

local environment agency plan

WYRE ACTION PLAN 1997 - 2002



ENVIRONMENT AGENCY

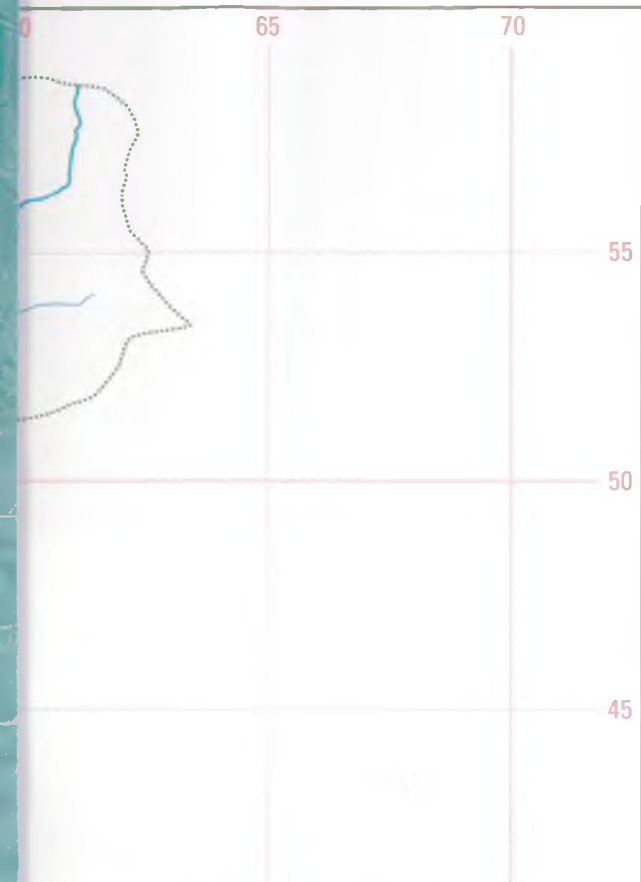
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ENVIRONMENT
AGENCY



Wyre Infrastructure

KEY

- Area Boundary
- Main Watercourse
- Minor Watercourse
- Canal
- Built up Area
- Motorway
- A Road
- Railway

Key Details

General

Plan Area 450 sq. km.

Conservation

Total number of Sites of Special Scientific Interest 7
 Designated Sites of nature conservation value 56

Water Resources

Long Term (1961 - 1990) overall catchment average rainfall 1220mm
 Total number of licensed abstractions in the catchment 107

Flood Defence

Length of Main River 300km

Waste Management

Licensed Waste Management operations in the area 30

Integrated Pollution Control

Total number of authorised IPC/RAS sites within the catchment area 31

Water Quality - Rivers and Canals - General Quality Assessment (GQA) 1995

GQA 1995	CHEMICAL CLASSIFICATION		BIOLOGICAL CLASSIFICATION	
	km	%	km	%
Very Good	0.0	0.0	0.0	0.0
Good	50.4	26.1	76.5	46.3
Fairly Good	27.5	14.3	32.6	19.8
Fair	54.1	28.0	32.1	19.4
Poor	50.3	26.1	20.9	12.7
Bad	10.6	5.5	3.0	1.8
Total	192.9	100	165.1	100

Map of the Catchment



The Environment Agency's Vision for the Wyre Area

Our vision for the Wyre in 25 years is to have:

- A sustainable supply of water for abstractors that does not compromise the needs of fauna, flora and amenity and where the quality of the water sustains good salmonoid or coarse fisheries.
- The risk of flooding to property minimised and the design of flood alleviation and land drainage works accommodates for and seeks to enhance, where possible, species and their habitats, and also provides access to the watercourse for recreational pursuits.
- Activities in the home, in industry and rural and residential developments are managed to minimise waste production.
- Awareness of the value of ecological features such as wildlife habitats, landscape, archaeological and historic features is raised through educational initiatives. Furthermore, the protection, promotion and enhancement of these features are endorsed by legislation and adopted as policy through local development planning processes.

The Agency seeks to realise this vision not just through its own actions, but by working in partnership with others.

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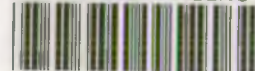
vision

Map of the Catchment and Key Details

The Environment Agency's Vision for the Wyre Area

Contents	Page
Foreword	2
Executive Summary	3
1 Introduction	
1.1 The Environmental Agency	4
1.2 The LEAP Process for the Wyre	5
2 The Wyre LEAP Area	6
3 Review of the Consultation Process	8
4 Activity Plans	9
5 Protection Through Partnership	26
6 Future Review and Monitoring	27
Appendix 1 List of Respondents	28
Appendix 2 Erratum for the Consultation Report	32
Appendix 3 Glossary	33
Appendix 4 Confirmed River Quality Objectives (RQOs)	34
Appendix 5 Air Quality Monitoring Sites	37

contents



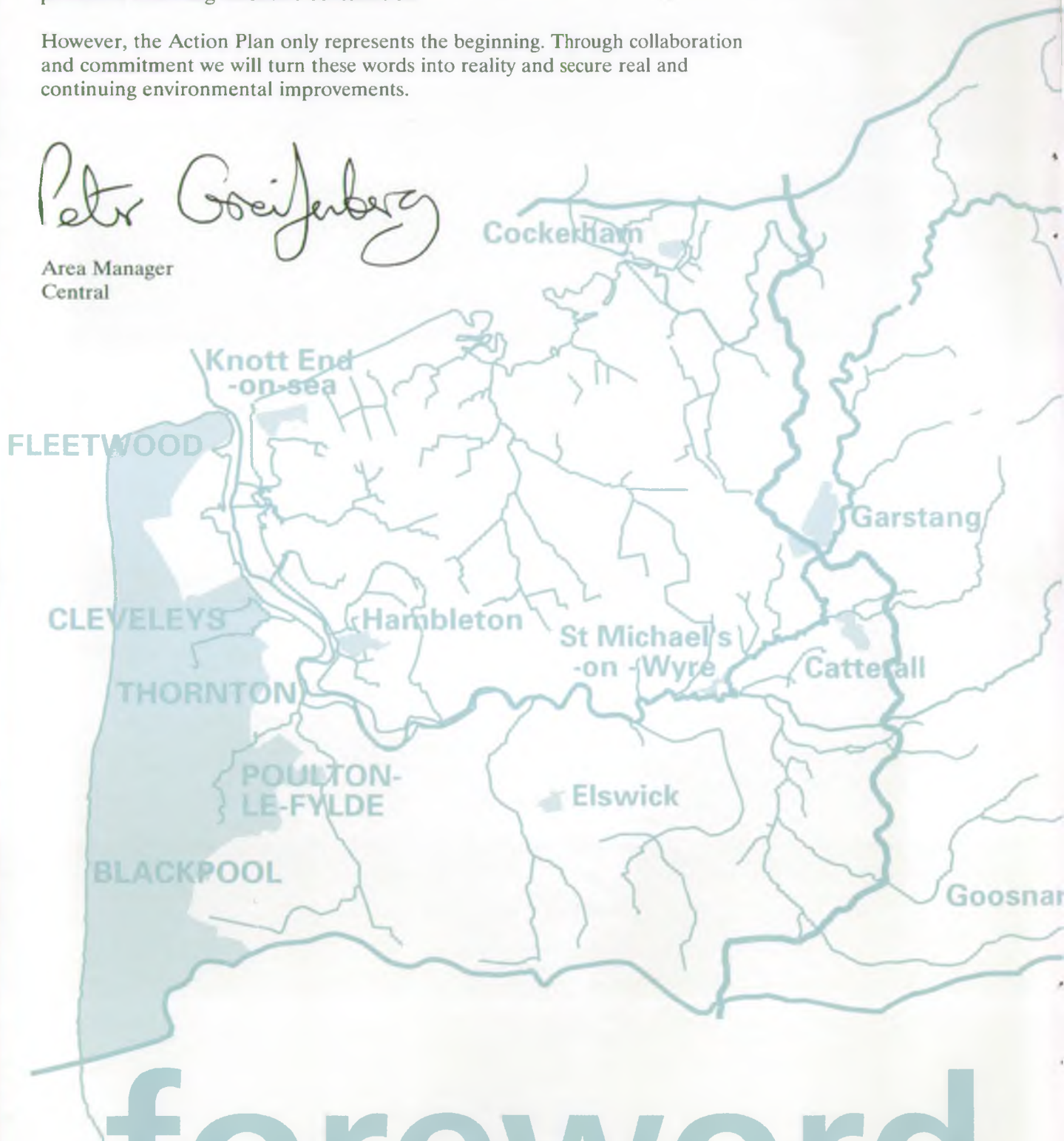
Foreword

The Wyre Catchment Management Plan is a significant step forward in achieving the Agency's vision for the future improvement and integrated management of the catchment. It has been produced following extensive consultation.

However, the Action Plan only represents the beginning. Through collaboration and commitment we will turn these words into reality and secure real and continuing environmental improvements.

Peter Goeyberg

Area Manager
Central



foreword

Executive Summary

The Wyre catchment area extends beyond the remit of Wyre Borough Council, incorporating parts of Lancaster City Council and areas within the Boroughs of Fylde, Blackpool and Preston.

The catchment area offers opportunity for a diverse range of recreational and economic pursuits. The popular sandy beaches of the Fylde coast contrast with quieter areas of important bird habitats of mudflats and salt-marshes associated with the Wyre Estuary. Raised mires or mosslands are found at Cockerham and Winmarleigh and are particularly important for their landscape and nature conservation value.

The area is in part underlain by the aquifer of the Fylde exploited as a public water supply. It contains high quality groundwater although, near the Wyre Estuary, some saline intrusion may occur.

A number of prominent environmental issues within the catchment were set out at the Consultation Stage. These have been well received and developed for action in this plan.

- Concern regarding the stresses on the Fylde Aquifer including the sustained availability of the water supply for yield.
- Low flow conditions in the River Wyre and in the River Calder.
- Protecting and restoring existing and degraded important habitat types and their associated flora and fauna in line with biodiversity principles. Siltation in the area is a problem due to high deposition.
- Barriers restricting the distribution of fish.
- Poor access to certain watercourses and coast for recreational usage.
- The loss of Fylde pond habitats resulting from infilling.
- The protection and restoration of existing and degraded important habitat types and their associated species.

- The loss of water power mills as a landscape heritage feature and the protection of peat-preserved archaeological remains.
- The failure to meet mandatory EC Bathing Water Directive bacteriological standards of bathing waters at Blackpool South and Fleetwood.
- The effect of agricultural activities contributing to failure to meet the Freshwater Fisheries Directive Standards and failures to meet long-term water quality objectives.
- The impact of discharges from NWW Wastewater Treatment works (particularly Hambleton WwTW and Pilling WwTW), combined sewer over flows and contaminated surface waters.

In terms of flood defence issues within the catchment, the main areas of concern are the dependence on man made flood defence systems and the need to defend large parts of the catchment for urban and agricultural use.

The main waste related initiatives focus on the need for waste minimisation (in conjunction with efficient water use) due to future increases in urban development and industrial activity. Addressing this issue is central to working towards a more sustainable future. Also, further investigations will be required in relation to the environmental impact of closed landfill sites.

The local authority has primary responsibility for local air quality, the Agency has powers for its regulation principally by operating Integrated Pollution Control (IPC) for certain industrial purposes. There are no issues arising from them in this plan. There are several air quality monitoring sites within and adjacent to the catchment area. Details of these sites are listed in Appendix 5.

Tackling these issues are the main focus of this plan. Following consultation, our preferred options have been translated into actions. These actions have, where appropriate, been costed with responsibilities set out.

1 Introduction

1.1 The Role of The Environment Agency

The Environment Agency for England and Wales was established on 1 April 1996 as a result of the 1995 Environment Act. The Agency exists to provide high quality environmental protection and improvement. This is achieved by an emphasis on prevention, education and vigorous enforcement wherever necessary.

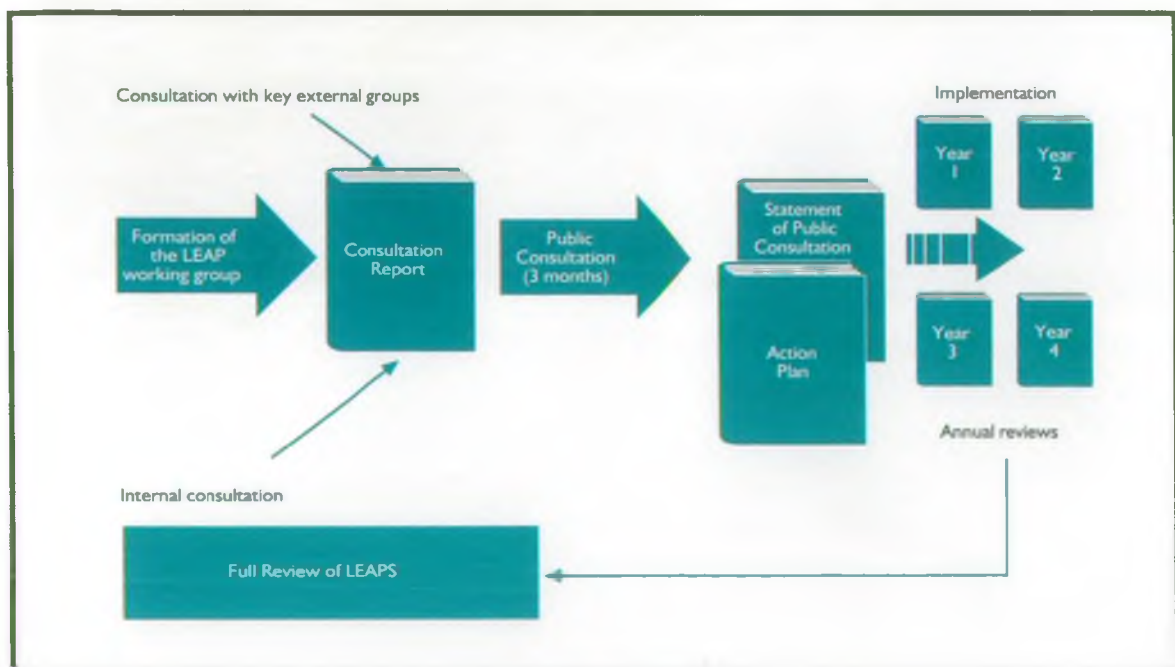
The Agency's Principal Aim

The Agency's principal aim, as set out in the Environment Act 1995, is to protect and enhance the environment, taken as a whole, in order to play its part in attaining the objective of sustainable development.

The Agency's Objectives

The Agency works towards sustainable development through seven objectives, set by Government Ministers. These are:

- an integrated approach to environmental protection and enhancement, considering the impact of all activities on natural resources;
- delivery of environmental goals without imposing excessive costs on industry or society as a whole;
- clear and effective procedures for serving its customers, including the development of single points of contact with the Agency;
- high professional standards, using the best possible information and analytical methods;
- organisation of its own activities to reflect good environmental and management practice; and provision of value for money for those who pay its charges, and for taxpayers as a whole;
- provision of clear and readily available advice and information on its work;
- development of a close and responsive relationship with the public, including local authorities, other representatives of local communities and regulated organisations.



1.2 The LEAP Process for the Wyre catchment

A LEAP is the production of Local Environment Agency Plans within the Agency involving three stages:

The Local Environment Agency Plan Consultation Report

The Consultation Report for this LEAP was published in April 1997. The report included a vision, details of the area, issues to be addressed and options for their resolution, as identified by the Agency. This document was circulated to a wide variety of individuals and groups having an interest in the Wyre area. Informal pre-consultation took place during the start of the process in July 1996. The formal period of consultation took place from 1st April 1997 and lasted for three months. This enabled comments to be expressed on the issues and options raised by the Agency.

Local Environment Agency Plan - Action Plan

The Action Plan represents the next stage after the Consultation Report. This Plan has considered the comments received during the consultation process. The Action Plan is a public document and it will be reviewed over the next five years. This Plan identifies and consolidates the preferred options and details the nature of actions required with named third parties or partners where appropriate. The Plan also highlights the costs to be incurred both internal, and where known, external, within agreed timetables, via functional planning routes. The Agency will be seeking commitment to planned actions by others wherever possible.



Footpath at St. Michael's on the River Wyre.

Annual Review

The Agency will be jointly responsible, with other identified organisations and individuals, for implementing the Action Plan. Progress will be monitored and normally reported annually, by means of a review document which will be publicly available. This will ensure that all the timetabled Actions are monitored to measure their success in terms of being realistic and programmable. 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 area.
- Consideration of the need to update the LEAP.

Where the statutory or primary responsibility is with another organisation eg. Local Authority this will be referenced either in the issues, text or through the partnership section. Update requirements will obviously depend on the particular needs of the area. However, updates to the LEAP will normally be undertaken every five years. Key organisations and individuals forwarding comments will receive an annual review paper to provide updated action plan progress.

Constraints

To ensure improvements and overcome the problems in the area, actions, in partnership with other organisations and individuals, will be necessary. Where the Agency does not have the powers to make improvements it will use its influence wherever possible.

2 The Wyre LEAP Area

The area occupies a large part of Central Lancashire and is divided roughly in two along a north/south line by the M6 motorway and the Lancaster Canal. It is mainly a rural agricultural landscape consisting of cattle and sheep grazing stretching from the high Pennine moorland in the east to the relatively flat and fertile land on the Fylde coast.

The main centres of population and built landscape are along the developed coastline from Blackpool to Fleetwood. This coastline is famous as a major holiday resort receiving thousands of visitors each year. In addition to the tourist trade around Blackpool, Fleetwood Free Port and the Hillhouse Site at Thornton provide centre for employment. Inland the area is comprised of small agricultural villages and hamlets with larger settlement around the market town of Garstang.

The Forest of Bowland is designated as a Special Protection Area (SPA), a Special Area of Conservation (SAC), a Site of Special Scientific Interest (SSSI) and also as an Area of Outstanding Natural Beauty (AONB). South of the Forest of Bowland extends an area of Special Landscape Value from the village of Wharles to the Ribble Valley.

Across the catchment area there is a rich diversity of natural and man-made wildlife habitats. This is reflected in the number of designated County Biological Heritage Sites. The Estuary mudflats and saltmarsh are also important and designated SSSI.

There are commercial sea fish and shellfish fisheries present in The Estuary and coastal waters. A commercial elver fishery operates on the River Cocker and downstream of St. Michael's on the Wyre, regulated under licence by the Agency. The catchment supports recreational fisheries for both game and coarse fish species. Salmon and sea trout are fished from Abbeystead downstream to the tidal limit.

The Lancashire Cycle Way runs through the catchment and comprises two circular routes each about 130 miles long. Facilities for angling and navigation on the Lancaster Canal. The towpaths are used by walkers and cyclists. Commercial pleasure boat trips are also provided on the canal. The Wyre Estuary

downstream of the tidal limit at Little Eccleston is the main area utilised for water sports - yachting, water-skiing, jet-skiing and motor boats. Although there is no right of navigation above the tidal limit, canoeing does take place on the River Wyre from Garstang downstream.

When there is insufficient water in the Wyre to satisfy abstraction requirements, water may be available in the Lune and can be transferred via pipeline to the Wyre at Abbeystead for re-abstraction. There are residual flow conditions on the Lune and the Wyre to protect the rivers.

The increase in pressure on the water environment has resulted in the need to promote demand management. In addition, there is the requirement to promote the reduction of leakage from distribution systems by water companies and waste of water by industry and domestic users. North West Water Ltd. are committed to reducing total leakage within the North West region by 250 ML/d (millions of litres per day) company wide by 1999/2000. This is similar to the quantities abstracted through the Lune-Wyre transfer, as part of the LCUS.

The intensive agricultural activity predominating over the catchment, particularly the dairy farming on the fertile Fylde plain, causes poor water quality in certain areas. Incidents from livestock farms including releases of silage, slurry and other farm waste can cause serious pollution problems. Diffuse pollution sources, for example arising from the spreading of farm waste, are more difficult to control. The use of Farm Waste Management Plans to control this type of pollution is promoted by the Agency.

There is a chemical industrial site, ICI Hillhouse, located on the Wyre Estuary at Thornton. There is public concern over the perceived environmental impact of the discharges of trade effluent to the Wyre Estuary and over emissions to air. However, the Environmental Agency and the Discharger undertake regular environmental monitoring and this monitoring demonstrates that current environmental quality standards are being met. This work is considered to be routine Agency work and reference to this has now been removed from the issues section in this plan.

The Consultation Report referred to the possible addition of toxicity based criteria to the consent and authorisations controlling the activities on this site. A national demonstration programme has now been set up to explore the practicalities of this procedure in more detail. Pilot studies are underway at four sites across the UK but not at ICI Hillhouse. The inclusion of toxicity based criteria to improve regulation at ICI Hillhouse is now unlikely in the near future and will depend on the outcome of these studies.

Poor storage and accidental spillages of various chemicals on the ICI Hillhouse site in the past has led to contamination of the ground, particularly with mercury. There are proposals for the redevelopment of parts of the site, in particular the Agency is involved in discussions with a company who are proposing to construct a gas fired power station on this site. This proposal will need careful consideration and the developer will need to demonstrate that any contaminants will be contained or removed. The Agency will consult widely over this proposal once more details are known.

Waste Management activities in the catchment are concentrated in the industrialised west of the area, resulting in increased demand for waste disposal. Consequently, this part of the area has numerous transfer stations and metal recycling facilities. Additionally, ICI Hillhouse is located adjacent to the River Wyre. This site has in-house waste disposal facilities consisting of landfill and lagoons. There is one main strategic landfill site accepting a wide range of waste. This is operated by Lancashire Waste Services at Jameson Road in Fleetwood. A high concentration of waste activities, mainly transfer operations, exists at Poulton-le-Fylde Industrial Estate. This site is subject to close scrutiny by the Agency.

3 Review of the Consultation Process

3.1 Summary of Public Consultation

Pre-consultation took place in July 1996 and generated over 50 written responses. This early consultation provided an indication for Agency staff as to the type of issues that should be addressed in the area.

The Consultation Report was published in April 1997. This marked the start of the formal consultation process. Local surgeries were held within the catchment at Catterall and Cabus to enable interested groups to discuss the issues in more detail. Displays of the issues were also on show at Blackpool Airport and Blackpool Zoo for the remaining weeks of the consultation period. The Consultation Report was also publicised in the local press and on radio. Copies were also sent to libraries, local council offices and other public premises.

3.2 Results of Consultation

The Agency received 59 responses to the consultation process. The individuals and organisations are listed in Appendix 1.

In general, the comments received were supportive of the concept of LEAP's and the Wyre LEAP in particular. Comments on the issues and options raised were received and these have been considered in the production of this Action Plan. Errors and omissions were also highlighted. Although the Agency welcomes these corrections, it has to be pointed out that the supporting text and maps in the Consultation Report is not going to be reproduced until the next consultation plan in 5 years time.

3.3 Further Action

New partnerships have developed following the surgeries with key groups and interested individuals. The promotion of the issues in the Consultation Report have identified activities which forms the basis of the action plan for 1997-2002.

4 Activity Plans

4.1 Implementation

Implementation of this plan is based on 18 of the 21 key issues set out and discussed in the Consultation Report. These issues have been modified where appropriate in the light of comments received during the consultation period. Resolution of these issues will, it is considered, result in real improvements in the area.

4.2 Issues

The issues are presented with a number of actions, a target timetable and the identification of responsible parties. Where possible, costs have been outlined for the period covered by the plan. This does not necessarily reflect the total cost of the schemes and is sometimes a projected estimate to be more accurately costed later. This document recognises current priorities, both within the Agency and other organisations. The issues are not numbered in any order of priority or importance.

Key to Estimated Costs

- > Greater than.
- < Less than.
- Action in the year indicated.
- R Recurring-non additional cost to annual budgetary provision.
- U Unknown cost at this time.
- U(i) Individual costs will be identified and agreed during negotiations.
- U(ii) Capital costs will be identified during investigations and surveys.
- * Only Agency costs (other than normal working costs) identified here. Costs to other organisations unknown.
- K £1,000.

4.3 Annual Review

Following from this Action Plan the Annual Review will be the mechanism to communicate advances.

Abbreviations

The Agency	Environment Agency
AC	Angling Clubs
ADAS	Agricultural Development Advisory Service Consulting Limited.
AMP	Asset Management Plan
BW	British Waterways
CSO	Combined Sewer Overflow
FA	Forest Authority
FWAG	Farming and Wildlife Advisory Group
LA's	Local Authorities
LCC	Lancashire County Council
LWT	Lancashire Wildlife Trust
MAFF	Ministry of Agriculture, Fisheries and Food
NFU	National Farmers Union
NWW Ltd.	North West Water Ltd.
RO	Riparian Owner
RSPB	Royal Society for the Protection of Birds



NWW intake at River Calder.

Issue 1 LOSS OF FYLDE POND HABITAT DUE TO INFILLING AND DEVELOPMENT

Ponds and the associated pondscape resulting from earlier digging works are a characteristic element of the lowland Wyre, and are of landscape and heritage value, in addition to their habitat and associated species resource. The wildlife value of a pond is considerably increased if it is part of a network of ponds. This network of ponds is under continual threat from development, changes in agricultural practice, infilling, and poor management or total neglect and has suffered a 40% decline in the last 50 years. Fragmentation of the network needs to be addressed by viewing ponds as part of a wider pondscape, and developing a strategic approach to their protection.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/ 98	98/ 99	99/ 00	00/ 01	01/ 02	FUTURE
		LEAD	OTHER							
Loss of Fylde pond habitat due to infilling and development.	Assess the existing pond and pondscape resource - identifying key sites for protection; degraded sites for enhancement; and opportunities for pond creation. Encourage the continued development of the database 'Pond Information Network' in the Wyre area.	The Agency	Pond Life Project Pond Warden Scheme	£10K				—	—	
	Encourage the promotion of ponds and pondscape, through publicity and education.	Pond Life Project	The Agency			—	—			

Constraints: Pressure from third parties to develop such areas.

Locations: All the areas identified for development in the development plans for Fylde Borough Council, Preston Borough Council, Blackpool Borough Council, Lancaster City Council and Wyre Borough Council. In particular the areas south of the Wyre and around the urban areas of Blackpool, Poulton and Thornton.



Loss of ponds. The characteristic ponds of the Wyre are being lost through infilling and development.

Issue 2 THE PROTECTION AND RESTORATION OF EXISTING AND DEGRADED IMPORTANT HABITAT TYPES AND THEIR ASSOCIATED SPECIES, TO PROTECT AND INCREASE BIODIVERSITY

An English Nature survey in 1993 identified a decline in lowland wet grassland around St. Michael's, Pilling and Cockerham Mosses. This habitat is important for waders and wildfowl. The Agency will work with key partners to recreate and restore these areas.

Peatland areas around Pilling, Winmarleigh, Rawcliffe, St Michael's Inskip, Elswick and Wesham are being cut and drained (2.5m of peat lost at Eagland Hill, Pilling). A North West Wetland Survey has shown that these areas provide archaeological finds such as the severed head found at Pilling. Maintenance of the peatland is important not only as a habitat, but also to preserve the archaeological remains within them.

Water voles are a short-list on the biodiversity action plan. Water voles are present in the Wyre, but suitable habitat is limited and promotion is necessary to ensure its survival. The area identified for study is the area to the west of the M6. The Environment Agency is working in partnership with Local Authorities, Wildlife Trusts, English Nature and Societies to address this.

There is a shortage of suitable spawning substrate in the Wyre area for salmonid and coarse fish. The Agency is seeking to rectify this by forming work parties to undertake cleaning of existing gravels in collaboration with angling clubs. Where gravels are absent, gravel replenishment work will be carried out. This action is necessary to promote an increase in the distribution and density of fish populations in the Wyre area.

The creation of riparian buffer strips along certain rivers and streams may act to reduce diffuse pollution and land run-off. They would also increase the diversity and distribution of habitat for fish and other wildlife by providing extra cover and food.

The fencing off river banks would also reduce damage through over-grazing. This is a serious problem on the Wyre downstream of Churchtown and on the River Brock. Banks would become more stable thereby reducing erosion and siltation which should enhance flood defence management and maintain existing defence standards.

Lancashire has one of the lowest levels of woodland cover in the country. Within the Wyre catchment linear broad leaved woodlands associated with the rivers are the most noticeable. The Wyre Tree Strategy highlights the sparsity of tree cover in particular the lower reaches of the Wyre downstream from Garstang. Riparian owners will be encouraged to create and plant up buffer strips through grants available through the Countryside Stewardship Scheme, although this may conflict with access requirements to the water-courses for Flood Defence purposes and recreational users and in addition put at risk current flood defence standards of protection. The upper reaches of the catchment have suffered from poor woodland management and excessive grazing pressure from livestock resulting in the degradation of some areas of Ancient Woodland (that is, woodland that has existed since at least 1600AD).



Snipe.
Snipe were widespread in lowland Wyre up until the 1970's, but have now vanished from this area as a breeding bird.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
The protection and restoration of existing and degraded important habitat types and their associated species, to protect and increase biodiversity.	Lowland Wet Grassland and Peatland. Use the EN 1993 report and Wetland Survey to identify key locations where existing peat and lowland wet grassland can be protected; and locations where lost habitat can be recreated and restored.	The Agency	RSPB EN LCC Arch. Unit	£10K						
	Water Voles National Strategy. This needs to be taken into consideration prior to any locally based initiative.	The Agency	LWT	£5K						
	Make use of national strategy to implement a programme of habitat and species protection in the Wyre catchment.	The Agency	LWT							
	Manual cleaning of existing gravels. Further seeding of suitable gravels and transference of gravels from above Abbeystead Reservoir.	The Agency AC RO	RSPB EN LWT	£400 per annum						
	Removal of accumulated silt in areas of high deposition by either extraction or modification of channel engineering.	The Agency AC		£500						
	Use Wyre Tree Strategy as a catalyst to encourage riparian owners to undertake set aside buffer strips increasing bankside vegetation. Revegetation of river channels to reduce erosion and silt deposition.	The Agency	RO FWAG	£1K						

Constraints:
 NWW/RO/BW/LA/Angling Clubs/EN co-operation.
 Incentive compensation schemes required.
 Flood Defence standards to be maintained.



River Wyre. Treeless banks, erosion and degraded habitat.

Issue 3 IMPACT OF BARRIERS RESTRICTING THE DISTRIBUTION OF FISH IN THE WYRE AREA

Several barriers, either full or partial, to fish migration have been identified including: Churchtown Weir, Dolphinholme Weir, Street Bridge Weir, the Aqueduct Weir on the River Brock and Lee Bridge Weir at the foot of Tarnbrook Wyre with some smaller obstructions created by bedrock falls. In addition, the modification of bridge culverts and the selective removal of fallen trees should ease the passage of fish. The fish pass at Churchtown Weir is currently inefficient and needs to be improved. Additional sites identified but not actioned in this plan include: Foxhouses Brook, Grizedale Dam and Cam Brook Force.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Impact of barriers restricting the distribution of fish in the Wyre area.	Alter Churchtown Weir fish pass. This action will be completed by publication date of this plan.	The Agency	RO	<£1K						
	Investigate possibility of creating a new fish pass at Churchtown.	The Agency	RO	£70K						
	Improve Street Bridge Weir.	The Agency AC	RO LA	<£1K						
	Selective removal of fallen trees.	The Agency	RO LA	<£1K						
	Modify road bridge culverts to ease the passage of fish.	The Agency LCC	AC	£1K						
	Install a fish pass on the River Brock Weir.	The Agency BWB	RO AC	£60K						
	Remove several smaller obstructions.	The Agency AC	RO	£1K						
	Investigate improvements to modify major weirs to allow constant flow at Calder and Barnacre Intake.	The Agency	BW NWW	U						
	Restore the fish stocks in tributaries following future water quality improvements.	The Agency	AC RO	£5K						



Road Bridge Culverts can cause problems for fish passages.

Constraints:

- Co-operation and assistance of Riparian Owners/ BW/LA/Angling Clubs.
- Success of any stocking operation.
- Flood Defence interests.
- NWW/BW Co-operation and assistance.

Issue 4 POOR ACCESS TO THE WATERCOURSE AND COAST FOR RECREATIONAL USE

There is a lack of footpaths in some areas of the catchment, particularly in the areas between Little Singleton and Little Eccleston, between Great Eccleston and St. Michael's and at Gubberford Lane in Scorton. In addition to which the Coastal Path is being pushed inland at Pilling. Some existing footpaths, between Skippool Bridge and Little Singleton and between Hambleton and Out Rawcliffe become waterlogged and others are littered by the effect of the tide. This has been raised not only by recreational users but also by Lancashire County Council who have expressed their concern at the general lack of good quality open space amenity especially within urban areas. The Agency does not own the majority of flood banking but has agreements with local landowners for flood bank protection and maintenance. The Agency, in collaboration with Local Authorities and landowners, will seek to improve and promote current facilities and act as honest broker in discussions to extend access for walking and cycling.

The recreational use of the river corridor occasionally gives rise to a conflict of interest between different types of users, for example motor boats in the Estuary can disturb people interested in bird-watching. In these instances, the Agency will attempt to resolve conflict by education and liaison with the users of the recreational resource for diverse recreational purposes.

Canoeists have identified a lack of parking and access to the river for canoeing in some areas for example in Garstang. Canoeing does occur from Garstang to Fleetwood on an ad hoc basis. The Agency will seek to promote access for a canoe trail in this area with landowners and other recreational users during suitable river flows and times of the year.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Poor access to the watercourse and coast for recreational use.	Identify areas where existing footpaths can be extended and where new paths can be created.	LA The Agency	RO Rambler's Association	U(i)						
	Identify areas where canoe access to the river can be improved. Facilitate negotiations for the use of the river for canoeing in suitable areas and periods with the aim of brokering an access agreement.	The Agency BCU LA	RO AC	U(i)						

Constraints: Co-operation of LA, Owners, BCU, Conservationists, Anglers and Rambler's Associations.

Issue 5 ARTIFICIALLY INDUCED LOW FLOW CONDITIONS WITHIN THE CATCHMENT

Historical rights for the abstraction of water from the Wyre catchment results in artificial low flows. Detrimental effects have been identified in fauna and flora within 27kms of the Rivers Wyre and Calder (12kms affected by surface water abstractions/15kms due to groundwater abstractions). These historic rights are enjoyed by North West Water Ltd (NWW) for public water supply and by British Waterways (BW) for maintaining water levels within the Lancaster Canal. The Agency is working with NWW and BW to identify solutions and policies to reduce or remove the detrimental effects of these abstractions.

During the pre-consultation exercise carried out in July 1996, public concern was expressed regarding the environmental effects of both surface water and groundwater abstractions. In particular in Tarnbrook Wyre, Grizedale Brook and River Calder but also over other extensive reaches over the Fylde aquifer. This was also confirmed in the results issued in the APEM Report detailing a study of the Fylde prepared for the Agency in 1996.

The Agency has recently conducted a Fylde Aquifer/Wyre catchment study which highlighted a number of issues regarding the hydrology and hydrogeology of the Fylde Aquifer. Observations included declining groundwater levels, loss of river flows over extensive reaches of most watercourses and losses/deterioration in wetland features. Based upon the study a number of recommendations have been made which have been incorporated into the solutions.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Artificially induced low flow conditions within the catchment.	Evaluate effect of licensed abstraction conditions from surface water sources: Tarnbrook Wyre Grizedale Brook River Calder	The Agency	NWW	R						
		The Agency	NWW							
		The Agency	NWW/BW	£2K						
	Investigate feasibility of construction of drift observation boreholes adjacent to: NWW source L Winmarleigh Moss SSSI.	The Agency								
		The Agency	NWW	U(ii) R						
		The Agency	EN	R						
	Investigate the feasibility of installing a permanent gauging station on Woodplumpton Brook.	The Agency			U(ii) R					
	Review of the current status and reliability of continuous recording flow measuring stations, particularly with regard to low flows.	The Agency			R					
	Evaluate effects of licensed abstraction and augmentation conditions from groundwater sources on the following: River Wyre River Brock Barton Brook Woodplumpton Brook	The Agency	NWW	R						
	Enhance environmental monitoring (resulting from APEM report).	The Agency	EN	U						

Constraints: Co-operation of NWW and BW and English Nature.

Issue 6 FAILURE TO MEET FRESHWATER FISHERIES DIRECTIVE STANDARDS

Several watercourses within the Wyre LEAP Area are designated as salmonid fisheries under the Freshwater Fisheries Directive (EEC/78/659). (See also Issues 2 and 3). The following rivers are presently failing to meet the standards for ammonia: Barton Brook, New Draught Brook, Sparting Brook, Westfield Brook, River Calder and River Little Calder.

The stretches listed below presently fail to comply with strict limits on water quality, in particular the concentration limits for ammonia. The causes of these high levels of ammonia are believed to originate primarily from agricultural practices. Slurry and silage liquor discharges occur from farms with inadequate containment facilities. The spreading of slurry to land is also a significant contributor but is difficult to control due to the widespread nature of spreading activities. Other potential inputs of ammonia are discharges of treated sewage effluent from NWW WwTWs, and discharges from smaller private sewage treatment works and septic tanks.

Visits to farms by Agency staff are continuing. The visits provide an opportunity to advise and educate farmers on best farming practices. Advice is given about improvements that may be needed to contain farm wastes, and how pollution can be avoided when spreading wastes to land. Irrigation advice is also available to reduce water usage.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/	98/	99/	00/	01/	FUTURE
		LEAD	OTHER		98	99	00	01	02	
Failure to meet Freshwater Fisheries Directive Standards.	Provide information/ advice to agricultural community on pollution prevention, efficient spraying/ spreading techniques.	The Agency	MAFF Agricultural Consultants	R						— May become a statutory requirement.
	Carry out intensive water quality and ecological monitoring to identify and quantify inputs to the various stretches.	The Agency		£5K						
	Carry out farm pollution control campaigns to rectify sources of farm pollution.	The Agency	Farmers	U(i)						
	Carry out surveys of habitat and present fisheries status.	The Agency		£5K						
	Provision of additional treatment at Barton WwTW/revision of consent standards (if above actions prove this to be necessary).	NWW	The Agency	U(ii)						

Constraints: Costs to farmers/NWW.

Issue 7 IMPACT OF DISCHARGES FROM NORTH WEST WATER (NWW) LTD. WASTEWATER TREATMENT WORKS

Flows into Pilling WwTW presently only receive primary treatment. These are locked in Broadfleet at certain states of the tide causing significant failure to meet the long term objective of RE4 in Broadfleet for BOD, ammonia and dissolved oxygen.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Impact of Pilling WwTW on water quality of Broadfleet.	Install additional treatment at Pilling WwTW. Relocation of point of discharge to downstream of tidal gates.	NWW	The Agency	U(ii)						*

Constraints: Costs to NWW/work scheduled for completion no later than end of year 2005 in AMP2 programme in line with UWWTD.

Flows into Hambleton WwTW presently only receive primary treatment and are discharged into the high amenity watercourse Wardleys Creek before entering the Wyre Estuary. The poor quality of the effluent and the poor location of the outfall results in bad smells and sewage derived litter associated with the discharge impinging on boat users in the area.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Impact of Hambleton WwTW on Wye Estuary/ Wardleys Creek.	Abandonment of Hambleton WwTW and transfer of flows to Fleetwood WwTW for treatment (preferred solution).	NWW		U(ii)						*
	Provision of secondary treatment at present site.	NWW		U						

Constraints: Costs to NWW/work scheduled for completion no later than year 2005 in AMP2 programme in line with UWWTD.

* N.B. A significant number of consultation comments were received raising concerns over the impact of discharges from Pilling WwTW and in particular Hambleton WwTW. The Agency will pursue earlier resolutions to these problems should funds become available.

Issue 8 IMPACT OF DISCHARGES FROM COMBINED SEWER OVERFLOWS

Of the 60 or so combined sewer overflows (CSOs) situated within the Wyre Area around 20 are considered to be in an unsatisfactory condition by the Agency due to adverse impacts on water quality and aesthetics arising from poor design and/or lack of solids retention facilities. NWW are committed to addressing 3 unsatisfactory overflows that presently discharge to Marton Mere via the culverted Main Dyke in the 1997/98 financial year. 10 overflows in the Poulton area including 3 CSOs discharging to the Old Field Carr culvert in Hardhorn, 4 overflows discharging to Horsebridge Dyke in Normoss and 3 CSOs discharging to Main Dyke are due to be addressed in the period 2000-2005. The other unsatisfactory overflows will be considered for inclusion in NWWs AMP3 programme.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Impact of discharges from combined sewer overflows.	Ensure resolution of unsatisfactory Marton Mere CSOs within present AMP2 programme.	NWW	The Agency	U						
	Review designations for remaining CSOs and prioritise problems to be resolved.	The Agency	NWW LA's	R						
	Pursue further improvements to sewerage network to resolve problem of remaining unsatisfactory CSO's. (eg. Poulton).	NWW	The Agency	U(ii)						

Constraints: Costs to NWW/Resolution of all problems not scheduled in AMP2.

ISSUE 9 IMPACT OF CONTAMINATED SURFACE WATER DISCHARGES FROM SEPARATE SEWERAGE SYSTEMS

In areas served by separate sewerage systems, surface water systems are liable to contamination when foul water is incorrectly plumbed to the surface water system or where contaminated liquids are poured down surface water drains instead of drains connected to the foul sewer. This is a particular problem in the Thornton area where there has been a lot of new housing constructed that is served by separate sewers for foul and surface waters. There are numerous contaminated surface water (CSW) outfalls that discharge to Hillylaid Pool and Royles Brook causing poor water quality.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Impact of contaminated surface water discharges from separate sewerage systems.	Ensure identified CSW problems are investigated and resolved.	NWW	The Agency LA's	Approx. £1m likely to be spent in North West Region over next few years.						

Constraints: Costs and Resources for NWW/LA's/Householders.



Hillylaid Pool "contaminated surface water outfall".

Issue 10 FAILURE TO COMPLY WITH WATER QUALITY OBJECTIVES DUE PRIMARILY TO AGRICULTURAL ACTIVITIES

A large number of the classified watercourses within the Wyre LEAP Area presently fail to comply with the proposed short term and/or long term water quality objectives. Some of these failures are attributable to discharges from NWW WwTWs (see issue 7), discharges from combined sewer overflows (see issue 8) or discharges of contaminated surface water (see issue 9).

However, due to the intensively agricultural nature of most of the Wyre LEAP Area many failures to meet water quality objectives are due primarily to agricultural practices, although in some cases there will also be inputs from NWW WwTWs and smaller private sewage treatment works and septic tanks.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/	98/	99/	00/	01/	FUTURE
		LEAD	OTHER		98	99	00	01	02	
Failure to comply with Water Quality Objectives due primarily to agricultural activities.	Where appropriate carry out intensive water quality and ecological monitoring to identify and quantify inputs eg. Weeton Watercourse, Potters Brook, River Wyre below Garstang WwTW.	The Agency		£5K						
	Continue farm inspections and where necessary carry out farm pollution control campaigns to identify and rectify sources of farm pollution eg. Barton Brook Inskip Brook Lancaster Canal Thistleton Brook	The Agency	Farmers	U(i)						
	Provision of additional treatment at WwTWs/ revision of consent standards (if necessary) eg. Weeton WwTW, Forton WwTW, Garstang WwTW.	NWW	The Agency	U(ii)						

Constraints: Costs to farmers/NWW

Issue 11 LOSS OF AQUATIC SPECIES DIVERSITY AND FLOODING PROBLEMS DUE TO THE IMPACT OF HIGHWAY DRAINAGE FROM M6 (JUNCTIONS 32-33) AND M55 MOTORWAYS

All major roads are constructed with drainage systems to remove surface water which can cause hazardous driving conditions. These surface water drains often discharge to the nearest available watercourse. The disposal of drainage from roads can place a significant burden on the aquatic environment affecting the risks of both flooding and increasing the pollution load.

Decreases in the diversity and abundance of pollution sensitive species e.g. mayflies and stoneflies have been detected in the River Wyre, Bacchus Brook and River Cocker.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/	98/	99/	00/	01/	FUTURE
		LEAD	OTHER		98	99	00	01	02	
Loss of aquatic species diversity and flooding problems due to the impact highway drainage from M6 (Junctions 32-33) and M55 Motorways.	Undertake further monitoring to assess the scale of highway drainage impacts.	The Agency		£5K						
	Liaise with Highways Agency to seek improved drainage arrangements where impacts are identified as being significant.	The Agency	HA	R						

Constraints: Schedule of work programmes

ISSUE 12 DETERIORATION IN WATER QUALITY DUE TO A LACK OF SEWERAGE FACILITIES

Section 22 of the Environment Act 1995 places a new duty on sewerage undertakers, via Section 101A of the Water Industry Act 1991, to provide, where appropriate and cost beneficial first time sewerage facilities in areas suffering from environmental or amenity problems caused by the existing sewage disposal arrangements. Developments in these areas will be restricted due to the inadequate drainage facilities.

Failure to meet objectives/Other Water Quality Problems:

Problems due to inadequate sewerage facilities were identified in the following areas in the Consultation Report: Singleton Village; upper reaches of Potters Brook; tributaries of the Old River Brock; Halfpenny Lane, Longridge; Mains Lane, Little Singleton; Bartle and Swillbrook; Catforth.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Deterioration in water quality due to a lack of sewerage facilities.	Pursue provision of first time sewerage facilities.	Householders	LA's The Agency	U						
	Provision of sewer connection or new WwTW.*	NWW		U(ii)						

Constraints: Costs to NWW/Mechanism for progressing/prioritising areas not fully established.
Costs to householders.

* N.B. At present the timetable for resolving problems is unknown.



Singleton Village Drain "lack of sewerage facilities".

Issue 13 FAILURE TO MEET BATHING WATER DIRECTIVE STANDARDS AT FLEETWOOD AND BLACKPOOL SOUTH BEACHES IN 1996

Despite completion of North West Water's Fylde Coast Resewerage Scheme failures to meet the Bathing Water Directive standards (for total and faecal coliforms) were recorded at Blackpool South and Fleetwood beaches for the 1996 bathing season.

The Fylde Coast Resewerage Scheme was completed in 1996. Fleetwood Marsh WwTW provides secondary treatment for wastewater flows that were previously discharged with only preliminary treatment via the Manchester Square, Anchorsholme and Chatsworth Avenue pumping Stations at Blackpool, Cleveleys and Fleetwood together with wastewater from the Poulton area which was previously discharged to the Wyre Estuary at Skippool. Wastewater generated in the Blackpool area is now transferred via a 12km long tunnel flowing underneath the promenade to the new WwTW. Treated effluent is discharged via a 5km pipeline to an area of Morecambe Bay known as the Lune Deeps.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/	98/	99/	00/	01/	FUTURE
		LEAD	OTHER		98	99	00	01	02	
Failure to meet Bathing Water Directive Standards at Fleetwood and Blackpool South beaches in 1996.	Undertake/commission major project including intensive monitoring and investigations to assess reason for failures and to identify any further work required.	The Agency	NW LA's	>£100K in Central Area	---	---				
	Resolution of any outstanding problems found.	The Agency	NWW LA's	U	---	---				

Constraints: Cost to NWW/Local Authorities.

ISSUE 14 ENVIRONMENTAL IMPACTS OF JAMESON ROAD LANDFILL SITE

Landfill gas produced at Jameson Road contains a useful amount of energy that can be recovered using special plant and equipment provided that the gas production rate is sufficient. If the rates of production are uneconomic for energy recovery landfill gas can be burnt off with specialised flares to reduce its potential for harm and consequently reduce its environmental impact.

Energy recovery from this site's landfill gas can contribute towards a more sustainable use of resources in the UK and can also assist in reducing the contribution of waste management activities to global warming.

Operation of the site gives rise to leachate which affects groundwater quality but it is not known to what extent. Measures are necessary to isolate the source of the leachate and contain it.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/	98/	99/	00/	01/	FUTURE
		LEAD	OTHER		98	99	00	01	02	
Environmental impacts of Jameson Road Landfill Site.	Implement gas extraction and energy recovery at Jameson Road Landfill Site.	LWS	EA	U	---	---				
	Undertake chemical study of impact of leachate on surface and groundwaters.	The Agency		U	---	---				
	Undertake detailed study of the landfill site to determine sources of leachate.	The Agency		U	---	---				
	Remedy situation by installing a leachate handling facility on site.	LWS		U	---	---				

Constraints: Planning need, financing of schemes, gas production (quantities and rates) at the site, management of any immediate landfill gas risk to take priority over energy recovery, possible need to phase any scheme due to financial and/or production constraints.

Issue 15 IMPACT OF CONTAMINATED LAND ON THE ENVIRONMENT

Within areas of land which have been subjected to previous use that may have contaminated the soils and underlying groundwaters with a variety of substances which have the potential to pollute the environment. Ideally, the entire catchment should be subjected to a desk-study exercise to identify all such areas and to propose remediation work appropriate to the individual sites and the risk of pollution that they present. Notable examples of contaminated land are closed landfill sites.

The Agency holds information on closed landfill sites within the county of Lancashire although in many cases the records are incomplete. As a consequence of earlier waste disposal practices, many closed landfill sites lie in or close to urban areas and have the potential not only to impact upon the natural environment but also upon existing or proposed built developments.

Where the Agency holds adequate information on closed landfill sites it is able to provide advice to Local Authorities, landowners, developers and the general public as to the likely effects of the sites on existing or proposed developments. All too often the information is lacking in some way and the advice is of correspondingly lesser detail.

The Environment Agency would like to gather more information on the impact of these sites within the area enabling better advice and information to be made available. The Agency will encourage the gathering of such information as is necessary by those involved in land and property transactions, in particular where the information has a direct bearing on the transaction. When advising Planning Authorities on these matters, the Agency will seek to encourage the Authority to require the developer to submit any information they gather to the Agency and will in all cases seek to ensure that the information is made available as widely as possible.

The responsibility for ensuring remediation of land which is identified as being seriously contaminated rests in the main with the Local Authority - in the case of the Wyre catchment five local authorities are involved. New statutory controls relating to contaminated land are expected in 1997 and may well affect this LEAP issue.

Within the period of this plan the Agency proposes to focus attention on two areas of concern all of which impact on water quality. These are the former Fleetwood Metals site and the Wyre Waste Management site (both of which are located within the vicinity of Fleetwood Docks). The Agency intends to work with landowners and Local Authorities in an attempt to secure the clean-up of the two sites at Fleetwood Docks to allow their use for non-sensitive developments.

The following closed sites are close to the River Wyre:

1. Back Farm at Staynall
2. Stanah, River Road Thornton
3. BTBP Fleetwood (Catterall Station)
4. Barnacre Water Treatment Works

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Impact of contaminated land on the environment.	Assess potential risk posed to ground and surface waters and take appropriate remedial action.	Landowner	Developer LA The Agency	U						
The environmental impact of closed landfill sites.	Seek funding in order to undertake investigations to ascertain the location and potential threat posed by any previously unidentified sites and sites where information is lacking.	The Agency	Developers LA	U						

Constraints: Although there is a large amount of land within the catchment which may be contaminated the statutory powers of the Agency in respect of such land are limited and much responsibility rests with the Local Authorities, land owners and land developers. No set standards relating to specific land uses.

Developers submission of information.

Issue 16 WASTE MINIMISATION AND EFFICIENT WATER USE

Future increases in urban development in the Wyre area and increases in industrial activity can have a significant impact on total waste produced and future demands for water. Therefore the Agency seeks to promote water efficiency and waste minimisation throughout the catchment, in industry and in the home.

Waste minimisation is a key issue in working towards a more sustainable future. The less waste that is produced the less the impact on the environment as resources are more effectively managed. It is an objective of the Environment Agency to find ways in which to encourage waste producers to reduce waste at source. There is a real need to reduce waste being produced by industry, commerce and from municipal collections.

To encourage waste minimisation, the Environment Agency will look to develop links with industry, schools, colleges and various interest groups in order to help educate and inform them as to the benefits and savings that can be made through effective waste minimisation.

Moreover the Agency will seek to influence the various waste management techniques employed at present in order to ensure best practice in the management of that waste which is produced. This will assist in achieving the aim of waste being dealt with in a more sustainable manner.

A number of initiatives will assist in dealing with this issue over the coming years. Notable examples are: "producer responsibility" and the "landfill tax", both of which will place incentives to minimise, recycle and re-use wastes.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Waste minimisation and efficient water use.	Seek out opportunities in order to inform commerce, industry, schools, colleges and local interest groups to the benefits to be gained from waste minimisation.	The Agency	Industry Commerce Schools Colleges Householder NWW	U						
	Identify and quantify potential increases in water demand through future developments identified in the areas local development plans.	NWW The Agency								
	Implement demand management measures to control future demand for water, ie. leakage control.	NWW	The Agency							
	Monitor effectiveness of demand management measures.	NWW	The Agency							
	Promote efficient use of water in agriculture by encouraging winter storage and efficient irrigation techniques.	The Agency NFU ADAS								

Constraints: The primary constraint of waste minimisation is one of cost - in, for example, introducing more efficient manufacturing processes, better identification the true level of waste production from industry and introducing better recycling initiatives. Lack of markets for recycled waste materials is a major constraint to furthering this waste management option.



The River Brock

Issue 17 IMPACTS OF NEW DEVELOPMENT ON FLOOD DEFENCES

The Wyre catchment is heavily dependent for flood defence on man made systems, which have been in place for many years. Defence standards are optimal rather than generous and are constantly under threat from new development and changes in land use and farm practice.

The Agency is limiting the effects of new development by requiring surface water run off rates to be at a level which does not exceed existing. Advice is available on acceptable rates and alternative drainage methods. Restriction of run-off can be achieved by the use of Best Management Practices (BMP's). The Agency is promoting the use of these techniques, such as "source control", (e.g. storage ponds and porous surfaces to car parks).

The Development pressure in the upper catchments could reduce the effectiveness of two of the areas main flood control structures, the Garstang and Catterall flood basins. There is pressure on the use of land right up to the bank edge of the flood defences in Garstang, St. Michael's, Preesall and Poulton, thus limiting access for essential maintenance.

Studies on flood risk at various sites have been commissioned over the next 5 years to aid Agency and the Planning Authorities formulate clear and concise development planning policy. Studies due in the plan period are:-

Coastal and tidal flood risk areas.

Main Dyke - Poulton.

Horsebridge Dyke - Poulton.

Royles Brook - Thornton.

Woodplumpton Brook - Catforth

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/98	98/99	99/00	00/01	01/02	FUTURE
		LEAD	OTHER							
Impact of new development on flood defences.	Inform Local Authorities of flood risks during strategic planning process.	The Agency	LA	£90K						
	Promote the use of 'source control' to limit rates and volumes of run-off.	The Agency	LA	R						

Constraints: Co-operation of LA.



Garstang Flood Basin in operation.

Issue 18 LOSS OF WATER POWER MILLS AS A LANDSCAPE HERITAGE FEATURE

Where watercourses remain unmodified water power mills still exist. This is true for Brock Mill, Caldervale Sandholme Mill, Oakenclough and Corless which have existed since the industrial revolution. Present day maps show the number of mill sites distributed over the Rivers Brock, Wyre and Calder to be 4, 5 and 5 respectively, though it is likely that there were many more. Currently these sites are not listed under Town & County Planning legislation. Therefore an investigation into the full extent of these sites is necessary to ensure that developers are aware of their existence and features and interests recognised.

ISSUE	ACTIONS	RESPONSIBILITY		ESTIMATED COST	97/	98/	99/	00/	01/	FUTURE
		LEAD	OTHER		98	99	00	01	02	
Loss of water power mills as a landscape heritage feature.	Undertake a feasibility study to identify the heritage significance of water power sites on the River Wyre and Brock upstream of Garstang.	LCC English Heritage	The Agency	£10K						

Constraints: Lack of knowledge of site locations.

5 Protection through Partnership

5.1 Introduction

Much of the day to day work of the Agency is aimed at protecting the environment through education, prevention and environmental improvement. However, the Agency recognises that it is not the only body operating in the field of environmental protection and improvement and that our responsibilities and interests, in some cases, often overlap with those of other organisations.

The Agency actively encourages work with partners to achieve environmental protection and improvements. Much of this co-operation goes on at a day to day level between officers of various organisations. In some cases the Agency does not get involved in more formal partnerships and some of those which are relevant to this LEAP area are outlined below.

Morecambe Bay Conservation Group

This is an informal group organised through Lancaster City Council and is intended to focus public attention on the conservation value of the bay.

The Morecambe Bay Strategy

This is intended to be the foundation of a partnership between the users and regulators of Morecambe Bay. The strategy has been prepared by Local Authorities and English Nature working with local people and organisations in accordance with Government guidance.

Flood Warning Zones

The Agency, in co-operation with the County Council's Emergency Planners, the Local Authorities and the Police, have set up flood warning procedures covering the whole coastline and specific inland areas on the River Wyre at Scorton, Garstang and St. Michael's.

Wyre Salmon and Sea Trout Restoration Group (WSSRG)

A partnership consisting of local angling clubs, riparian owners and the Agency. Formed in 1994 the group was created to improve the Wyre migratory salmonid fishery.

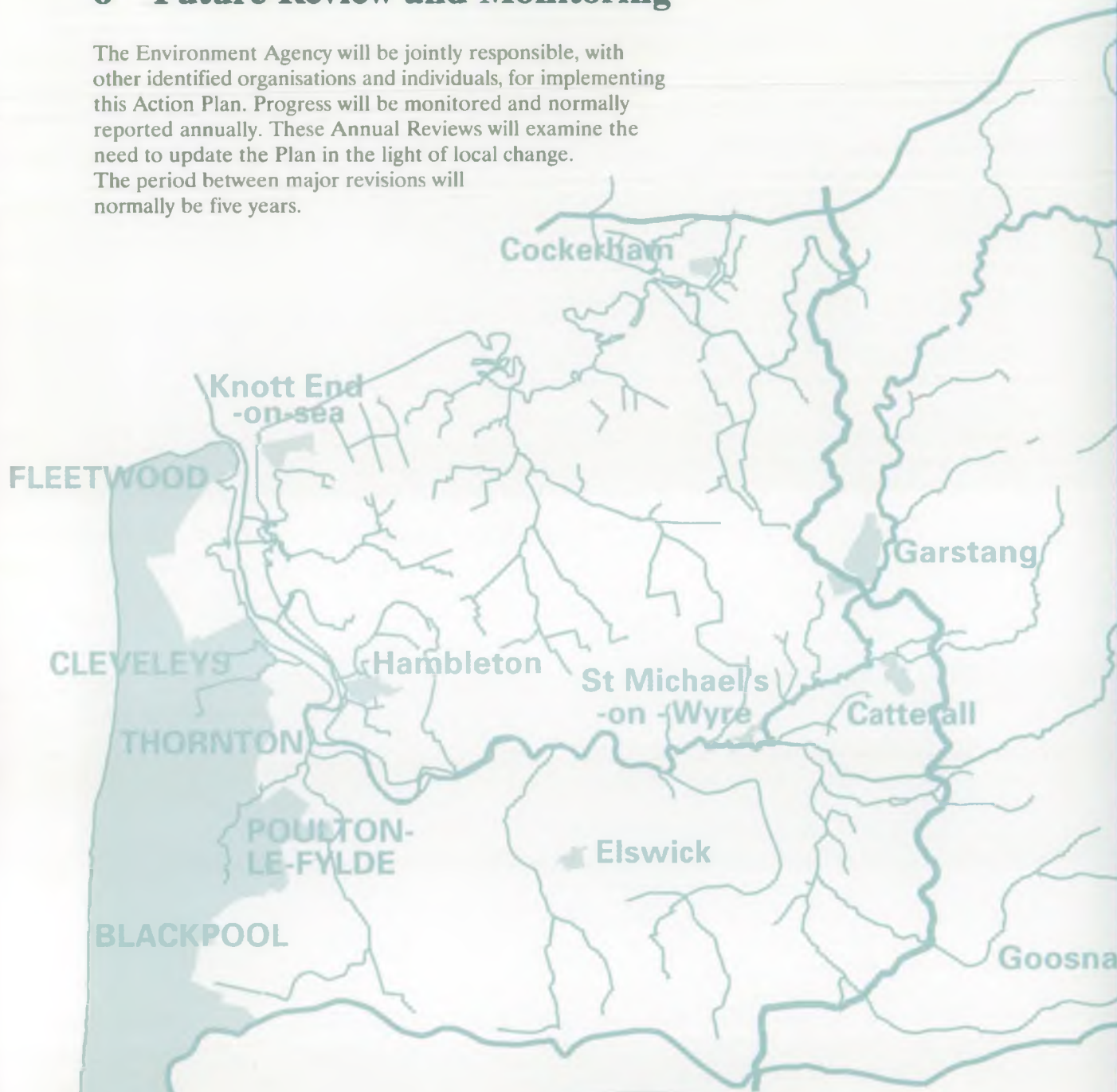
Lune and Wyre Fisheries Association

Quarterly meetings are held to discuss fishery issues in the Wyre and Lune catchments.

There are many other partnership organisations which the Agency liaises with whenever appropriate. These organisations were listed in the Wyre Consultation Report published April 1997.

6 Future Review and Monitoring

The Environment Agency will be jointly responsible, with other identified organisations and individuals, for implementing this Action Plan. Progress will be monitored and normally reported annually. These Annual Reviews will examine the need to update the Plan in the light of local change. The period between major revisions will normally be five years.



future review
&
monitoring

Appendix 1: List of Respondents

Association of Cruising Enthusiasts (Lancaster Canal)

The Agency expresses thanks for comments received. The Agency considers that improvements in water quality on the canal are of a long-term nature. The canal's importance as a protective area for wildlife wetland habitat is implicit as part of its designation as a Biological Heritage Site. The archaeological heritage of built development associated with the canal is the responsibility of British Waterways as is provision of boaters concerns.

Black Moss Fly Fishing Association

The Agency expresses thanks for the additional information.

Blackpool and Fleetwood Yacht Club

The Agency thanks the Yacht Club for its comments and takes notes of its interest in the plan.

Blackpool Borough Council - Chief Executive

The Agency welcomes the support expressed by the Chief Executive particularly in relation to Bathing Water Directive Standards.

The British Association for Shooting and Conservation Limited

Although the Association does not concern itself with issues relating to the Wyre catchment the Agency nevertheless expresses thanks to it for circulating the Consultation Report to affiliated clubs, therefore widening the network of organisations who can express an interest in the catchment issues.

British Waterways

The Agency expresses thanks to BW for its comments.

Major Fitzherbert-Brockholes

The Agency expresses thanks for the interest shown and notes the comments made.

Canatxx Energy Ventures Limited

The Agency accepts the validity of comments made regarding the colonisation of Spartina within the saltmarsh areas, but as an issue it has low priority due to financial constraints. The saltmarsh areas are designated SSSI's, therefore responsibility falls, in part, to English Nature.

Clitheroe Canoe Club

The Agency welcomes the support expressed for the canoe trail. Also, the Agency considers that progress is likely to be made by round-the-table discussions aiming to broker an agreement.

Clitheroe Scout and Guide Canoe Club

The Agency welcomes the support expressed relating to the canoe trail and will contact the Canoe Club prior to setting-up any future meetings.

Countryside Commission

The Agency expresses thanks for the comments made relating to Issues 2 and 4.

Elswick Parish Council

The Agency expresses thanks for comments and indication of future involvement.

English Sports Council

The Agency accepts that the possibility of a Wyre Barrage would require an Impact Assessment. The Agency also notes the importance to sailing as a sports benefit of The Blackpool and Fleetwood Yacht Club.

Mr. E.M. Fail - County Councillor, Lancashire County Council

The Agency expresses thanks for comments made.

Appendix 1: List of Respondents (continued)

The Forestry Authority - North West England Conservancy

The Agency recognises that this organisation can play a positive role in future partnerships and would wish to involve the Authority in any relevant future projects.

Freshwater Biological Association

The Agency expresses thanks for the comments made.

Friends of the Earth - North Lancs.

The Agency expresses thanks for the comments made.

Garstang Canoe Club

The Agency welcomes the support expressed relating to the canoe trail and other comments made.

Geraghty and Miller International, Environmental Services

The Agency expresses thanks for comments made.

H.M. Coastguard - Fylde Sector Office

The Agency expresses thanks for the information received.

D.G. Halford - Garstang T.C.

The Agency notes the comments made relating to landspreading of sewerage waste.

Hambleton Parish Council

The Agency welcomes the comments made and notes the concern expressed.

Hawk and Owl Trust

The Agency expresses thanks for the additional information provided.

Mr. J. Hodges - Nether Wyresdale Parish Council

The Agency recognises the importance of tourism to the economy of the catchment. The Agency is also aware of the impact this has on the environment. In view of this impact the Agency supports in principle Lancashire County Council's Green Tourism Policy. The issue of collection of litter is solely the responsibility of the Local Authority.

Councillor E.D. Horrocks - Wyre Borough Council

The Agency expresses thanks for the comments made. In relation to unsatisfactory CSO's the work programme is decided by priority taking into account the financial constraints placed by OFWAT on NWW Ltd.

Inland Waterways Association

The Agency expresses thanks for the additional information provided relating to the influence of navigable waters and their interface with watercourses. It has to be pointed out that in a Consultation Report there is not enough room in which all information can be mentioned. The Agency is aware of the importance of the Lancaster Canal but again the report does not allow enough room for this to be included. The figures relating to licensed boats and day/boat movements were supplied by British Waterways. The upper reaches of the canal to Kendal are outside the plan area.

The Right Hon. Michael Jack MP

The Agency expresses thanks for comments made.

Lancaster and District Canoe Club

The Agency welcomes the support expressed for the canoe trail and will contact the organisation in the near future.

Appendix 1: List of Respondents (continued)

Lancashire Outdoor Activities Initiative

The Agency welcomes the expression of support for the canoe trail. In order to reach agreement between the various interested parties a “round-the-table” discussion will be arranged in the near future.

Lancaster Canal Trust

The Agency expresses thanks for comments made.

Lancashire County Council

The Agency is continually looking to develop wetland habitat creation as part of its on-going work. In addition discussions between the Agency and RSPB are starting regarding the possibility of developing and or establishing new wetland habitats. The Agency will on a case-by-case basis take note of the value of any historic site in relation to future work.

Lancashire Wildlife Trust

Local plan policies, and planning conditions, are routinely used to protect Biological Heritage Sites, and as far as possible, in conserving pond habitat.

Mr. D. Maginn

The Agency expresses thanks for comments made. In relation to banger racing the Agency has no jurisdiction over the area concerned and therefore can not initiate legal action.

Mersey Basin Trust

The Agency expresses thanks for the additional information provided.

Ministry of Agriculture, Fisheries and Food

The Agency expresses thanks for comments made and the additional information provided.

Morecambe Bay Tourism - Lancaster City Council

The Agency expresses thanks for comments made.

Morecambe Bay Wildfowlers Association

The Agency expresses thanks for comments made and additional information provided.

Mr. F. Moreland - WSSRG

The Agency acknowledges the query made at the consultation day. The Agency understands the Fisheries interests in the catchment area and the concerns expressed over the increase of canoeists in the River Wyre at Garstang. However, the Agency has a responsibility to consider all recreational users but is also of the view that a “round-the-table” discussion may be the best way to resolve the situation.

Mr. Moorland - Garstang and District Angling Association

The Agency notes the comments made.

National Farmers Union - North West Region

The Agency expresses many thanks for the useful comments made. In relation to points raised in the correspondence the Agency considers that a discussion in the near future may be the best option to resolve the situation.

National Pure Water Association

The Agency expresses thanks for comments made and welcomes the circulation of the Consultation Report to a wider network.

National Trust

The Agency expresses thanks for the additional information received.

Appendix 1: List of Respondents (continued)

North Western and North Wales Sea Fisheries Committee

The Agency notes the comments made and expresses thanks for the additional information provided.

North West Water Ltd.

The Agency expresses thanks for comments made which have been noted.

Outdoor Adventure Group

The Agency welcomes the expression of support for a canoe trail.

The Ramblers - Lake District Area

The Agency expresses thanks for comments made.

The Ramblers - Mid Lancashire Area

The Agency expresses thanks for comments made and for the provision of additional information.

Shoreline Management Partnership

The Agency expresses thanks for comments made.

Ms. J.M. Robinson-Southward

The Agency welcomes the comments made relating to ponds and closed landfill sites.

Stalmine - with - Staynall Parish Council

The Agency expresses thanks for comments made and the expression of support for Issue No.7.

Mr. C. Stanfield - Myrescough College

The Agency expresses thanks for information provided.

Timber Growers Association Ltd. - North England

The Agency welcomes the comments made and recognises the potential value of future involvement.

Wildlife and Wetlands Trust

The Agency is looking at the re-instatement of flood meadows as part of the solution to Issue No.2.

Mr. M. Woombs - Knott End Sea Centre

Morecambe Bay SAC is the responsibility of English Nature, but the Agency is continually interested in this area as part of its normal responsibilities.

Wyre Anglers

The Agency has taken note of comments made.

Wyre Borough Council - Councillor G. McCann, Preesall Ward

Wyre Borough Council - Countryside Department

Wyresdale Anglers - A.D. Appleton, Honorary Secretary

The Agency understands the fisheries interests in the catchment area and the concerns expressed over the increase in canoeists in the River Wyre at Garstang. However, the Agency has a responsibility to consider all recreational uses. The Agency is of the view that a "round-the-table" discussion may be the best way to resolve the situation.

Appendix 2: Erratum for the Consultation Report

1. Issue 8 - "Impact of discharges from combined sewer overflows". An unsatisfactory overflow discharging to a tributary of Woodplumpton Brook was omitted by mistake from the list in the consultation report.
2. Short to medium Term RQOs - Map 20. Sparring Brook was incorrectly shown as complying with RE3 in the Consultation Report. This reach is marginally failing to meet RE3 and an objective of RE3 (1999) is now proposed.
3. EC Water Quality Objectives - page 71 of Consultation Report. Reference to the Surface Water Abstraction Directive, which specifies standards for the quality of water abstracted for use as drinking water and which has implications for water quality within the Wyre area, was omitted by mistake.
4. River Ecosystem Classification - Water Quality Criteria - standards for dissolved copper and total zinc should have been in microgrammes/litre not milligrammes/litre.
5. General Quality Assessment (GQA) - Chemical Grading for Rivers and Canals - 90 percentile standards for ammonia should apply as follows:

Class A	0.00 - 0.25 mg/litre
Class B	0.25 - 0.60 mg/litre
Class C	0.60 - 1.30 mg/litre
Class D	1.30 - 2.50 mg/litre
Class E	2.50 - 9.00 mg/litre
Class F	>9.00 mg/litre

6. Removal of Issues contained in the Consultation Report from this Action Plan:

Issue 11 - "Impact of ICI Hillhouse on the environment". After further consideration the Agency decided that there were no problems requiring resolution within the period of this Action Plan.

Issue 18 - "Landspreading of controlled waste". This was deleted because the Agency considered that any potential problems arising from this activity can be addressed as part of Issue 10 "Failure to comply with Water Quality Objectives due primarily to agricultural activities".

Issue 19 "The environmental impact of closed landfill sites" has been combined with Issue 16 "Impact of contaminated land on the environment". The new combined issue is now re-numbered as Issue 15.

Appendix 3: Glossary

AONB

Area of Outstanding Natural Beauty, notified by the Countryside Commission.

County Biological Heritage Sites

A network of County-designated sites which are of special value in terms of their contribution to the biological diversity of the county. A full list can be obtained from the Lancashire Wildlife Trust, or the County Ecologist.

Coarse Fish

See FRESHWATER FISH, CYPRINIDS, SALMONIDS.

County Structure Plans

Statutory documents produced by County Councils outlining their strategy for development over a 10-15 year timescale.

Cyprinids

Fish of the carp family. (See also COARSE FISH, FRESHWATER FISH, SALMONIDS).

Local Plans

Statutory documents produced by Borough or City Councils to implement the development strategy set out in County Structure Plans. Specific land use allocations are identified.

Freshwater Fish

For the purposes of the Salmon and Freshwater Fisheries Act 1975, fish other than salmon, brown trout, sea trout, rainbow trout and char (see also COARSE FISH, FRESHWATER FISH, SALMONIDS).

Hectare

Unit of area 100m x 100m, equal to 2.471 acres.

Potable Water Supply

Water supplied for domestic use, including human consumption.

Ramsar Site

A wetland site of international significance for conservation, notified under international treaty.

Residual Flow Conditions

Levels below which water abstraction cannot be taken. These are set to protect the rivers.

SAC

Special Area of Conservation. A European legislation classification.

Salmonids

Fish classified by the Salmon and Freshwater Fisheries Act 1975 as belonging to the salmon family - salmon, brown trout and char. (Summer-spawning salmonid species such as grayling are classified by the Act as Freshwater Fish). (See also COARSE FISH, FRESHWATER FISH, CYPRINIDS).

SPA

Special Protection Area. A European legislation classification.

SSSI

Site of Special Scientific Interest. A site designated by English Nature as being in need of protection to conserve its outstanding ecological or geological features. Land use and management operations within SSSIs are subject to control.

WwTW

Wastewater Treatment works.

Appendix 4: River Quality Objectives

The Environment Agency uses strategic targets known as River Quality Objectives (RQOs) for all classified rivers and canals. RQOs provide a basis for water quality management decisions and are based on the River Ecosystem Classification Scheme. This scheme comprises five quality classes which reflect the chemical quality requirements of different types of river ecosystems.

The Consultation Report (April 1997) proposed short-to-medium term and long term RQOs. A similar consultation exercise was carried out by the former North West Water Authority in 1979. The RQOs proposed in the Wyre Consultation Report were largely a translation of the water quality objectives which were set out in 1979. The only change arising from the consultation period applies to Sparring Brook. A short-to-medium term objective of River Ecosystem Class 3 (RE3) to be met by the year 1999 has now been set. This river was incorrectly shown as already complying with RE3 in the Consultation Report. Confirmed objectives are tabulated overleaf.

Short-to-medium term objectives reflect the improvements which it is envisaged can be brought about over the next five year period. Long term objectives reflect the vision for the Wyre Area in terms of water quality which the Agency is working to achieve in a 25 year period.

Confirmed River Quality Objectives (RQOs)

River	Reach	RQO Short Term	RQO Long Term	Present Status
Wyre	Brock to FWL (6.0km)	RE3	RE2	Complying with RE3 significantly failing to meet RE3
Wyre	Garstang STW to Brock (2.7km)	RE3	RE2	Complying with RE3 marginally failing to meet RE2
Wyre	Below Garstang to Garstang STW (2.6km)	RE2	RE2	Complying with RE2
Wyre	QSL at Hare Syke to below Garstang (28km)	RE2	RE1	Complying with RE2 significantly failing to meet RE1
Hillylaid Pool	Royles Brook to FWL (0.5km)	RE5	RE4	Complying with RE5 significantly failing to meet RE4
Hillylaid Pool	QSL Breedy Butt to Royles Brook (2.9km)	RE5	RE4	Complying with RE5 significantly failing to meet RE4
Royles Brook	ICI Complex to Hillylaid Pool (0.1km)	RE5	RE4	Complying with RE5 significantly failing to meet RE4
Royles Brook	QSL at A585 to ICI Complex (2.4km)	RE5	RE4	Complying with RE5 significantly failing to meet RE4
Main Dyke	Staining PS to FWL (7.7km)	RE5	RE4	Complying with RE5 marginally failing to meet RE4
Main Dyke	QSL below Marton Mere to Staining PS (1.3km)	RE4	RE4	Complying with RE4
Trib. of Main Dyke	QSL at Weeton STW to Main Dyke (1.9km)	RE5	RE4	Complying with RE5 marginally failing to meet RE4

Confirmed RQs (continued)

River	Reach	RQO Short Term	RQO Long Term	Present Status
Thistleton Brook	QSL at Elswick STW to FWL (3.4km)	RE5	RE4	Complying with RE5 marginally failing to meet RE4
Lords Brook	SD 465 398 to Wyre Estuary (2.8km)	RE5 (1999)	RE4	Marginally failing to meet RE5 significantly failing to meet RE4
Lords Brook	QSL Stanley Lodge to SD 465 398 (7.4km)	RE5 (1999)	RE4	Marginally failing to meet RE5 significantly failing to meet RE4
Brock	M6 to River Wyre	RE2	RE2	Complying with RE2
Brock	QSL at Bleasdale to M6	RE2	RE2	Complying with RE2
New Draught Brook	Barton Brook to Brock (3.7km)	RE3 (1999)	RE3	Marginally failing to meet RE3
Woodplumpton Brook	Swill Brook to Barton Brook (3.1km)	RE4	RE3	Complying with RE4 significantly failing to meet RE3
Woodplumpton Brook	A6 Broughton to Swill Brook (5.3km)	RE4	RE3	Complying with RE4 significantly failing to meet RE3
Woodplumpton Brook	QSL Withy Trees to A6 Broughton (5.8km)	RE5	RE3	Complying with RE5 significantly failing to meet RE3
Old River Brock	QSL Bacchus Brook to New Draught Brook (3.3km)	RE5	RE4	Complying with RE5 marginally failing to meet RE4
Barton Brook	Barton STW to New Draught Brook (5.3km)	RE3 (1999)	RE3	Marginally failing to meet RE3
Barton/Westfield Brook	QSL Brook Farm to Barton STW (8.3km)	RE3 (1999)	RE3	Marginally failing to meet RE3
Sparring Brook	QSL Silk Mill Bridge to Barton Brook (2.5km)	RE3 (1999)	RE3	Marginally failing to meet RE3
River Calder	QSL Oakenclough Weir to Wyre (8.9km)	RE2 (1998)	RE2	Significantly failing to meet RE2
Grizedale Brook	QSL Grizedale Reservoir to Wyre (2.8km)	RE2	RE2	Complying with RE2
Foxhouses Brook	QSL above Lordhouse Brook to Wyre (1.8km)	RE2 (1998)	RE2	Marginally failing to meet RE2
Damas Gill	QSL Upper Greenbank to Wyre (1.7km)	RE2	RE2	Complying with RE2

Confirmed RQOs (continued)

River	Reach	RQO Short Term	RQO Long Term	Present Status
Catshaw Greave	OSL Blind Clough to Wyre (1.4km)	RE2	RE2	Complying with RE2
Marshaw Wyre	QSL Trough Road to Wyre (4.6km)	RE2	RE2	Complying with RE2
River Grizedale	QSL Grizedale Barn to Wyre (1.7km)	RE2*	RE1*	Complying with RE2 marginally failing to meet RE1
River Cocker	Lee Brook to FWL (1.9km)	RE4 (1998)	RE4	Marginally failing to meet RE4
River Cocker	Potters Brook to Lee Brook (6.5km)	RE3	RE3	Complying with RE3
River Cocker	QSL Hole of Ellel Bridge to Potters Brook (2.6km)	RE4	RE3	Complying with RE4 marginally failing to meet RE3
Park Lane Brook	QSL at Patten Arms to Cocker (1.4km)	RE3	RE3	Complying with RE3
Potters Brook	QSL at Forton STW to Cocker (0.6km)	RE5	RE3	Complying with RE5 significantly failing to meet RE3
Broad Fleet	Pilling STW to Tidal Sluice (0.4km)	No Class	RE4	Significantly failing to meet RE5 significantly failing to meet RE4
Pilling Water	QSL at Bone Hill to Pilling STW (4.4km)	RE4 (1997)	RE4	Marginally failing to meet RE4
Ridgy Pool	QSL Birks Farm to Pilling Water (3.5km)	RE4 (1997)	RE4	Marginally failing to meet RE4
Lancaster Canal	Catterhall to confluence near Galgate (15.5km)	RE4	RE3	Complying with RE4 marginally failing to meet RE3
Lancaster Canal	Swillbrook to Catterhall (11.9km)	RE4*	RE3*	Complying with RE4 marginally failing to meet RE3

* = derogation applied for pH or BOD

Appendix 5: Air Quality Monitoring Sites

Air quality monitoring sites exist within and adjacent to the Wyre area at the following locations:

	Location	Determinand
Blackpool Borough Council	Junction off Devonshire Road/Caunce Street	Sulphur Dioxide
Preston Borough Council	Town Hall at Lancaster Road	Sulphur Dioxide Nitrogen Oxides
Lancaster City Council	4 sites in Lancaster	Sulphur Dioxide Nitrogen Dioxide Ozone
	2 sites in Morecambe	Nitrogen Dioxide
Fylde Borough Council	4 sites in Lytham	Nitrogen Dioxide

Further details of air quality monitoring can be obtained from these Local Authorities.

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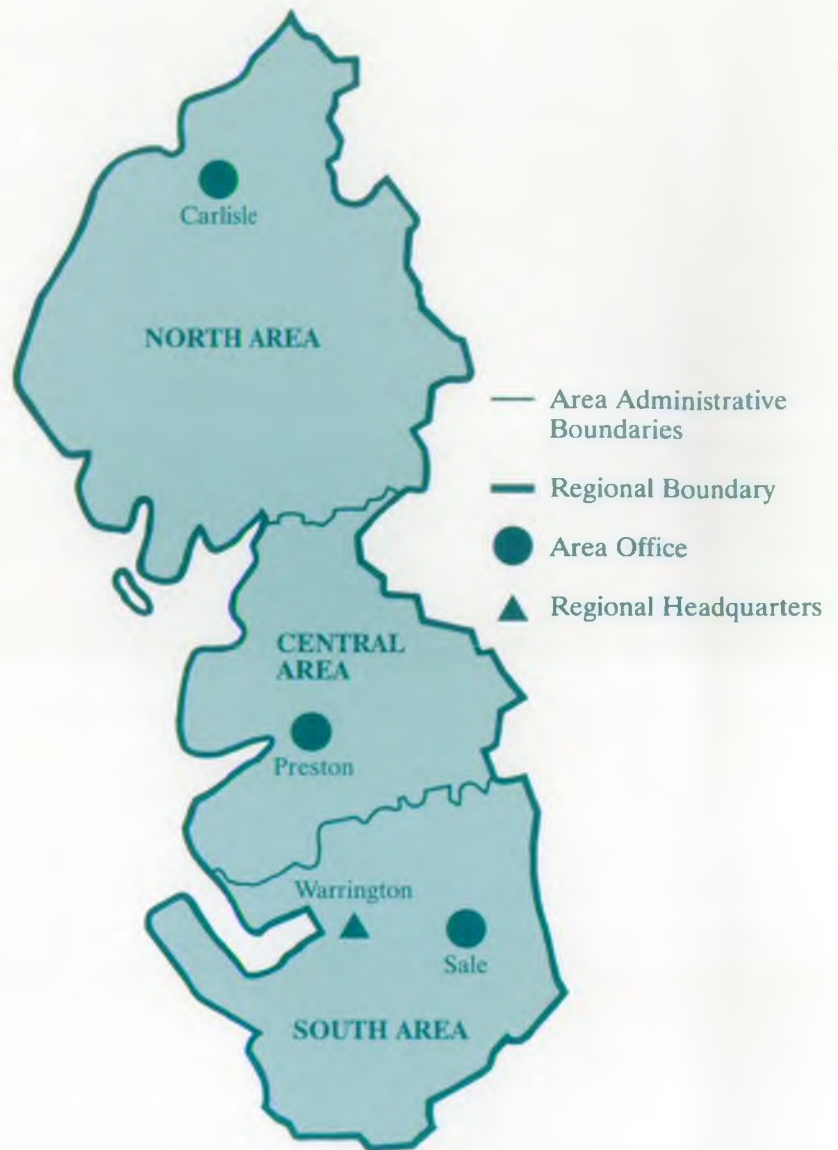
Environment Agency
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Tel: 01228 25151
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CENTRAL AREA

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Carrington Lane
Sale M33 5NL
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For general enquiries please call your local Environment Agency Office. If you are unsure who to contact, or which is your local office, please call our general enquiry line.

**ENVIRONMENT AGENCY
GENERAL ENQUIRY LINE**

0 6 4 5 3 3 3 1 1 1

The 24-hour emergency hotline number for reporting all environmental incidents relating to air, land and water.

**ENVIRONMENT AGENCY
EMERGENCY HOTLINE**

0 8 0 0 8 0 7 0 6 0



**ENVIRONMENT
AGENCY**

local environment agency plan

WYRE

ACTION PLAN

1997 - 2002

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