. Within the catchment there are many culverted sections of river (where the river flows under roads or buildings) with associated problems of their own. For example, blockages caused by the collapse of the culvert, as well as blockages by litter and debris which cause flooding, are common.



*Urban Decay,
River Medlock,
Central Manchester*

Poor access to many culverts add to the problems of removing debris to prevent localised flooding.

Improvements have been made within the Irwell Catchment, by extending parkland areas alongside the river, undertaking river corridor surveys seeking to conserve and enhance wildlife habitat, alleviating flood risk areas and more sympathetic planning and development. However, there is much more work to be done.

Several projects for new road by-passes and extending and widening existing motorways are also planned in the area.



*New Development, River Irwell,
Manchester*

FLOOD DEFENCE

The NRA has a duty to exercise a general supervision over all matters relating to Flood Defence. The principle watercourses in the catchment have a formal designation of “main river” and the NRA has powers to regulate works on these watercourses. Powers to directly regulate works on “ordinary watercourses” are less extensive.

Although the responsibility for watercourse maintenance rests with the riparian (river bank) owner, the NRA has discretionary operational powers to carry out, where required, maintenance and improvement works on “main rivers”. Similar discretionary operational powers on “ordinary watercourses” are vested mainly with the Local Authorities, the NRA having limited supervisory and default powers.

The River Irwell at Salford has a well recorded history of flooding dating back to 1616. The worst recorded floods were in 1866 and 1946. During the flood of October 1946, approximately 5000 houses and 300 industrial premises were affected.

The NRA is now planning a flood control scheme for the River Irwell at Salford which will create two areas that can act as flood storage lagoons next to the river. These areas will store excess water during major floods and so protect the low lying areas currently at risk.



River Irwell, adjacent to Littleton Road Playing Fields

The proposed two flood storage lagoons, one at Littleton Road Playing Fields, and the other at Castle Irwell Playing Fields, when combined with downstream river channel works, will give a 1 in 100 year standard of flood protection.

The following are other issues of flood defence interest within the catchment:-

- There are 363 km of “main river”, of which a major percentage pass through heavily urbanised areas such as Manchester, Salford, Bolton, Bury and Rochdale.
- Regular, planned inspections of “main river” channels and structures are carried out in order to programme any necessary maintenance works. Such works are carried out to safeguard the existing standards of flood protection, particularly in the heavily urbanised areas.
- Regular clearing of debris from channels, culverts, bridges and debris screens; de-silting and dredging works using mechanical plant.
- Persuading riparian owners to fully accept their responsibilities for the many dilapidated riverside structures, and prosecute where appropriate, cases of illegal tipping of rubbish in watercourses.
- Provide information and advice to the Police and Local Authorities for the purpose of giving them sufficiently advanced warnings of likely flooding in known flood risk areas. Forecasts of high river levels are based on rainfall and river level data collected from outstations by the Regional Telemetry System.
- Provide information and advice to Local Authorities to prevent the development of sites affecting or within Flood Risk Areas.

WATER QUALITY

The assessment of River Water Quality in 1993 showed that of the 329 km of classified rivers in this catchment 53% were classified as poor or bad.



Outlet pipe, River Irwell

The catchment is extensively affected by treated sewage effluent and storm sewage. There are 13 significant sewage treatment works within the catchment and over 600 known overflows on the sewerage system. There are also 20 significant industrial discharges direct to river.



Litter and debris, Salford Quays

Significant lengths of the catchment are affected by ochre coming from apparently natural sources and/or as a consequence of previous industrial activities.

Surface water run-off from the substantial urban areas, during periods of wet weather, is a further significant influence on water quality.

WATER RESOURCES

The river levels within the River Irwell Catchment rise and fall rapidly in response to rainfall. This is mainly due to the thin soils and steep gradients of the upper catchment which form the natural character of the River Irwell and its tributaries.

There is a need to control the use of water within the catchment and the NRA achieve this by licensing abstractions from and discharges to the river system.

The demand for industrial and public water supplies prompted the construction of numerous reservoirs within the catchment. Groundwater obtained from the shallow wells and springs is a locally important resource. The headwaters of the Roch and Upper Irwell are used mainly for drinking water supply but further downstream the catchment is used mainly for industrial purposes.

The NRA monitors the river and underground water (aquifer) levels and rainfall amounts at key points within the catchment to help with the management of the water resources. Rainfall and river levels are also continuously monitored at key sites to operate the flood warning service for the areas at risk from flooding within the catchment.

FISHERIES

The River Irwell catchment has some good non-migratory trout fisheries in many of its upper reaches as well as some good coarse fisheries in its lower reaches. There are however large lengths of river which have very poor fisheries or maintain no fishery at all due to severe water quality problems. This situation is expected to improve as water quality improvements are carried out.

The lakes, reservoirs and lodges within the catchment area provide anglers with good trout and coarse fish angling. There are many angling bodies that control the fishing and access rights to the rivers and still waters.

CONSERVATION

The rivers of the Irwell Catchment are of high local conservation value. Many of them have been seriously degraded and restricted by ever expanding urban development.

However, significant stretches flow naturally along a varied stony bed through a range of habitats, from open moorland and wooded cloughs to wet flood plain and species rich grassland.

It is important to safeguard, and recreate continuous, open river corridors along these historic watercourses and their tributaries to achieve their full potential.

RECREATION

Many people live alongside the rivers and streams in this catchment. They are attracted by the rugged beauty of the moorlands near its upland sources, its many reservoirs and lodges and the variety of its open valleys. There are long distance walks along the Irwell and the Medlock and many other footpaths within the catchment. However access is restricted in many places and needs to be improved. Many of the areas of open public space lie within the river corridors. The Irwell is being increasingly used for canoeing and an international training course is being created at Burrs and a canoe pass at Ramsbottom Weir.



*Fish pass and canoe pass,
River Irwell, Ramsbottom*

ISSUES AND OPTIONS

The following tables list the Catchment Wide issues which the NRA has identified within the Irwell. We would like to hear from you if:-

- you think that there are any significant issues which have not been included
- you think that we have not considered all the options available.
- you have any views on the options suggested.
- you have any other information about the catchment or any comment about its future management.

Catchment Wide (CW) Issues:

Issue No: CW1	Development Control - the impact that development and development pressures have on the water environment for all NRA functions		
Options	Responsibilities	Advantages	Disadvantages
1. Promote green corridors for rivers and encourage enhancement of river corridor features in UDP's, structure and local plans. include relevant policies in structure UDP's and local plans. Seek opportunities for "planning gain" where practical.	NRA/ Planning Authorities	Protection and enhancement of water environment, landscape, and recreational use as appropriate	Number of Local Authorities to consult with using limited staff resources
2. Object to/place conditions on unsympathetic development proposals	NRA/ Planning Authorities	Retention of natural and heritage features and the existing riverside character. Retention of recreational use as appropriate.	Cost implications for Developers/ Riparian owners
3. Work to ensure the DOE circular 30/92 on development and flood risks is applied by planning authorities	NRA/ Planning Authorities/ Developers	Maintain existing standards of flood protection and ensure development at acceptable risk	
4. Improve liaison with planning authorities and developers and highlight problems of re-developing existing sites in flood risk areas.	NRA/ Planning Authorities/ Developers/ Riparian Owners	Ensure NRA requirements are considered at an early stage	

DOE circular 30/92 - guidance from DOE to planning authorities on developments and flood risk.

Issue No: CW1 continued from Page 11	Development Control - the impact that development and development pressures have on the water environment for all NRA functions		
Options	Responsibilities	Advantages	Disadvantages
5. Set up NRA Project Teams to manage input to new roads/ bypasses and major projects	NRA	Ensure optimum protection/ enhancement.	
6. Continue to influence Local Authority or individual application decisions	NRA/Local Authority	Ensure that the water environment is protected against the impact of development	Possible conflict with economic development of land
7. Negotiate with and persuade developers to retain physically diverse features and valuable habitats within development sites	NRA/ Developers	As above	Limited powers to ensure policy carried out, especially if planning permission granted
8. Resist development in areas draining to a sewage treatment works with capacity problems until adequate capacity is available	NRA/ NWW Ltd./ Local Authority	Maintain existing water quality and prevent deterioration.	Cost to NWW Ltd and possible customers. Possible conflict with Development Plans
9. Encourage Planning Authorities to apply the NRA's Ground water Protection Policy in considering new development proposals	NRA	Ensure groundwater is not at risk from contamination from new development.	

DOE - Department of the Environment UDP - Unitary Development Plan

Issue No: CW2	Lack of survey information on some watercourses.		
Options	Responsibilities	Advantages	Disadvantages
1. Collection of sufficient data on total zinc and dissolved copper date.	NRA	Permit full assessment of compliance with the Rivers Ecosystem Use classes order to assess compliance with statutory water quality objectives in the future.	

Cont'd

Issue No: CW2 Continued from Page 12	Lack of survey information on some watercourses.		
Options	Responsibilities	Advantages	Disadvantages
2. Update existing land survey information in a planned manner.	NRA	Basic physical information used to assist with regulatory activities, flood defence and planning works.	
3. Carry out ad-hoc land survey work as and when required.	NRA	Updates existing information.	Does not completely address lack of survey information.
4. Continue to provide River Corridor Surveys prior to Flood Defence river maintenance/ capital schemes	NRA	Protect nature conservation and landscape interests of river corridor.	Incomplete and ad hoc record.
5. Provide additional River Corridor Survey information in a planned manner	NRA	Provide more informed and strategic basis for decision making.	
6. Organise survey of threatened riverine species such as otters and water voles. Identify: potential habitats, and ways of improving them, and obstructions to future colonisation	NRA/Wildlife Groups	Be able to implement habitat improvement strategy in expectation of water quality improvements. Encourage declining species.	
7. Stimulate survey of bat roosts along rivers particularly under bridges responsibility	NRA/Local Bat Groups/ Wildlife Trusts/English Nature	Avoid damage or obstruction to habitat of declining and protected species.	Reliance on volunteers.

Issue No: CW3	General Flood Defence maintenance works.		
Options	Responsibilities	Advantages	Disadvantages
1. Dredging or De-silting with heavy plant. Hand maintenance work e.g. tree cutting, weed clearance, grass cutting etc.	NRA/ Riparian owner	Maintenance of existing standard of flood protection. Avoidance of flooding due to culvert and channel blockages. Opportunities to further and enhance conservation.	Possible short term disruption of recreation and amenity uses. Possible short term reduction in water quality. Possible impact on wildlife habitats, natural beauty and heritage features.

Issue No: CW3 Continued from page 13	General Flood Defence maintenance works.		
Options	Responsibilities	Advantages	Disadvantages
2. Provide machine access ramps at suitable locations.	NRA/ Riparian owners/ Developers	Existing standard of flood protection maintained. Avoidance of flooding due to culvert and channel blockages.	Cost justification and difficulty in locating suitable sites.

Issue No: CW4	Assess standards of service to identify where maintenance or improvement works are required on "main river"		
Options	Responsibilities	Advantages	Disadvantages
1. Undertake standards of service survey in accordance with NRA national guidelines.	NRA	Resources targeted at areas with highest potential for flood damage.	Difficulty in classifying all watercourses according to flood risk due to lack of information.
2. Continue to allocate resources using current systems.	NRA	Lowest cost option.	Current systems rely on local knowledge and tend to be subjective.

Issue No: CW5	Access problems - inadequate access to and along watercourses for maintenance activities, improvement works, recreation and amenity.		
Options	Responsibilities	Advantages	Disadvantages
1. Enforce flood defence bylaws and ensure working areas alongside main rivers are not prejudiced in future.	NRA	Maintains and improves access to river corridors.	Difficulty in "policing" all main rivers.
2. Encourage Local Authorities to adopt a similar stance on ordinary watercourses.	NRA/ Local Authorities	As above.	Difficulty in "policing" ordinary watercourses. Local Authorities often unaware of legislative powers.

Cont'd

Issue No: CW5 Continued from page 14	Access problems - inadequate access to and along watercourses for maintenance activities, improvement works, recreation and amenity.		
Options	Responsibilities	Advantages	Disadvantages
3. Selectively improve public access to watercourses and encourage extending linear parks whilst ensuring there is no reduction in conservation interest.	NRA/Local Authorities/ landowners/ Ramblers Associations/ Warden Services	Improve public perception of value of water environment. Allow more people to enjoy rivers and their corridors.	Land take, maintenance, security of riverside properties.

Issue No: CW6	Culverted Sections and Bridges. Risk of culverts and bridges blocking. Clearance and maintenance of debris screens. The number and extent of culverted sections and resulting fragmentation of river habitat.		
Options	Responsibilities	Advantages	Disadvantages
<ol style="list-style-type: none"> 1. Carry out culvert inspections. Clear blockages where possible. 2. Clear debris screens when necessary or where available resources allow. 3. Enforce clearance of debris screens by Riparian owners. 4. Promote policy that existing culverts within new developments should be opened up on an opportunist basis. 5. Identify possible river restoration schemes to open up culverts within areas of open space. 6. Object to new culverting of watercourses except for access purposes and under special circumstances. 	<ol style="list-style-type: none"> 1. NRA/ Riparian owners 2. NRA 3. NRA 4. NRA/ Developers/ Planning Authority 5. NRA 6. NRA/ Developers/ local Authority 	<ol style="list-style-type: none"> 1. Existing standard of flood protection maintained. Avoidance of flooding due to culvert blockages. 2. As above. 3. As above. 4. Continuity in river corridors. Opportunities to enhance conservation. Free movement of fish. Possible improvement of flood protection. 5. As above. 6. Maintain existing flood defence standards and existing river corridor features. 	<ol style="list-style-type: none"> 1. Maintenance costs. 2. Maintenance costs. 3. Difficult to trace some owners. Implications of failure if cannot trace. 4. Restricts available land for development. 5. Often prohibitive scale of removing infill material. 6. Increased land take.

Issue No: CW7	Instream structures such as culverts and weirs.		
Options	Responsibilities	Advantages	Disadvantages
1. Provision of fish passes over weirs and similar structures.	Riparian landowners/ NRA/Local Authority	Free migration of fish throughout the catchment. Migration to spawning ground not normally available. Improved fish stocks.	Cost benefit ratio.
2. Flows within culverts to allow fish passage e.g. by modification of bed within culvert.	NRA/Local Authority	Free movement of fish up and downstream.	Cost. Possible reduction of flood defence standard.
3. Leave as obstacles.		No cost.	Restriction of fish movements. Loss of potential stock improvements.

Issue No: CW8	Urban decay and the impact riverside dereliction has on the water environment.		
Options	Responsibilities	Advantages	Disadvantages
1. Persuade owners to repair decaying structures. Repair structures where debris could be transported into culverts and cause blockages. Negotiate improvements with developers. Liaise with Local Authorities on plans for specific sites.	NRA/Local Authorities/ Developers/ Riparian Owners.	Ensure that dilapidated structures do not pose a flood risk. Ensures maximum flood defence benefit and amenity value.	Difficulty in tracing land-owners and enforcing legal responsibilities. Maintenance and/or scheme costs.
2. Support riverside regeneration initiatives including renovation of significant/historic buildings. Support initiatives promoting sympathetic enhancement works such as riverside walkways.	Local Authorities/ Voluntary Sector/ Mersey Basin Campaign/ NRA.	Increases value of river as focal point. Attractive setting promotes positive economic regeneration and respect for riverine environment.	Scheme costs. Difficult to get consensus of opinion on way forward with different interests being considered.
3. Promote the use of appropriate materials, which respect the landscape setting, for the repair and construction of river walls, bridges and other structures associated with the river.	NRA/ Landowners/ Developers/ Local Authority.	Maintain and improve aesthetic appearance of rivers.	Cost implications.

Issue No: CW9		Litter and rubbish problems in and near rivers, particularly in urban areas.		
Options	Responsibilities	Advantages	Disadvantages	
1. Ensure that rubbish is not dumped in rivers by using enforcement powers. Raise public awareness of consequence of rubbish dumping.	NRA/Local Authority	Flood protection standards maintained. Increase in visual amenity.	Cost to Local Authority.	
2. To clear rubbish which may pose a flood risk.	NRA/Local Authority	Flood protection standards maintained. Increase in visual amenity.	Maintenance costs.	
3. Design Schemes to discourage fly-tipping using fencing etc.	Local Authority	Supports work of other functions particularly Flood Defence.	Can cause difficulties of access.	
4. Installation of fine mesh screens. Installation of debris screens.	Mersey Basin Campaign Central Catchment Group/NRA/DOE/Local Authorities	Large amounts of waterborne litter and rubbish would be removed from rivers, with a resultant increase in visual amenity.	Increased obstruction to flow with increased flood risk. Restriction of fish movement. Maintenance costs. Increased liability for screen owners.	
5. Continue to fund work of WATERWATCH and STREAMCARE (part of Mersey Basin Campaign).	NRA/Mersey Basin Campaign/ Riparian Owners	Improves visual appearance and improves respect for waterways.	Cost implications.	

DOE - Department of the Environment.

Issue No: CW10	Review of "main river" lengths to reflect the land use of protected areas.		
Options	Responsibilities	Advantages	Disadvantages
1. Amend main rivers to suit changing needs.	NRA	Improve effectiveness of limited resources in providing and maintaining flood defence standards.	Need for liaison with MAFF, RFDC and other bodies before implementation. Results will probably not be realised in the timescale of this plan.
2. Retain existing main river schedules.	NRA	Least impact on resources.	Scarce NRA flood defence resources will continue to be poorly targeted.

MAFF - Ministry of Agriculture, Fisheries and Food.
 RFDC - Regional Flood Defence Committee

Issue No: CW11	Failure to achieve the present water quality classification objective for many classified reaches of the catchment.		
Options	Responsibilities	Advantages	Disadvantages
1. Pursuance of the water quality improvements necessary for achievement.	NRA - to monitor water quality and pursue and enforce improvements. Parties responsible for pollution - to undertake necessary remedial measures. Responsible parties likely to include NWW Ltd./District Councils/Industrial Site Operators/Farm Operators and Individual Householders.	Achievement of the present water quality classification objective and possibly improvement to the aesthetic, amenity and fishery value.	Cost to responsible parties.
2. Revision of the present water quality classification objective where this is not achieved.	NRA	Avoidance of expenditure on inputs normally outside the scope of pollution control.	Apparent relaxation of water quality standards.

Issue No: CW12	Widespread aesthetic deterioration in the catchment due to sewage litter.		
Options	Responsibilities	Advantages	Disadvantages
1. Reduction in debris load released from unsatisfactory sewer overflows.	As a requirement of the EC Urban Wastewater Treatment Directive NRA/NWW Ltd. - to agree improvements required to achieve satisfactory performance. NWW Ltd. to undertake capital works.	Improvement to aesthetic and amenity value.	Cost to NWW Ltd. and possibly customers.

EC - European Community

Issue No: CW13	Widespread aesthetic deterioration in the catchment due to domestic foul wastes wrongly connected to surface water drains.		
Options	Responsibilities	Advantages	Disadvantages
1. Investigation and remedial measures to re-direct wrong connections to foul sewer.	NRA - to establish responsibility at point of discharge. NWW Ltd./ District Councils/ private drainage owner - to investigate source of wrong connection. NWW Ltd./ private drainage owner/ householder - to undertake works to redirect drainage.	Improvement to aesthetic and amenity value.	Cost to NWW Ltd./ District Councils/private drainage owner. Cost to NWW Ltd./ District Councils/private drainage owner/ householder.

Issue No: CW14	Protection and enhancement of Wildlife habitats, natural and geomorphological features within river corridors.		
Options	Responsibilities	Advantages	Disadvantages
1. Safeguard and conserve existing sites of conservation interest (both designated and non-designated) against threat of development, e.g. encroaching into river corridors.	NRA/ GMCU/EN/ Local Authority/ Riparian Owner/ Wildlife Trusts	Diversity of habitats promotes wide range of wildlife. Increases landscape and amenity value.	Possible conflict with third party developments.
2. Maintain database of sites of conservation interest, areas of open spaces etc.	NRA/Local Authorities/ EN Warden Services/ Wildlife Trusts	Easier to avoid damage if know where sites are.	
3. Maintain database of RIGS sites.	NRA/LTNC/ Manchester Museum	Help make more informed decisions.	Baseline surveys and designations at early stage in Greater Manchester.
4. Encourage low intensity farming within river corridors by promoting schemes such as countryside stewardship.	NRA/ Landowners/ Countryside Commission/ Wildlife Trusts/FWAG	Maintain and improve interest of existing sites.	Economic implications for landowners. Time consuming.
5. Negotiate with and persuade developers to retain valuable habitats within development sites.	NRA/ Developers	as above	Limited powers to ensure policy carried out, especially if planning permission granted.
6. Seek opportunities to enhance river corridor for conservation landscape and amenity.	NRA/Local Authorities/ Riparian Owners/ Warden Services/ Prospective Developers	Increase value of river corridor for wildlife and people to enjoy.	Possible conflicts with developers interests. Cost implications NRA not a landowner in this area.
7. Object to proposals to drain, infill or develop on old lodges, ponds and reservoirs.	NRA/Local Authorities/ Wildlife Trusts	Retain features of ecological, amenity and historical values.	Loss of land for development.

Cont'd

Issue No: CW14 Continued from page 20	Protection and enhancement of Wildlife habitats, natural and geomorphological features within river corridors.		
Options	Responsibilities	Advantages	Disadvantages
8. Encourage positive management of old lodges, ponds and reservoirs for conservation, amenity and fisheries as appropriate.	NRA/ Landowners/ Groundwork Trusts/ Wildlife Groups/ Angling Clubs/Local Authorities.	Ensure future of sites of ecological, amenity and historical value.	Costs of continued maintenance.
9. Promote schemes to leave an uncultivated buffer strip along the bank top or rural or semi-rural watercourses .	NRA/ Landowners/ Countryside Commission/ Wildlife Trusts/FWAG	Improve wildlife value of rivers. Buffer against diffuse pollution.	Less land for agriculture. Time consuming.
10. Identify areas with potential for restoration and determine costs.	NRA	Provide basis for decision making.	
11. Undertake restoration schemes (if identified and cost effective).	NRA/Local Authorities/ Riparian Owners/ Warden Service/ Prospective Developers.	Increase value of river corridor for wildlife and people to enjoy.	Possible impact on developers interests. Cost implications. NRA not a landowner in this area.

Note: Geomorphological features include meandering channel gravel bed and shoals, oxbows, earth cliffs and river terraces.

EN - English Nature

FWAG - Farming and Wildlife Advisory Group

GMCU - Greater Manchester Countryside Unit

LTNC - Lancashire Trust for Nature Conservation

UDP - Unitary Development Plan

Issue No: CW15		Protection of archaeological features within river corridors.		
Options	Responsibilities	Advantages	Disadvantages	
1. Maintain database of Scheduled ancient monuments sites.	NRA/English Heritage/ Local Authorities/ GMAU.	Easier to avoid damage if know where sites are.		
2. Ensure liaison with appropriate county archaeologists for all NRA heavy maintenance and capital works.	NRA/County Archaeologists.	Expert information.	Costs.	

GMAU - Greater Manchester Archaeological Unit.

Issue No: CW16		Alien Pest Species		
Options	Responsibilities	Advantages	Disadvantages	
1. Systematic treatment programme for control and eradication of Himalayan Balsam, Japanese Knotweed, Giant Hogweed and Alien Cray Fish.	NRA/ Riparian owner	Increase habitat diversity for wildlife. Improve bank stability.	Scale of problem.	
2. Ensure NRA activities do not encourage spread of alien pest species.	NRA/ Riparian owner	As above.	NRA not a landowner.	
3. Object to proposals for the farming of crayfish.	NRA/MAFF/ Local Authorities	Protect populations of the native crayfish in the North West by preventing further spread of alien crayfish and crayfish plague.		

Note: It is an offence under Section 14(1)(b) of the Wildlife and Countryside Act (1981) to release alien crayfish into the wild.

MAFF Ministry of Agriculture Fisheries and Food.

ISSUE NO: CW17	Failure of Aquatic invertebrate communities to achieve diversity and richness consistent with river habitat, and quality objectives, in many reaches within the catchment.		
Options	Responsibilities	Advantages	Disadvantages
1. Achievement of water quality objectives.	NRA/Parties responsible for pollution.	Improvement of aquatic ecosystem.	Cost - Parties responsible for pollution.
2. Retain and, where possible, enhance aquatic habitats.	NRA	As above.	

The Future

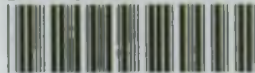
Against this background, the NRA's aims for the catchment are as follows:

- To develop an integrated flood defence management plan that provides the most efficient and most effective method of flood protection to people and property.
- To achieve a fully satisfactory system for the disposal of domestic and industrial waste, which results in water quality which will not prevent any other legitimate use of the catchment.
- To improve the status of the Irwell in terms of the standards currently set for water quality, fisheries, conservation and recreation.
- To improve fish stocks once water quality has improved sufficiently.
- To improve public awareness of the catchment's features and ways of conserving them for the future.
- To ensure that any future developments within the catchment do not cause long term harm to the rivers and, wherever possible, take the opportunity to include measures to enhance the river environment.



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