

EA-North West LEAPs

DERWENT AND CUMBRIA COAST CATCHMENT MANAGEMENT PLAN ACTION PLAN

FOR REFERENCE ONLY
PLEASE DO NOT REMOVE



NRA

National Rivers Authority

North West Region

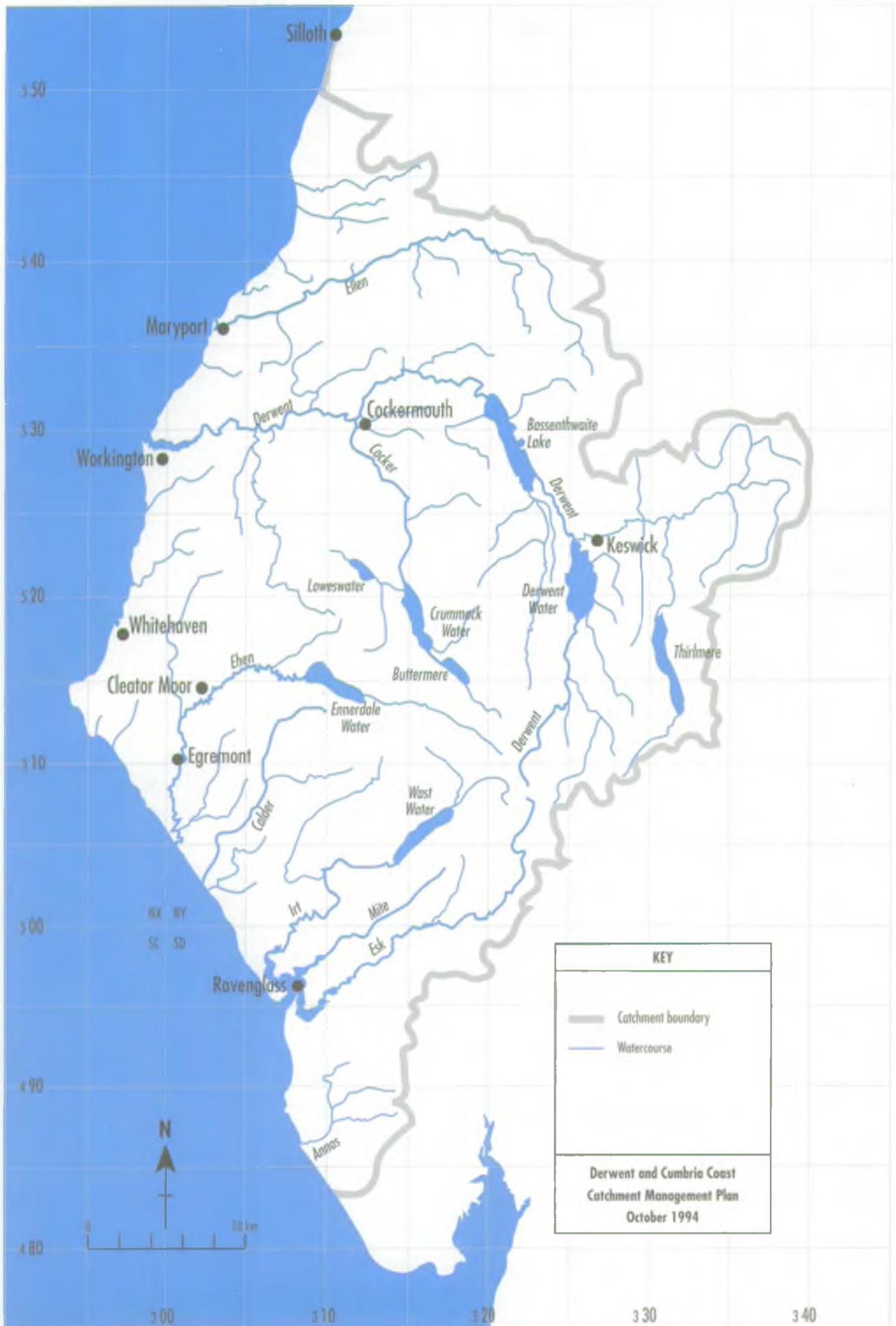
September 1995

CONTENTS

SECTION	PAGE
DERWENT AND CUMBRIA COAST CATCHMENT AREA MAP	4
1.0 VISION FOR THE CATCHMENT	5
2.0 CATCHMENT MANAGEMENT PLANNING AND REVIEW OF THE CONSULTATION PROCESS	6
2.1 THE PURPOSE OF CATCHMENT PLANNING	6
2.2 CATCHMENT PLANNING PROCESS	6
3.0 OVERVIEW OF THE CATCHMENT	8
3.1 GENERAL DESCRIPTION OF THE CATCHMENT	8
3.2 LAND USE PLANNING AND DEVELOPMENT	8
3.3 EFFLUENT DISCHARGES	9
3.4 FISHERIES	10
3.5 WATER RESOURCES	10
3.6 FLOOD DEFENCE	11
3.7 CONSERVATION	11
3.8 RECREATION	12
4.0 ACTION PLANS	13
LIST OF APPENDICES	
Appendix 1 - CONSULTEES WHO RESPONDED TO THE CONSULTATION REPORT	26
Appendix 2 - CURRENT POSITION WITH REGARD TO LOCAL PLANNING AUTHORITY (LPA) PLAN PREPARATION.	26
Appendix 3 - N.R.A. GUIDANCE STATEMENTS AND LPA DEVELOPMENT POLICIES.	27



DERWENT AND CUMBRIA COAST CATCHMENT AREA MAP



1.0 THE VISION

Much of the catchment lies within the Lake District National Park where water is a vital part of this nationally important landscape. The area has a rich heritage and has historically attracted artists and poets. Today The Lakes draw in large numbers of tourists who together with local communities enjoy its exceptional qualities. The waters of the catchment support an important ecology including significant fisheries for salmon and sea trout. The River Derwent is one of the premier salmon rivers in the country. Consequently the work of maintaining the health of the catchments' waters is critical in maintaining the

quality of the environment in this area and in supporting the local community and its economic well-being.

The plentiful supply of water is an important resource for industry and drinking water supplies both on and off the catchment.

The National Rivers Authority (N.R.A.) recognises the exceptional significance of the water environment in the catchment, and will seek to work with all appropriate parties to protect that which is already excellent and seek to achieve and maintain improvements where necessary. The N.R.A. wishes to work in partnership with the local community and other interested organisations and use this catchment plan as a stimulus to promote discussion about the future management of the catchments water environment and to achieve a sustainable system of rivers at their full environmental potential.



BNFL, Sellafield

In support of the vision, key objectives will be to:-

- Seek reductions where necessary in nutrient inputs to the lakes and rivers of the catchment.
- Ensure coastal sewage discharges are improved to minimise aesthetic problems and reduce pollution. To identify areas for improvements beyond statutory requirements and pursue these wherever possible.
- Protect the important conservation aspects of this catchment giving particular consideration to rare and endangered species.
- Produce a fisheries management plan which seeks to protect the important fishery in the catchment in consultation with other parties who have an interest in the catchments fisheries.
- Ensure abstractions of water do not damage rivers and lakes.
- Implement an emergency plan to enhance protection of Bassenthwaite Lake from any polluting spillages on the A66.
- Minimise the ecological and visual impact of necessary in river works.
- Encourage migration of otters onto the catchment.

2.0 CATCHMENT MANAGEMENT PLANNING AND REVIEW OF THE CONSULTATION PROCESS

2.1 THE PURPOSE OF CATCHMENT PLANNING

The rivers, lakes, estuaries and coastal waters of England and Wales are subject to large and rapidly increasing demands from the users of water. Many different uses interact or compete for water and these may come into conflict with one another. The N.R.A. is the major regulator of the water environment in England and Wales and plays a role in reconciling conflicts between water users. Our Mission Statement expresses the following:-

We will protect and improve the water environment by the effective management of water resources and by substantial reductions in pollution. We will aim to provide effective defence for people and property against flooding from rivers and the sea. In discharging our duties we will operate openly and balance the interests of all who benefit from and use rivers, groundwaters, estuaries and coastal waters. We will be businesslike, efficient and caring towards our employees.

We have chosen to use Catchment Management Plans to translate these principles into actions. The plans describe our vision for each catchment, identify problems and issues and propose actions that may be taken to resolve them.

2.2 CATCHMENT PLANNING PROCESS

Stages of the Process

(i) The Consultation Report

The report launched in November 1994 proposed a vision for the catchment. It identified problems, issues and potential solutions. Supporting information was also enclosed to enable the document to provide long term reference which may be read in conjunction with this Action Plan.

(ii) The Consultation Process

One of the objectives of Catchment Management Planning is to involve all interested parties in the planning for the future well being of the catchment. The N.R.A. is therefore committed to the concept of public consultation on all its Catchment Management Plans.

The N.R.A. would like to express its thanks publicly to all those organisations and individuals who responded to the Derwent and Cumbria Coast Catchment Management Plan Consultation Report. All respondents' comments were given serious consideration during production of this Action Plan.

Regional N.R.A. staff and Advisory Committees were consulted prior to the release of the Consultation Report. In November, 1994 the public launch of the Consultation Report took place at Bassenthwaite and marked the start of the external consultation process. Approximately 90 invitees attended the launch representing a wide range of organisations and all received a copy of the report and a summary leaflet. In total approximately 400 copies of the Consultation Report and 1000 summary leaflets have been circulated to local authorities, industrial, environmental, recreational and other organisations as well as individuals within the catchment. A display board about the catchment plan was circulated around libraries within the catchment along with copies of the report and summary leaflet. Press releases were circulated leading to articles in a number of local papers as well as radio and television interviews.

This consultation process has increased local awareness of the catchment planning process and attracted a high level of response. The 98 written responses received provided constructive comments and general support for the catchment planning process and the general thrust of the plan. All responses have been considered and acknowledged. Many of the responses were detailed and lengthy. All respondents will receive a copy of this Action Plan. A full list of consultees who responded is given at Appendix 1.

(iii) Translation of the Consultation Report into this Action Plan

Comments were expected to concentrate mainly on the issues raised in the Consultation Report, and while many comments were received on issues there were also a large number of comments received on the supporting material (the uses etc.). Comments on these parts of the Consultation Report cannot be incorporated in the Action Plan as this document concentrates on actions to solve issues and does not repeat the level of detail on uses etc. contained in the Consultation Report. However, these comments will be taken into account in the review of the Consultation Report and in the production of other Catchment Consultation Reports.

A number of consultees expressed a desire to see the vision place a greater emphasis on protecting the important ecology of the catchment's waters. The N.R.A. recognises the significance of the areas ecology and has amended the vision to more closely reflect the high priority we place on this aspect of our work.

As a result of consultation, a number of issues have been amended, amalgamated or dropped. In addition consultation has led to the identification of a number of new issues, and these are listed below.

1. Management of Water Resources in Ennerdale Lake (Issue 30).
2. Potential for enhancements to the water environment from improved forestry practices (Issue 31).
3. Impact of development on the water environment (Issue 32).
4. Effective allocation of N.R.A. resources in the maintenance of watercourses for flood defence purposes (Issue 33).
5. Access to water for recreation (Issue 34).
6. Facilities for recreation (Issue 35).

(iv) Future Review and Monitoring

The N.R.A. will be jointly responsible, with other identified organisations and individuals, for implementing this Action Plan. Progress will be monitored and normally reported annually, by means of a review document which will be publicly available. The review document will comprise the following information:

- a detailed comparison of actual progress against planned progress;
- identification of additional actions to maintain progress in the light of changes in the catchment;
- consideration of the need to update the Catchment Management Plan.

Update requirements will obviously depend on the particular needs of the catchment. However, updates to the consultation report will normally be undertaken every 5 years. Key organisations and individuals forwarding comments will receive an annual review paper to keep them updated with the Action Plan progress.

3.0 OVERVIEW OF THE CATCHMENT

3.1 GENERAL DESCRIPTION OF THE CATCHMENT



View across Wastwater

The catchment comprises almost 1600km² and includes the rivers Annas, Mite, Esk, Irt, Ehen, Calder, Derwent and Ellen and all their tributaries as well as associated coastal waters.

There are eight major lakes within the catchment:- Bassenthwaite Lake, Derwentwater, Loweswater, Crummock Water, Buttermere, Ennerdale Water, Wastwater and Thirlmere Reservoir.

All the major rivers rise on the high lakeland fells with the River Esk and Lingmell Beck (a tributary of the River Irt) rising on Scafell Pike, England's highest mountain at 977m.

Much of the catchment lies within the Lake District National Park and, as the name suggests, water is a vital part of this nationally important landscape.

Rainfall is generally high, although it varies widely from the coast (annual average less than 1000mm in places) up to the high fells (annual average of 4000mm or more in places).

The catchment is largely rural with agriculture being the dominant land use. The upland areas support sheep farming with some beef cattle. Dairy farming becomes increasingly important lower down the valleys and predominates in the low lying coastal areas. Commercial forestry, mainly of conifers, is also an important land use. There are large forests above Ennerdale Water, around Bassenthwaite Lake and to the South and West of Wastwater.

The bulk of the population is concentrated towards the coastal fringe, principally in the towns of Whitehaven, Workington and Maryport. The largest industrial concern, British Nuclear Fuels' Sellafield Plant also lies on the coast. The number of permanent residents is approximately 140,000 but this figure can increase dramatically in the summer because of the importance of tourism within the catchment, especially around Keswick.

3.2 LAND USE PLANNING AND DEVELOPMENT

The catchment lies within the County of Cumbria, and the majority of the catchment is administered by the Lake District National Park Planning Board, who are responsible for all planning activities within the park area. The strategic planning framework for the catchment is laid out in the Cumbria and Lake District Joint Structure Plan which seeks to respect the long term quality of the County.

These broad county wide policies are translated by the Allerdale and Copeland District Councils who produce local plans against which planning applications will be considered. The table at Appendix 2 summarises the current position with regard to development plan preparation.

The emphasis of future Local Planning Authority (L.P.A.) planning policy within the catchment reflects the following priorities:-

- strong environmental protection
- clear priority for housing to meet local needs
- fostering the local economy and maintaining the role of the main settlements to accommodate growth.

The N.R.A. has produced Guidance Notes for L.P.A.'s on methods of protecting the water environment through development plans. The table at Appendix 3 indicates how the L.P.A.'s have incorporated this guidance into their respective plans.

The N.R.A. is taking a more pro-active role in planning related matters and working more closely with L.P.A.'s to ensure development proceeds in harmony with the needs of the water environment. This plan supports this initiative.

3.3 EFFLUENT DISCHARGES

The major discharger in the catchment is North West Water Limited (N.W.W.). There are a number of discharges of crude (largely untreated) sewage into coastal waters some of which cause local designated bathing waters to fail the requirements of the E.C. Directive on this subject. This problem is being addressed by the installation of a combination of improved sewage treatment facilities and long sea outfalls by N.W.W. designed to provide compliance with the E.C. Directive by the 1996 bathing season.

Inland, the largest sewage treatment works are at Keswick, Cockermouth and Cleator Moor with numerous smaller works particularly on the Derwent and Ellen systems.

Bassenthwaite Lake has been designated a "Sensitive Water" under the provisions of the E.C. Urban Wastewater Treatment Directive (91/271/EEC) requiring Keswick Sewage Treatment Works to have phosphate removal facilities by the end of 1998. However, after negotiation with N.R.A. and others N.W.W. agreed to install the necessary plant ahead of the statutory time period. The new facility has now been commissioned.

Other improvements to sewage treatment works during the lifetime of this plan will improve water quality of some smaller watercourses whilst increasing the security of the larger streams and rivers.

There are also 123 combined sewer overflows on the catchment. In this largely rural area there are also a large number of private septic tanks and small sewage treatment facilities serving single or groups of dwellings, hotels, caravan sites, etc.

There are 51 trade effluent discharges to watercourses in the catchment with the most significant of these, at the B.N.F. Sellafield site and Albright and Wilson's factory at Whitehaven.

Surface water drainage from industrial estates/premises often discharge direct to a watercourse. These drains can be contaminated by spillages, cross connections and inappropriate working practices leading to intermittent pollution.

There are a number of landfill and solid waste tips on the catchment, principally outside the National Park. The only significant problem is caused by drainage to the River Keekle from the deep mine spoil heap at Oatlands.

3.4 FISHERIES

The Esk, Irt, Calder, Ehen and Ellen support significant fisheries for salmon and sea trout. The River Derwent is one of the best salmon rivers in the country.

Rare fish of national and international importance are present in the catchment. Char are found in Loweswater, Crummock Water, Buttermere, Ennerdale, Wastwater and Thirlmere. Bassenthwaite Lake and Derwentwater are the only remaining sites in Britain where vendace are found. The vendace is a protected species and fishing for it is illegal.

Coarse fishing on the catchment is concentrated on some of the lakes and smaller tarns of the area.

To assist the passage of migratory fish over obstacles there are fish passes at various locations throughout the catchment.

The N.R.A. has fisheries responsibility in coastal waters for a distance of six nautical miles. There is a small commercial drift net fishery for salmon and sea trout in these waters.

Extensive commercial sea fishing takes place in these waters and is regulated by the Cumbria Sea Fisheries committee (Cumbria S.F.C.). Regular liaison takes place between the N.R.A. and Cumbria S.F.C. on matters of joint interest.

The N.R.A. is producing a detailed fisheries management plan for the catchment to create a structured overall approach to fisheries management and draw together all interested parties.



Fisherman, Bassenthwaite

3.5 WATER RESOURCES

Water supplies in the catchment are generally sufficient to meet current demand, but must be carefully managed to avoid derogation to environmental interests or current water users.

There are 118 licensed abstractions from surface sources and 73 from groundwater, the majority of these are small abstractions for agricultural or domestic use. There are however, large abstraction for industrial and drinking water supplies with the bulk of this water being taken from surface rather than groundwater licences.



Thirlmere Reservoir

The B.N.F. Sellafield plant is the single largest industrial user with eight licences to abstract from a number of different sources. These include Wastwater and the rivers Ehen and Calder and from mines and boreholes.

North West Water Limited (N.W.W. Ltd) abstracts substantial quantities of water for potable use, notably from Thirlmere Reservoir, Crummock Water, Ennerdale Water and the River Derwent. Almost half of this water is exported from the catchment by N.W.W. Ltd's Thirlmere aqueduct.

3.6 FLOOD DEFENCE

There are approximately 416 km² of statutory Main River in the catchment. Main River is a legally defined term, and lengths of Main River are identified on maps held by the N.R.A. and M.A.F.F. On Main River the N.R.A. can spend money on the maintenance and control of the channel where this is economically viable.

Major fluvial flooding of large numbers of properties is largely restricted to the towns of Keswick and Cockermouth. A flood alleviation scheme was constructed at Keswick in 1987 and 1988 and a similar scheme is in the pipeline for Cockermouth.



Flood alleviation scheme, Keswick

The N.R.A. will continue to liaise with local Planning Authorities to ensure development does not increase flood risk. As part of this effort the N.R.A. has agreed to carry out surveys to identify the extent of floodplain, washlands and other land liable to flood, and to establish the effects of increased run off on existing development. Once completed these surveys will be passed to Local Planning Authority's to assist them in the development of their Local Development Plans and help ensure planning decisions take account of flooding issues.

Even where flood defences are provided, it must be accepted that flooding will occur on occasions.

The N.R.A. will continue to operate flood warning zones for the coast and at Keswick and Cockermouth.

3.7 CONSERVATION

The catchment is important in conservation terms and this is reflected in the large number of special landscapes, ecosystems and archaeological sites which are protected by specific designations.

The quality of the landscape is recognised by several designations including the National Park which covers a significant proportion of the catchment. Water is a vital element of this landscape. Important coastal landscapes outside the National Park are also recognised as the catchment contains part of the Solway Coast Area of Outstanding Natural Beauty and St. Bees Head is designated Heritage Coast for its dramatic sandstone cliffs.

The catchment is rich in archaeological interest including a number of sites which have been designated as Scheduled Ancient Monuments.

Water plays a significant role in maintaining the important ecology of the catchment across a range of habitats. For example, Bassenthwaite Lake is a National Nature Reserve and Wastwater, Ennerdale and Buttermere are designated as Sites of Special Scientific Interest (S.S.S.I.). The Derwent/Cocker river system is of national importance as the only large nutrient poor (oligo-mesotrophic) river in England, and this will be formally recognised by S.S.S.I. designation in the near future.

The catchments water environment is also home to several rare and protected species including important populations of rare fish, freshwater pearl mussels and natterjack toads. Evidence suggests that otters are present, but rare throughout the catchment.

3.8 RECREATION

The water environment is important to local communities for a variety of leisure activities and a key attraction for the important tourist industry.

In addition to angling; sailing, windsurfing, canoeing and sub-aqua are the main active watersports occurring on the catchment and take place to varying degrees on all major lakes. Angling and canoeing are the main active sports which take place on the rivers and a number of access agreements exist between the British Canoe Union and various riparian landowners.

Because there are no navigation rights on the catchment rivers, and access is generally across private land, access for canoeing will remain a private matter between landowners and canoeists.



Maryport Marina

However, the N.R.A. will be willing to act as honest broker on canoe access, where invited by all parties to do so.

The quality of the landscape in the catchment encourages a significant number of ramblers and casual visitors, with many people being attracted to the water features in the landscape.

The N.R.A. does not own any recreational facilities in the catchment area and recognises that opportunities to further recreation will mainly arise through the flood defence capital and maintenance programmes and collaborative projects with other bodies.

4.0 ACTION PLANS

Each issue is numbered for ease of reference, the numbers in brackets indicate the section the issue was discussed at in the consultation report for those who wish to cross reference.

Issue No. 1 (6.2.1a) Input of "point source" agricultural effluents									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Continue liaison with farming community, N.F.U., M.A.F.F./A.D.A.S. and others	NRA	Farmers M.A.F.F. A.D.A.S. N.F.U. Others	NRA Staff costs	✓	✓	✓	✓	✓	✓
Continue current pollution control initiatives	NRA		NRA Staff costs	✓	✓	✓	✓	✓	✓
Continue to implement the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations and take enforcement action where necessary	NRA		NRA Staff costs Capital costs for farmers	✓	✓	✓	✓	✓	✓
Establish Pattern of incidents on major catchments and target action	NRA		NRA Staff Costs	✓	✓	✓	✓	✓	✓
Seek reduction in incidents of farm pollution	NRA	Farmers MAFF ADAS Others	NRA Staff costs	✓	✓	✓	✓	✓	✓

NFU - National Farmers Union

MAFF - Ministry of Agriculture Fisheries and Food

ADAS - Agricultural Development Advisory Service

Issue No. 2 (6.2.1b) Acid Stress in some upper tributaries									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Continue liaison with Forestry Authority and LDNP to establish a future strategic plan for Forestry Land use	NRA FA	Forestry Owners LDNP	NRA Staff time	✓	✓	✓	✓	✓	✓
Promote and audit the degree of compliance with the Forest and Water Guidelines	NRA		NRA staff time	✓	✓	✓	✓	✓	✓
The NRA hopes that the formation of the new Environment Agency in 1996 will provide an opportunity to take a more holistic approach to this problem									
Develop Agency holistic approach to issue including air emissions	New Environment Agency		unknown		✓	✓	✓		

FA - Forestry Authority

LDNP - Lake District National Park Authority

Issue No. 3 (6.2.1c) Localised pollution from small sewage treatment plants and septic tanks									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Target areas to Planning Authority's where problems exist	NRA	LPA's		✓	✓	✓	✓		
Promote NRA policy to local Authority's and establish number of new installation	NRA	LA's		✓	✓				
Influence NWW on future investment plans beyond current agreed programme (Beyond year 2005)	NRA NWW								✓

LPA's - Local Planning Authorities

LA's - Local Authorities

NWW - North West Water

Issue No. 4 (6.2.1d) Lack of sewage treatment along the Cumbria Coast									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Ensure provisions of the E.C. Bathing Water Directive are complied with at identified bathing waters ie Silloth, Allonby South, Allonby, St. Bees and Seascale	NRA NWW DoE		Costs to be met by NWW	✓	✓				
Ensure provision of the E.C. Urban Wastewater Treatment Directive are complied with.	NRA NWW DoE		Costs to be met by NWW	✓	✓	✓	✓	✓	by 2005

NWW - North West Water

DoE - Department of the Environment

LA's - Local Authorities

Summary of work to be carried out by NWW to achieve EC Bathing Water Directive Compliance

Silloth	New STW to include secondary treatment and disinfection, and extensive stormwater storage.
Allonby	New STW to include secondary treatment and enhanced tidal storage - (Completed May, 1995).
Allonby South	Compliance at this bathing water will be achieved by a combination of schemes including the construction of STW's at Allonby and at Workington (Siddick) as well as the abandonment of the crude outfall and unsatisfactory sewer overflows in Maryport and by construction of interceptor sewers to transport sewage to the new STW at Workington. There will be a new long outfall at Workington.
St Bees	Improved stormwater management at St. Bees STW.
Seascale	New STW and increased stormwater storage along with a new long outfall.

Summary of work to be carried out by NWW to achieve EC Urban Wastewater Treatment Directive Compliance

1. New STW at Workington (Siddick) incorporating primary treatment and a long outfall. Scheduled for completion in May, 1996. (See No. 3).
2. Abandonment at Seaton/Ectona crude outfalls with flows being pumped to Workington (Siddick) STW. Scheduled for completion in May, 1996.
3. Construction of John Pier transfer sewer to allow abandonment of crude outfalls at Shore Road, German Arch, John Pier and Northside. Flows will be pumped to the new Workington (Siddick) STW by December 2000.
4. Enhanced facilities at West Strand pumping station complete with new outfall (completed May, 1995). New STW to be constructed at Parton (Whitehaven) to allow primary treatment by December 2000 for flows from Whitehaven (via West Strand pumping station) and surrounding villages presently discharged untreated via Lillyhall outfall.
5. New STW at Braystones incorporating primary treatment and a new long outfall (outfall completed in 1994) to allow abandonment of current crude outfall. Scheduled for completion by 2005.

Issue No. 5 (6.2.1e) Impact of combined sewer overflows (CSO's) and storm sewage discharges									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Divert Keswick STW storm discharge from Wath Beck to the River Derwent to reduce stock watering problems	NWW		Costs to be met by NWW	✓					
Abandon 10 unsatisfactory sewer overflows in Maryport and transfer flows to new Workington (Siddick) STW	NWW		Costs to be met by NWW	✓	✓	✓	✓	✓	by 2000
Abandon 4 unsatisfactory sewer overflows in Workington area and transfer flows to the new Workington (Siddick) STW	NWW		Costs to be met by NWW	✓	✓	✓	✓	✓	by 2000

NWW - North West Water

Issue No. 6 (6.2.1f) Pollution caused by contaminated surface water outfalls (CSW's)									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
NWW to complete present programme of CSW improvements (see note 1)	NWW		Costs to be met by NWW	✓	✓	✓	✓		
Establish remedial programmes on private outfalls with established chronic problems. ie Cleator Moor and Lillyhall Industrial Estate outfalls and Seaburn Sewer	NRA		NRA staff costs		✓	✓			
			NRA staff time. Possible capital costs to developers	✓	✓	✓	✓	✓	✓
Input and advise at the planning stage for new developments	NRA	LPA							

NWW - North West Water

LPA - Local Planning Authority

Note 1:

Name of outfall	Estimated date of completion
Moresby Parks	1994
Thornhill	
* Salterbeck	
* Risehow	

* Not yet confirmed to be in NWW ownership

Issue No. 7 (6.2.1g) Development in areas where sewers/sewage treatment works are at or near design capacity											
Actions	Lead	Responsibility		Est. Cost	Duration of Action						
		Other			95	96	97	98	99	Future	
Identify works which are deteriorating and close to consent limit	NRA			NRA staff time	✓	✓					
Influence development in critical areas by liaison with local planning authorities	NRA	LPA		Unknown		✓	✓	✓	✓	✓	
Prioritise impacts to influence NWW's future capital programme	NRA			Unknown			✓	✓	✓	✓	

LPA - Local Planning Authority

Issue No. 8 (6.2.1h) Impact of proposed past, and current opencast coal sites											
Actions	Lead	Responsibility		Est. Cost	Duration of Action						
		Other			95	96	97	98	99	Future	
Ensure strong NRA input at planning stages of new sites	NRA	Local Authority	Coal Authority	NRA staff time and possible costs to developers	✓	✓	✓	✓	✓	✓	
Continue close liaison with the Coal Authority and mine operators	NRA	Coal Authority	Site Operators	Unknown	✓	✓	✓	✓	✓		
Ensure appropriate reinstatement of river channel and catchments associated with opencast	NRA	Coal Authority		Unknown	✓	✓	✓	✓	✓		
Long term monitoring of sites at routine river monitoring points	NRA			Unknown	✓	✓	✓	✓	✓	✓	

Issue No. 9 (6.2.2a) Fish stocks status and management									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Produce a fisheries management plan to create a structured overall approach to fisheries management and consult and publicise widely	NRA		20k	✓					
Continue strategic survey of juvenile fish stocks	NRA		300k	✓	✓	✓	✓	✓	✓
Continue anti-poaching/enforcement activity and take prosecution as necessary	NRA	Cumbria Sea Fisheries Committee	1.5m	✓	✓	✓	✓	✓	✓
Continue operation of anglers log book scheme	NRA anglers and Associations		5k	✓	✓	✓	✓	✓	✓
Continue to operate automatic fish counters and conduct calibration and validation exercises to maximise data quality	NRA		40k	✓	✓	✓	✓	✓	✓
Monitor current stocking practice to optimise stocking effort	NRA		Unknown	✓	✓	✓	✓	✓	
Continue investigation to obtain baseline data on char populations in Ennerdale, Buttermere, Wastwater, Crummock, Loweswater and Thirlmere	NRA		50k	✓	✓	✓	✓	✓	
Investigate the reasons for relatively poor fish populations downstream of major lakes	NRA		Unknown	✓	✓	✓	✓	✓	

Issue No. 10 (6.2.2b) Problems with degraded fish habitat and need for comprehensive information on habitat quality									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Areas currently being considered for action include:- River Derwent at Ouse bridge, River Derwent at Gultersfoot Broughton Cross, River Derwent at Broughton bridge									
Undertake a comprehensive survey to identify areas where habitat rehabilitation may be appropriate	NRA		unknown	✓	✓				
Programme of weed clearance and manual raking in spawning areas suffering from siltation and compaction	NRA	Riparian owners	unknown	✓	✓	✓	✓	✓	

Issue No. 11 (6.2.2c) Impact of gravel extraction from rivers on Fisheries and Conservation interests

Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
NRA gravel removal for flood defence purposes for example at Lorton and in Borrowdale									
Continue gravel removal as and when required	NRA)	Dependant on individual sites and circumstance	✓	✓	✓	✓	✓	✓
Remove gravel little and often	NRA)		✓	✓	✓	✓	✓	✓
Create gravel traps at convenient locations	NRA)		✓	✓	✓	✓	✓	✓
Gravel removal by riparian owners to improve angling interest									
Continue consenting gravel removal provided there is no detriment to the water environment	NRA		Dependant on number and nature of applications	✓	✓	✓	✓	✓	✓

Issue No. 12 (6.2.2d) Illegal exploitation of migratory salmonids in inland and coastal waters

Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Maximise effectiveness of anti-poaching enforcement operations through best deployment of staff, use of part time assistance and liaison with private fisheries interests and the police	NRA		See Issue 9	✓	✓	✓	✓	✓	✓
Monitor effectiveness of new Sea Fisheries Byelaws in protecting migratory fish and liaise with Cumbria Sea Fisheries Committee	NRA	Cumbria Sea Fisheries Committee	Unknown	✓	✓	✓	✓	✓	

Issue No. 13 (6.2.3a and 6.3.4f to 6.3.4k incl) Properties at risk from flooding									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Assess flood risk to properties and the compliance with standards of service for flood defence	NRA		Minimum £2.5k per site	✓	✓	✓	✓	✓	✓
Consider improvements or inclusion in Capital Works Programme if cost beneficial	NRA		Project dependent	✓	✓	✓	✓	✓	✓
Carry out the necessary further investigations to ensure the feasibility of schemes. Design and implement any approved project. Consult with all statutory bodies and residents.	NRA	MAFF	Project dependent	✓	✓	✓	✓	✓	
Whitehaven Harbour Scheme	WDC	NRA MAFF	NRA contribution £1.6m		✓	✓			
Cockermouth Scheme	NRA	MAFF	£542k		✓	✓			
Maryport Scheme	ABC	NRA MAFF	£1.0m			✓	✓		
River Ehen at Braystones	NRA			✓					
Parton Sea Defences	CBC	NRA	£46k	✓	✓				
Ravenglass Sea Defences	NRA	MAFF	2.38k		✓	✓			

WDC - Whitehaven Development Corporation
MAFF - Ministry of Agriculture Fisheries and Food
ABC - Allerdale Borough Council
CBC - Copeland Borough Council

Issue No. 14 (6.2.4a) & (6.2.4b) combined Maintenance and improvement of the conservation status of the catchment particularly in connection with potential SSSI designation on the Derwent/Cocker									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Implement new habitat survey methodology to assess conservation status and identify areas not meeting their ecological potential	NRA		15k	✓	✓	✓			
Pursue enhancements to river corridor and wetland habitats as opportunities arise through NRA flood defence and other operations, and facilitate partnership projects with other organisations and individuals	NRA	EN CWT FA Others	Unknown	✓	✓	✓	✓	✓	

EN - English Nature
CWT - Cumbria Wildlife Trust
FA - Forestry Authority

Issue No. 15 (6.3.1a) Long term problems from ochreous discharges to the River Keekle caused by previous deep mining activity

Actions	Lead	Responsibility Other	Est. Cost	Duration of Action					
				95	96	97	98	99	Future
Monitor water quality in the River Keekle to determine the extent of improvements brought about by the burial of the Walkmill spoil heap in the Keekle opencast void	NRA		NRA staff costs Unknown	✓	✓	✓	✓	✓	✓
Site investigation at Oatlands to determine the best method for reducing pollution from the deep mine spoil heap there.	NRA	Cumbria County Council	£50k	✓	✓				
Programme of action to resolve the problems at Oatlands based on the site investigation carried out in 1995/96	NRA	Cumbria County Council	£250k	✓	✓	✓	✓	✓	✓
Review water quality improvements and publicise widely	NRA		NRA staff costs 10k	✓	✓	✓	✓	✓	✓

Issue No. 16 (6.3.1b) NIREX Project

Actions	Lead	Responsibility Other	Est. Cost	Duration of Action					
				95	96	97	98	99	Future
Establish NRA strategic position prior to 1995 Enquiry	NRA		NRA staff time	✓					
Ensure protection of groundwater from accidental pollution from site operations and from deep groundwater contamination	NRA		NRA staff time	✓	✓	✓	✓	✓	✓
Ensure re-instatement of bore-holes is to a standard consistent with protection timescales	NRA		Unknown	✓	✓	✓	✓	✓	✓

NIREX - Nuclear Industries Radioactive Waste Executive

Issue No. 17 (6.3.1c) Impact of Cleator Sewage Treatment Works in the River Keekle and Ehen

Actions	Lead	Responsibility Other	Est. Cost	Duration of Action					
				95	96	97	98	99	Future
Monitor the River Ehen to assess designation status under the E.C. Urban Wastewater Treatment Directive (UWWTD)	NRA		NRA staff time Unknown	✓	✓	✓			
If River Ehen is designated sensitive under UWWTD ensure appropriate treatment is afforded, including nutrient removal from Cleator STW effluent	NRA	NWW	Possible capital cost to NWW			✓	✓		

NWW - North West Water

Issue No. 18 (6.3.1d) Eutrophication in Bassenthwaite Lake									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Phosphate removal from Keswick STW effluent	NWW		Capital cost to NWW	✓					
On-going monitoring of all significant inputs to the lake, the lake itself and the outflow from the lake.	NRA		NRA staff time Unknown	✓	✓	✓	✓	✓	✓

NWW - North West Water

Issue No. 19 (6.3.1e) Vulnerability of Bassenthwaite Lake to spillages on the A66 Trunk Road									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Installation of valves on interceptors along part of the A66 to hold chemical spills	Cumbria County Council	NRA	£9k to NRA	✓					
Implement co-ordinated emergency plan to deal with accidents, with full involvement of the emergency services	NRA	Emergency Services	10k	✓	✓	✓	✓	✓	✓

Issue No. 20 (6.3.1g) Pollution of Furnace Gill from Broughton Moor STW									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Continue to press for early date for conveyance of sewage to new treatment facilities on the Cumbria Coast	NRA		Unknown						✓

NWW - North West Water

Issue No. 21 (6.3.2a) Poor appearance and limited habitat diversity of canalised rivers. For example Newlands Beck, Lower River Calder and minor watercourses discharging to Allonby Bay									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Determine extent of sites damaged by canalisation and assess the significance to amenity and other interests	NRA	LDNP Friends of the lakes EN Local Authorities Owners	Unknown	✓	✓	✓			
Explore the possibility of improving damaged sites in partnership with other bodies and where opportunities arise, make improvements to damaged sites	NRA	LDNP Friends of the Lakes EN Owners	Unknown	✓	✓	✓	✓	✓	

LDNP - Lake District National Park Authority

EN - English Nature

Issue No. 22 (6.3.2c) The potential impact of recently observed coarse fish on the ecology of Bassenthwaite Lake

Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Undertake investigations of the roach and ruffe populations in Bassenthwaite Lake with a view to assessing their ultimate status and their possible impact on vendace	NRA	IFE	90k	✓	✓	✓			

IFE - Institute of Freshwater Ecology

Issue No. 23 (6.3.3b) (6.3.3c) Impact of water abstraction on river flows for example the Rivers Irt, Calder, Derwent and St. John's Beck

Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Review historical data and assess current flow regimes downstream of significant abstractors and produce options report	NRA		£20k	✓	✓	✓	✓		
When opportunities arise address any identified problems by negotiations with abstractors	NRA	Abstractor	Unknown	✓	✓	✓	✓	✓	

Issue No. 24 (6.3.4a) Perceived waterlogging of agricultural land between Bassenthwaite Lake and Derwentwater

Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Carry out investigation and establish relationship between lake levels, maintenance regimes and land use.	NRA	NFU LDNP CLA EN	£5k	✓	✓	✓			

NFU - National Farmers Union
 LDNP - Lake District National Park Authority
 CLA - Country Landowners Association
 EN - English Nature

Issue No. 25 (6.3.4b) Visual intrusion and potential for flooding caused by dumping of supermarket trolleys in the River Derwent at Workington

Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Continue to pressurise supermarkets to manage trolleys better	NRA	Trolley owners	NRA staff time Unknown	✓	✓	✓	✓	✓	
Continue removing trolleys	LA NRA		£1000 each operation	✓	✓	✓	✓	✓	
Consider other options including legal action if problem persists	NRA		Unknown						

LA - Local Authority

Issue No. 26 (6.3.4c) Pressure on the NRA to dredge the River Annas outfall to prevent flooding of farmland. Dredging is likely to impact on the adjacent SSSI and natterjack toad population and cause erosion of a cliff face downstream

Actions	Lead	Responsibility Other	Est. Cost	Duration of Action					
				95	96	97	98	99	Future
Review maintenance annually, and take appropriate action after agreement with interested parties	NRA	EN LDNP NFU Copeland Borough Council	Dependent on action	✓	✓	✓	✓	✓	✓

EN - English Nature
LDNP - Lake District National Park Authority
NFU - National Farmers Union

Issue No. 27 (6.3.4d) Long term future of the Cumbria Coastal rail line acting as sea defence embankment

Actions	Lead	Responsibility Other	Est. Cost	Duration of Action					
				95	96	97	98	99	Future
Determine the future proposals of Railtrack to keep the line operational	NRA Railtrack	CCC) ABC) CBC))	2k	✓	✓	✓			
Investigate Parliamentary responsibilities laid down during the construction of the line	NRA Railtrack	CCC) ABC) CBC)		✓	✓	✓			
Produce a strategy to maintain the existing embankment at Flimby and Parton if the line closes	NRA Railtrack	CCC ABC CBC	unknown						✓

CCC - Cumbria County Council
ABC - Allerdale Borough Council
CBC - Copeland Borough Council

Issue No. 28 New issue but incorporates 6.3.5a Rare species conservation and recovery

Actions	Lead	Responsibility Other	Est. Cost	Duration of Action					
				95	96	97	98	99	Future
Undertake investigations into freshwater pearl mussels and vendace in order to assist in their conservation	NRA EN IFE CWT		15k (pearl Mussel) 90k (vendace)	✓	✓	✓			

EN - English Nature
CWT - Cumbria Wildlife Trust
IFE - Institute of Freshwater Ecology

Issue No. 29 (6.3.5b) The return of the otter to the catchment

Actions	Responsibility		Est. Cost	Duration of Action						
	Lead	Other		95	96	97	98	99	Future	
Undertake habitat improvement on River Waver and Wampool immediately to North of catchment to encourage otters to migrate to good otter habitat in the catchment area.	NRA	CWT	15K	✓	✓					
Monitor for otter signs during other routine activities	NRA		Minimal	✓	✓	✓	✓	✓	✓	
Train other NRA river bank staff to recognise otters and otter signs	NRA		Minimal	✓	✓	✓	✓	✓	✓	

CWT - Cumbria Wildlife Trust

Issue No. 30 New Issue Improvement to the management of water resources in Ennerdale/River Ehen as a result of the agreement with NWW

Actions	Responsibility		Est. Cost	Duration of Action						
	Lead	Other		95	96	97	98	99	Future	
Implementation of the new operational agreement on abstraction from Ennerdale agreed jointly between NRA and NWW	NWW		Unknown	✓	✓	✓	✓	✓		
Monitor and review implementation of the new abstraction agreement and assess benefits and any residual impacts to the water environment of Ennerdale and the River Ehen.	NRA		£8k	✓	✓	✓				

NWW - North West Water

Issue No. 31 New Issue Potential for improvements to the water environment from judicious tree planting/forestry

Actions	Responsibility		Est. Cost	Duration of Action						
	Lead	Other		95	96	97	98	99	Future	
Ensure new and existing woodlands are managed in compliance with the Forest and Water Guidelines	FA	NRA	unknown	✓	✓	✓	✓	✓		
Meet with the Forestry Authority to discuss policy on riverside and flood plain tree planting and forestry	NRA	FA		✓						

FA - Forestry Authority

Issue No. 32 New Issue Impact of development on the water environment									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Standard comments drawn up by NRA in line with local authority requirements to be implemented and take up monitored	NRA	LPA	NRA staff costs Unknown	✓	✓	✓	✓	✓	
Continue to improve quality of response to planning consultation in order to ensure the water environment is protected	NRA	LPA	NRA staff costs Unknown	✓	✓	✓	✓	✓	

LPA - Local Planning Authorities

Issue No. 33 New Issue Effective allocation of NRA resources in the maintenance of watercourses for flood defence purposes									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Review main river designations. Liaise over any proposals to change main river with appropriate authorities and organisations and MAFF for approval by 1996	NRA	MAFF	NRA staff costs £6k	✓	✓				

MAFF - Ministry of Agriculture Fisheries and food

Issue No. 34 New Issue Access to water for recreation									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Take appropriate opportunities to bring interested parties together to further recreational opportunities	NRA Sports Council Local Authorities Sporting interests Site owners LDNP		Unknown	✓	✓	✓	✓	✓	✓

LDNP - Lake District National Park Authority

Issue No. 35 New Issue Facilities for recreation									
Actions	Responsibility		Est. Cost	Duration of Action					
	Lead	Other		95	96	97	98	99	Future
Provide specific facilities for individual sports	NRA Local Authorities Sports Council Sporting interests LDNP		Project dependent	✓	✓	✓	✓	✓	✓
Provide facilities for general informal recreation	NRA Local Authorities Land owners LDNP		Project dependent	✓	✓	✓	✓	✓	✓

LDNP - Lake District National Park Authority

APPENDICES

APPENDIX 1 - RESPONSES RECEIVED THROUGH CONSULTATION NATIONAL BODIES

Sports Council	British Nuclear Fuels plc
British Canoe Union	The Forestry Authority
Ministry of Agriculture Fisheries and Food	Forest Enterprise
Agricultural Development and Advisory Service	Nuclear Industries Radioactive Waste Executive (Nirex)
English Nature	Ramblers Association
The National Trust	

LOCAL BODIES

Distington Parish Council	Keswick Angling Association
Newton Rigg College	Copeland Canoe Club
North West Rowing Council	Outward Bound (Ullswater)
Copeland Borough Council	South and west Cumberland Fisheries Assoc.
Cockermouth Town Council	West Coast Breakers Canoe Polo Club
Lorton Parish Council	District Commissioner of The Scouts
Keswick Leisure Pool	The Calvert Trust
Ullswater Canoeing Centre	Lowside Quarter Parish Council
Bootle Parish Council	Cumbria Wildlife Trust
Egremont and District Angling Association	Cumbria Tourist Board
North West Water Ltd	Workington Angling Association
Underskiddaw Parish Council	Allerdale Borough Council
Friends of the Lake District	Lake District Special Planning Board
Cumbria Primary Heads Association	Derwent Hill Outdoor Centre
Silloth Town Council	Derwentwater Marine
Carlisle and District Coarse Angling Club	Keswick School
Cumbria County Council	Operation Britannia
Headway (Cumbria)	West Cumbria Croudwork Trust
Egremont Town Council	Dale Campbell-Savours MP

The remaining 50 responses were from individuals, some of whom were pursuing particular individual interests such as canoeing.

APPENDIX 2 - DEVELOPMENT PLAN PREPARATION ON THE CATCHMENT

Local Planning Authority	Development Plan - Status and Comment
Cumbria County Council	Cumbria and Lake District Joint Structure Plan 1991 - 2006
Lake District National Park Authority	Examination in Public completed. Modifications expected Autumn 1994 Adoption expected 1995 Lake District National Park Local Plan. Deposit Consultation ended 28 April 1994
Copeland District Council	Copeland Borough Local Plan Deposit consultation ended 8 September 1994
Allerdale District Council	Allerdale Borough-Wide Local Plan Draft expected April 1995

**APPENDIX 3 - NRA GUIDANCE STATEMENTS AND LOCAL PLANNING AUTHORITY
DERWENT AND CUMBRIA COAST**

NAME AND TITLE OF DEVELOPMENT PLAN	WATER QUALITY AND WATER RESOURCES					FLOOD DEFENCE						FISHERIES RECREATION & CONSERVATION COASTAL MARGINS			MINERAL WORKINGS AND WASTE DISPOSAL					
	S1	S2	L1	L2	L3	L4	S3	L5	L6	L7	L8	S4	L9	L10	S5	S6	L12	L13	L14	L15
Cumbria and Lake District Joint Structure Plan 1991 - 2006	22	22	N/A	N/A	N/A	N/A	24	N/A	N/A	N/A	N/A	17	N/A	N/A	58	61	N/A	N/A	N/A	N/A
Copeland Deposit Local Plan	N/A	N/A	SVC 24	SVC1	X	X	N/A	ENV 15	ENV 15	X	X	N/A	ENV4	SVC1	N/A	N/A	N/A	N/A	N/A	N/A
Lake District National Park Deposit Local Plan	N/A	N/A	UT1	X	NE9	UT1	N/A	UT3	UT4	UT5	X	N/A	X	X	N/A	N/A	MZ	X	M1	W5

S1 etc = NRA guidance statements applicable to structure plans	Notes: X Denotes no policy has so far been included	L4 Availability of Water Resources	L10 Development and the Water Environment
L1 etc. = NRA guidance statements applicable to local plans	N/A Not applicable to this plan	S3 Flood Defence	S5 Water quality protection and minerals and waste
Numbers in boxes refer to LPA plan policy. Numbers which protect the water environment	S1 Water quality protection	L5 Flood plain protection	S6 Minerals and waste restoration
	S2 Water resource protection	L6 Surface water run-off	L12 Minerals and groundwater
	L1 Waste water management	L7 Development and tidal & fluvial defences	L14 Minerals and waste restoration
	L2 Surface water protection	L8 Development and tidal flooding	L15 Waste and the flood plain
	L3 Groundwater protection	S4 River corridors and coastal margins	
		L9 River corridors and coastal margins	

Table produced January 1995 and should be read in conjunction with the NRA's Guidance Statements and the relevant Development plan

N.B. No Draft Boroughwide Local Plan available for Allerdale when table prepared



Awarded for excellence



NRA

*National Rivers Authority
North West Region*

National Rivers Authority, North Area Office, Chertsey Hill,
London Road, Carlisle CA1 2QX. Tel: (01228) 25151 Fax: (01228) 49734.

Design, photography and production for the National Rivers Authority by Creative Incentives: 0161-487 1749

NW-10-95-0.5K-E-AQGE