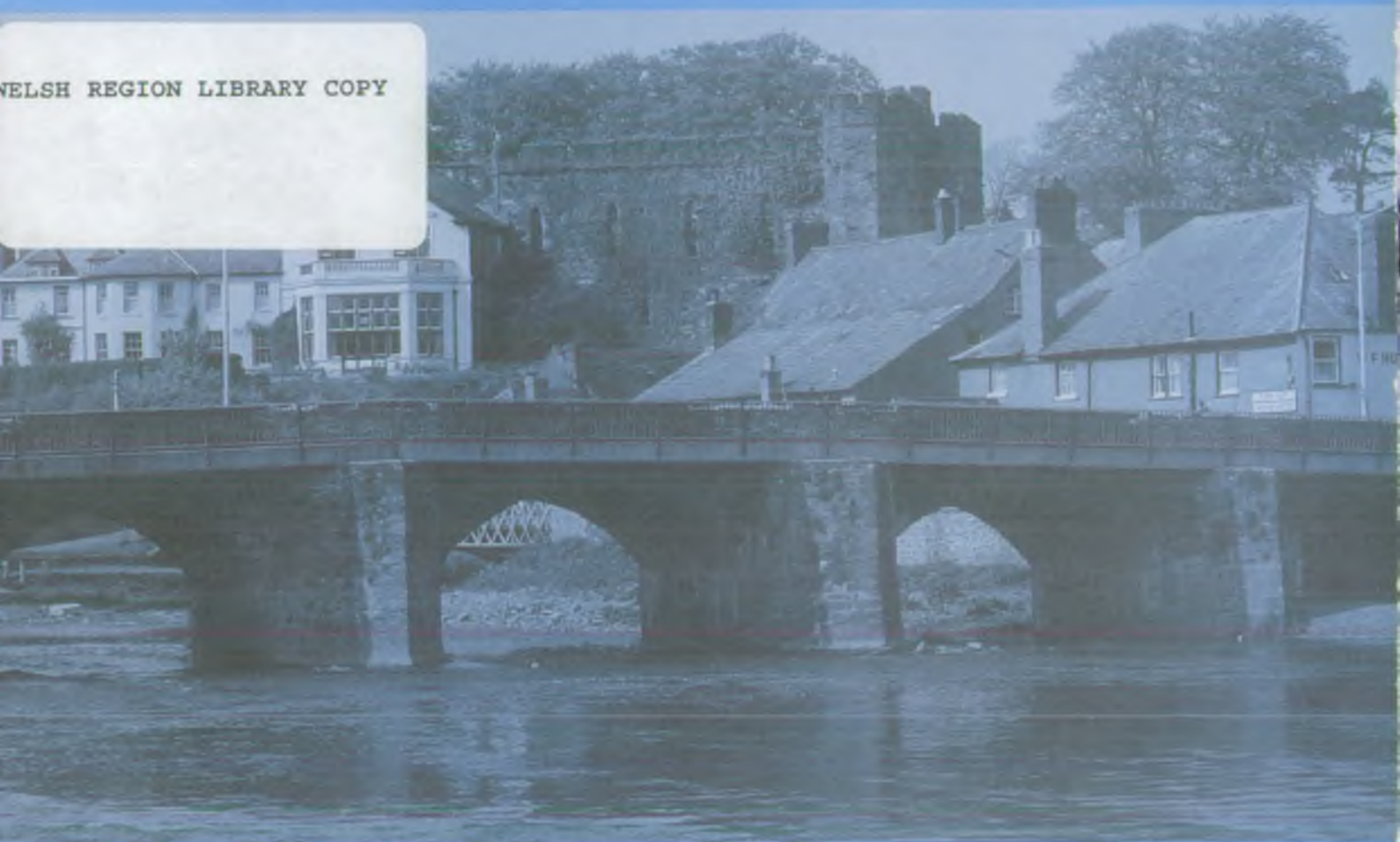


USK CATCHMENT MANAGEMENT PLAN ACTION PLAN: 1996

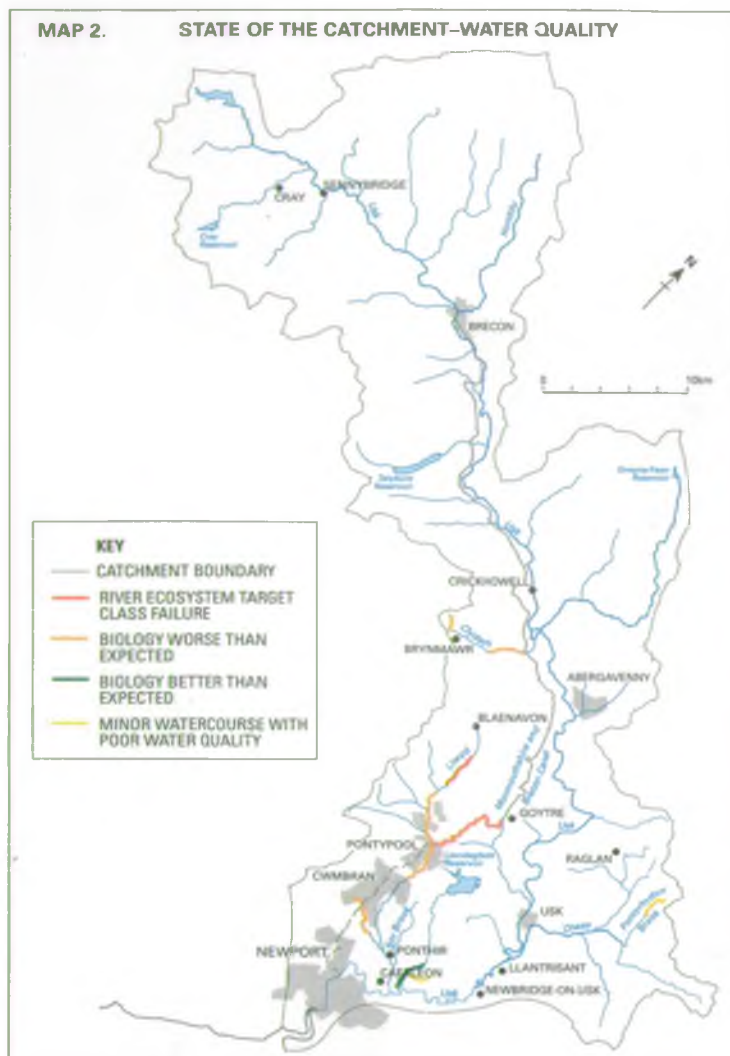
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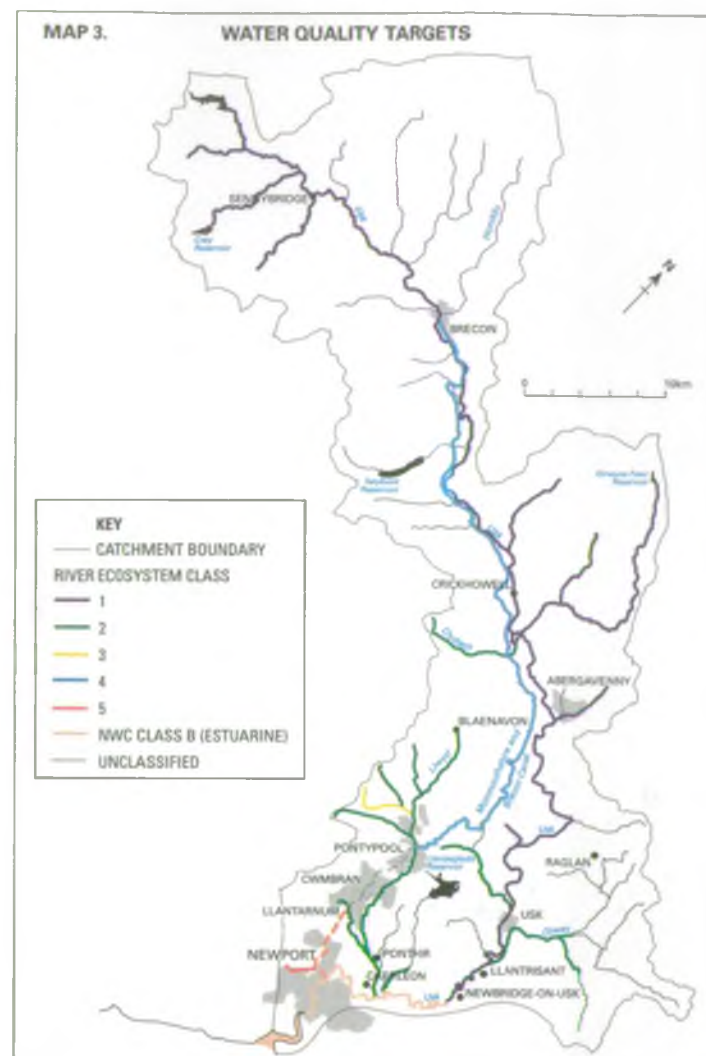
NRA

*National Rivers Authority
Welsh Region*

MAP 2. STATE OF THE CATCHMENT-WATER QUALITY



MAP 3. WATER QUALITY TARGETS

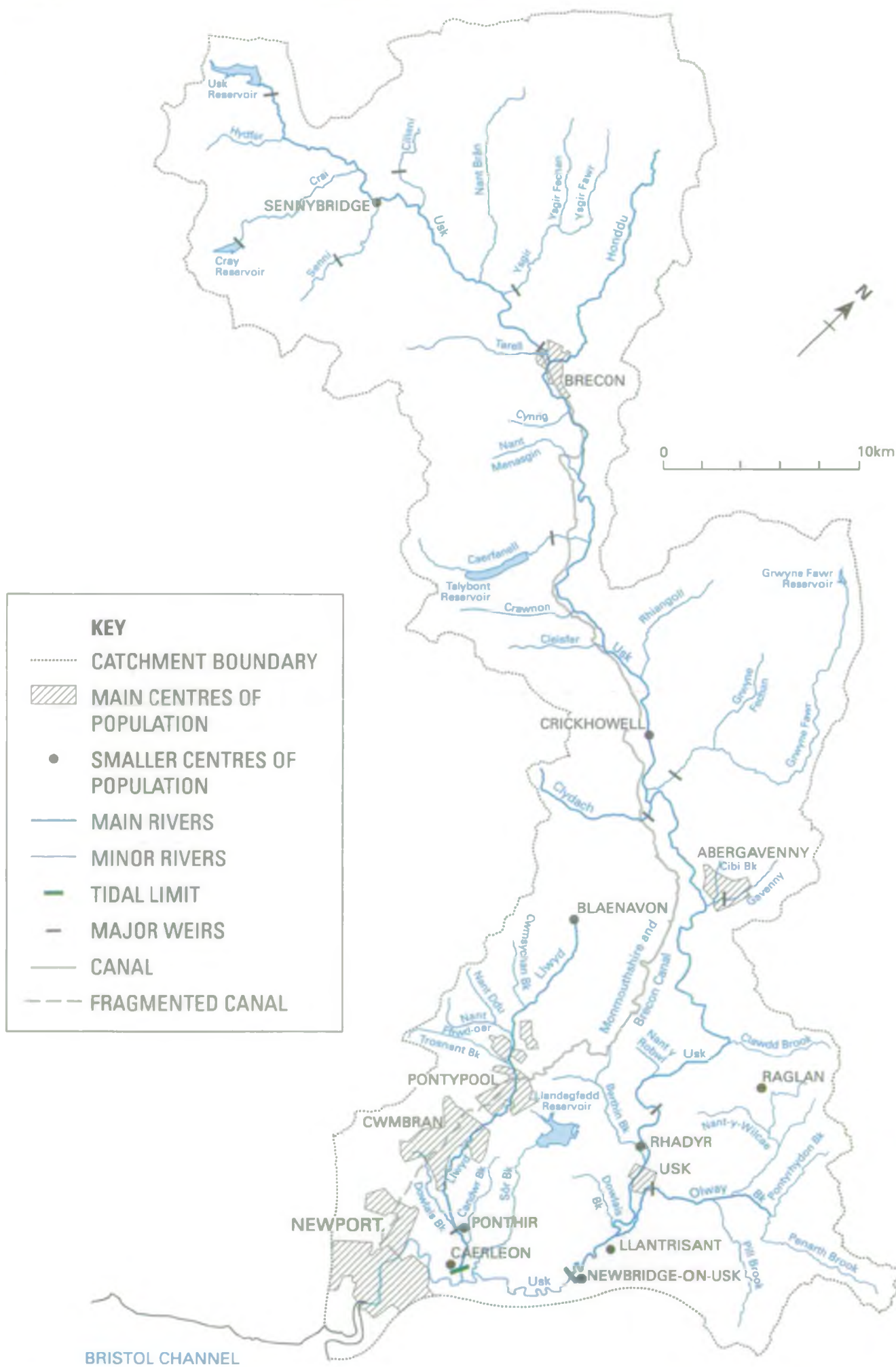


KEY STATISTICS FOR THE USK CATCHMENT

<i>Catchment Area:</i>	1358 km ²	
<i>Highest Point:</i>	886m (Pen-y-fan on the Brecon Beacons)	
<i>Population:</i>	<i>Year:</i>	<i>Population:</i>
	1991	236,445
	2021	254,592 (predicted)
<i>Length of Statutory Main River:</i>		252km
<i>Average Daily Flow:</i>	Usk	2750 megalitres per day
	Llwyd	270 megalitres per day
<i>Gross Licensed Abstraction:</i>		2103 megalitres per day

MAP 1.

USK CATCHMENT



THE AREA MANAGER'S VISION FOR THE USK CATCHMENT

The Usk catchment is one of extraordinary contrasts: the mountainous landscape of the Brecon Beacons and the lowland plains and estuarine area around Newport; the rural character of much of the River Usk valley and the highly populated and industrialised Afon Lwyd valley; the man-made channel of the Monmouthshire and Brecon Canal and the fast flowing headwaters of the River Usk as well as the daily changes experienced by an estuary with the second highest tidal range in the world.

These many and varied features allow the catchment to support a range of uses such as farming, forestry, water supply, industry and tourism. The rivers and canal provide many opportunities for recreation, including angling and canoeing, walking and bird-watching. The catchment offers a habitat for many rare plants and animals, including otters, little ringed plovers, twaite and allis shad, sea and river lamprey, bullhead, freshwater crayfish, invertebrates and lichens.

The National Rivers Authority's task is to seek to balance these uses now and in the future. Our main aim is to achieve a sustainable use of the catchment and our key objectives are:

- To seek continued improvements in the water quality of the Usk and its tributaries wherever possible, in particular by encouraging the improvement of combined sewer overflows and lobbying the Government to produce a strategy for the control of discharges from abandoned mines.
- To ensure that utilising the natural capacity of the river to dispose of treated effluents does not result in a loss of the river's ecological and fishery potential.
- To ensure that development proposals in the catchment have no detrimental effect on the water environment and flood protection. Close liaison with developers and contractors is essential, particularly in the Afon Lwyd catchment.
- To maintain the importance of the Usk catchment as a major source of water throughout South Wales and to investigate, and if necessary diminish, the effect of the abstractions upon the water environment.
- To maintain and improve flood defences, in order to protect people and property. To ensure that duration of floods is minimised and land drainage facilities are maintained.
- To improve the River Usk's spring salmon and wild brown trout fishery with runs and catches of salmon meeting targets consistent with ideal breeding levels. To sustain healthy coarse fish, eel and the important shad populations.
- To maintain and improve the conservation value of the catchment by advising, encouraging and collaborating with landowners.
- To advise and assist riparian owners, and those who depend upon the river, in the daily management of the catchment.
- To ensure that all those who wish to use the catchment for recreational purposes can enjoy doing so with the mutual respect and consideration of others.

The views of local people and their representatives will be respected. We will need the help of the local communities and hope to build upon existing relationships and develop new ones in pursuing these goals. Through close liaison, regular reporting on our progress and our determination to fulfill our role we intend to maintain the impetus for action in the Usk catchment.

Alun S. Gee

AREA MANAGER

Cover picture: River Usk at Brecon (Courtesy of Wales Tourist Board)



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INTRODUCTION

The rivers, lakes, estuaries and coastal waters of Wales are subject to large and rapidly increasing demands from the users of water. Many different uses interact or compete for water or water space, and will inevitably come into conflict with one another. The National Rivers Authority aims to protect and improve the water environment in England and Wales and to harmonise conflicts between competing water users. Our Mission Statement expresses the following principles:

"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 those principles into action. The Action Plan is a strategic policy framework for the management of the catchment and is produced after we have considered the comments received on the Consultation Plan. It includes an action plan to achieve the vision for the Usk Catchment and will form the basis for improvements to the water environment

by outlining the areas for work and investment proposed by the NRA and others. The Action Plan primarily covers the five year period from 1996/1997 to 2000/2001. A number of the projects may take longer owing to funding availability and government policy. The Region will formally adopt the proposals in the Action Plan.

The plans also provide the means of promoting two key aspects of environmental management - land use planning and water quality objectives.

RELATIONSHIP BETWEEN LAND USE PLANNING AND CATCHMENT MANAGEMENT PLANNING

The broad objective of catchment management planning is to conserve and enhance the total river environment through effective land and water resource management. However, while the NRA is a statutory consultee under the General Development Order and our role is further supported by Government circulars, planning decisions are ultimately the responsibility of local planning authorities.

The policies in statutory Development Plans are important in this regard as they set out the framework for land use change and provide the key rules in determining development applications; the NRA actively pursues the inclusion of policies which go hand in hand with its responsibilities.

As guidance for local authorities, the NRA has prepared a set of statements relating to the broad headings of water quality and water resources, flood defence, fisheries, conservation, recreation and navigation in the river corridor, with regard also to mineral workings and waste disposal. These statements summarise the NRA's "Guidance Notes for Local Planning Authorities on Methods of Protecting the Water Environment through Development Plans".

This CMP Action Plan sets out issues and actions specific to this catchment which have been agreed within the framework of these Guidance Notes. Later in this plan we discuss how the concerns of the water environment should influence the location and nature of development and land use change within the catchment.

WATER QUALITY OBJECTIVES

The Statutory Water Quality Objectives (SWQO) scheme, introduced under the Water Resources Act 1991, is a new system for water quality planning

which will place quality targets on a statutory footing. The scheme is based upon the recognised uses to which a river stretch may be put and is consistent with the principles of CMPs. These uses will include River Ecosystem, Special Ecosystem, Abstraction for Potable Supply, Agricultural /Industrial Abstraction and Watersports.

At present, only the standards for the River Ecosystem Use have been developed on a formal basis and, as a result, this is the first SWQO Use to be introduced by the Government through the Surface Waters(River Ecosystem) (Classification) Regulations 1994. For each classified stretch within the Usk catchment a River Ecosystem Use Target Class has been proposed and this CMP Action Plan identifies, where appropriate, the actions required to achieve these targets. At present these targets will only be applied informally although it is hoped, in the near future, that they may be established as Statutory WQOs by the Secretaries of State for the Environment and Wales.

REVIEW OF THE CONSULTATION PROCESS

The NRA published the Usk Catchment Management Consultation Report in April 1995 seeking comment from all those interested in the water environment. The 8 week consultation period started with a presentation at the Angel Hotel, Abergavenny on 6th April 1995. After that date, information about the catchment and the consultation document were deposited in local libraries and council offices. Further copies have been sent to individuals and organisations who requested them.

The consultation aimed to obtain agreement on the catchment uses, environmental objectives and standards required and detailed comment on the issues and options in the document. As a result of the consultation process we are now able to publish this Usk Catchment Action Plan for the next 5 years.

Thirty-one letters (see Appendix 1) with detailed comments plus numerous questionnaire responses were received. All comments were noted and, where appropriate, there was further correspondence to clarify points. A number of local issues were raised in the course of the consultation procedure and these matters have been referred to the appropriate department for action. We would like to assure you that any factual errors will be corrected in the review document in 5 years time. The NRA welcomes the comments that have been received; several changes to the issues raised in the plan have been made as a consequence of consultation. These are detailed later in this document. The general support shown for many of the objectives set out in the Consultation Document is appreciated.

THE RIVER USK CATCHMENT AND ITS USES

THE CATCHMENT

This plan covers the main River Usk, the Afon Lwyd and the Monmouthshire and Brecon Canal. The River Ebbw and the coastal levels area will be dealt with in separate catchment management plans.



Courtesy of Wales Tourist Board

The River Usk

The River Usk rises on the northern slopes of the Black Mountains of Dyfed and flows through the picturesque landscape of the highest mountains in South Wales. Its headwaters and those of some major tributaries are contained within the Usk, Cray, Talybont and Grwyne Fawr reservoirs. At Brecon, the Monmouthshire and Brecon Canal begins its parallel path alongside the river until the floodplain widens at Abergavenny and the canal takes a separate course towards Pontypool where it crosses the Afon Lwyd and then fragments into unconnected sections. Meanwhile the river Usk continues via the town of Usk to join the Severn Estuary at Newport. The Afon Lwyd rises above Blaenavon and passes through the highly populated and industrialised areas of Pontypool and Cwmbran before joining the Usk estuary near Caerleon.

HYDROLOGY AND HYDROGEOLOGY

The climate is generally mild and wet, providing high yields for reservoirs in the Usk catchment. Rainfall is particularly high in the Brecon Beacons due to their altitude and proximity to the coast. The shelter provided by these mountains ensures that the inland areas behind receive markedly less rainfall.

Over most of the catchment, the groundwater contributions to the flow in the river are modest, emanating from the Devonian (Old Red Sandstone), the coal measures or from sand and gravels along the river channels. Because of this, the river levels fall quite rapidly during dry periods. The lowest flow was recorded during the 1976 drought.

Groundwater is a more important contributor on a local

scale in the Afon Lwyd and Clydach catchments. The Carboniferous Limestone underlying these tributaries is a major groundwater resource. It also adds many features to these valleys which are characteristic of the rock, including the Llangatwg Cave system and the Clydach Gorge. Springs here are much more numerous than elsewhere in the Usk, and consequently these rivers return relatively high flows in the summer months.

Water abstracted from the Usk at Brecon flows slowly along the Monmouthshire and Brecon Canal to discharge into the Lwyd at Pontypool.

CONSERVATION

There are a number of SSSI's, National Nature Reserves and County Trust Reserves within the catchment and the rural character and good water quality generally support a good flora and fauna. The Usk is very important for birds, invertebrates and fish. It supports major breeding populations of sandmartin, dipper and grey wagtail and also kingfisher, heron, common sandpiper and little ringed plover. The lower valley holds a range of wintering wildfowl, including Bewick's swan and small numbers of breeding redshank and lapwing. The river supports some highly specialised communities and rare species of invertebrates, freshwater crayfish and internationally important populations of twaite and allis shad, and river lamprey and bullhead. The otter population has recently shown signs of expansion and the rare, native black poplar is a feature of the valley.

The river Usk itself is currently in the process of being notified as an SSSI and is being considered for designation as a Special Area of Conservation under the EC Habitats Directive.



Kingfisher

Courtesy of R. Wainwright / KSP

FLOOD DEFENCES

The River Usk flows through low-lying agricultural land along much of its length from Brecon to the tidal limit at Newbridge-on-Usk. In the uplands, much of the rainfall runs rapidly off the Old Red Sandstone rocks, the waterlogged peat and thin soil cover. The catchment is long and narrow, with the Usk running through its centre and the tributaries typically short. During periods of heavy rainfall within the catchment, the flood plain becomes inundated and the total width of the river and flood plain can exceed 1.5km in places.

Downstream of the tidal limit, flooding largely results from tidal influences. This is due to the Severn Estuary tidal range which is the second highest in the world, exceeded only by the Bay of Fundy in Newfoundland. At Newport, the predicted tidal range is approximately 14.1 metres.

Widespread development has taken place within the flood plain of the river at several locations such as Brecon, Crickhowell, Usk and Ponthir. Major flood alleviation schemes have been carried out at all of these places to protect the settlements from inundation by water. At Newport and Caerleon works have been carried out to protect against tidal flooding with other reaches benefiting from privately financed defences.

WATER QUALITY

Water quality in the Usk catchment is generally very good. The main river upstream of the tidal limit, and the majority of the tributaries are of high enough quality for potable abstraction and salmon and trout fisheries. Due to the urban and industrialised nature of the Afon Lwyd sub-catchment and the former presence of coal mining operations, this river receives several discharges of minewater and is prone to



Lionel Sweet and catch of Usk Spring Salmon (1933)



Tidal Flooding in the Lower Usk Catchment

intermittent discharges of sewage from CSOs. The oxygen content of the Monmouthshire and Brecon Canal varies significantly during the year due to a combination of sluggish flows and heavy weed and algal growths. The Usk has a highly dynamic estuary which gives rise to extensive re-suspension of mud and a brown colouration. Under certain conditions sudden reductions in dissolved oxygen content occur due to discharges of crude sewage and the oxygen demand of the resuspended mud.

LANDSCAPE AND HERITAGE

A large part of the upper catchment is within the Brecon Beacons National Park and a considerable part of the lower catchment is a Special Landscape Area. There are several Scheduled Ancient Monuments in the catchment although not many of them are directly associated with watercourses. Archeological sites, masked by alluvial deposits are however likely to be associated with the river valleys. A number of sites and structures linked to the industrial revolution and the exploitation of the coalfields have been proposed as World Heritage Sites. eg Clydach Ironworks and the Monmouth - Brecon Canal.

FISHERIES

The Usk is one of the principal salmon rivers in Wales and is historically famous for its spring salmon run. It is probably the most renowned wild brown trout river in Wales, and coarse fish species, particularly chub and dace, are present in the middle and lower reaches. It is one of the few British rivers where shad are recorded in significant numbers and sea lamprey are found. The twaite shad flourish in the Usk whilst the very rare allis shad is occasionally seen. The salmon and trout fisheries are very important to the local economy as they attract anglers from afar.

INFRASTRUCTURE

The Usk catchment has numerous A-class roads which follow the line of the river for most of its length. The Monmouthshire and Brecon canal also provides a link between Brecon and Pontypool.

The Usk Valley Walk gives access to the river between Caerleon and Brecon and there are other shorter, riverside footpaths principally associated with Brecon and Crickhowell. There is also access along the canal's towpath.



Courtesy of Wales Tourist Board

Canoeing on the Monmouthshire and Brecon Canal

CATCHMENT USES

The catchment is predominantly rural and sparsely populated, the exceptions being the towns of Newport, Abergavenny, Pontypool, Blaenavon, Cwmbran and Brecon. Agriculture is the principal land use in the upper catchment with industry important in the lower catchment and along the Afon Lwyd. Tourism has always been important to the local economy with the historic towns of Usk, Brecon, Abergavenny, Crickhowell, Caerleon and Raglan complemented by other features such as the Brecon Beacons National Park, the Monmouthshire and Brecon Canal and the Big Pit Mining Museum in Blaenavon, all within the catchment. The scenic Usk Valley attracts many visitors and residents who enjoy their leisure time close to the river, its tributaries and canal.

Walkers, anglers, naturalists, canoeists and boat users all use the aquatic environment. Conflicts can occasionally arise where a user is ignorant or disrespectful of the requirements of other users. The range of water uses within the Usk catchment is extensive and all of those which have the potential to impact, or interact with the water environment have been described in the consultation document Uses Section. The uses identified were:

Abstraction of water
Angling and Commercial Fishing
Basic Amenity
Conservation - Nature, Landscape and Heritage
Farming
Rivers Ecosystem
Fish Farming
Flood Defence
Forestry
Livestock Watering
Mineral Extraction
Navigation and Boating
Net Fishing for Salmon, Trout and Eels
Sewage and Trade Discharges
Solid Waste Disposal
Special Ecosystems
Urban Development
Watersports Activities

There will inevitably be some interaction and sometimes conflict between different uses. All the uses will have water quality, quantity and physical features requirements. These already achieve the appropriate standards for the majority of the uses. There are, however, some exceptions to this, for example:-

- the impact of the abstraction at Brecon weir for the canal water on fish movement in the river.
- past development of flood plain areas has led to restrictions in the amount of wetland areas
- the impact of recreational use on the wildlife conservation of the river.

These have been identified as issues requiring resolution along with 31 others in this Action Plan (see tables). We are seeking to maintain and, where possible improve on the situation.

INTRODUCTION

The policies in local authorities' statutory development plans are very important, given that they provide the framework for land use change and provide the key reference in determining planning applications for developments. The NRA therefore welcomes the inclusion of policies which reflect the Authority's concerns and responsibilities in development plans, including the statutory requirement to conserve and enhance the water environment and associated lands. To facilitate this the NRA actively comments on all development plans and has provided 'Guidance Notes for Local Planning Authorities on the Methods of Protecting the Water Environment through Development Plans' to all local planning authorities.

The majority of the Usk catchment is rural with the predominant land use being agriculture but there are development areas around the main towns and rural settlements. Forestry is also widespread but industry is limited with some mineral extraction in places.

Issues of particular concern to the NRA in the Usk catchment are:

- lack of effective sewerage in some rural areas puts surface and groundwater quality under threat through piecemeal development relying upon inadequate sewage treatment/ disposal systems eg Llandenny near Raglan.
- the risks associated with development on the floodplain and the further flooding problems that may be created.
- the impact of water abstraction on the river at Rhadyr and Llantrisant.
- the piecemeal loss of riparian and wetland habitats over recent years and the continuing threat to nature conservation and heritage features

The NRA's stance on all new development is that it is the developer's responsibility to assess the impact of the proposals on the water environment, and to provide suitable mitigation works where necessary. In order to ensure that the right issues are addressed, the developer should consult with the NRA at the earliest opportunity.

INFRASTRUCTURE

Roads: There are several projects for road improvements in the Usk catchment. These include a major dualling scheme along the A465 Heads of the Valley road between Abergavenny and Hirwaun. This may impinge upon the Clydach Gorge SSSI and National Nature Reserve. Also two major bridge

crossings at Newport are envisaged, one which will form part of the proposed M4 relief road and the other part of the Southern Distributor road. Highway infrastructure works are also being investigated at Brecon.

It is important that these improvements are undertaken in an environmentally sympathetic manner so as to protect water quality, the landscape, heritage features and the flora and fauna of river and wetland habitats, and to ensure that flooding problems are neither created nor exacerbated.

FLOOD RISK

Development may affect rivers and flood defences directly, or increase the risk of flooding. Development situated within the flood plain is obviously at risk, and the NRA is obliged to advise the local planning authorities, in accordance with Welsh Office Circular 68/92, whether a proposed development may flood.

It is Government policy that where new development is permitted within areas of flood risk, provision for flood defences must be made. Where such alleviation works are possible, the onus is on the developer to investigate the flood risk, and to design necessary works for submission to the planning authority. Development often results in increased rates of surface water run-off which may cause or exacerbate a flood risk elsewhere. The NRA's advice to the planning authorities in such circumstances calls for the restriction of flow from the site to maintain the status quo. In view of the complex and protracted discussions that may ensue, developers should consult with the NRA prior to making an application.

The NRA will be undertaking major surveys of all river catchments in phases commencing in 1995. This will be done with the cooperation of the local authorities to identify more accurately the areas at risk from flooding. It will take several years to complete the survey and will concentrate initially on those areas where flooding is a major issue.

Within the Usk catchment, there has been pressure to develop on the flood plain, such as in Brecon and Abergavenny.

CONTAMINATED LAND

When promoting redevelopment plans, developers also need to be mindful of the past use of the site. Within the Usk catchment there are some problems which need to be identified by planners and developers prior to redevelopment.

GROUNDWATER

The preservation of groundwater quality and quantity is of great importance because it is very difficult to clean if it becomes contaminated. The NRA has produced a document "Policy and Practice for the Protection of Groundwater" which provides advice on the management and protection of groundwater on a sustainable basis. This policy deals with the concept of vulnerability and risk to groundwater from a range of human activities. There are no major aquifers in the catchment and so groundwater is important only at the local scale.

RIVER CORRIDORS

Buffer Zones: River corridors of the Usk provide important interconnections between habitats and are used extensively by wildlife. In the long-term, the creation of buffer zones (strips of land next to rivers managed for environmental benefit) alongside watercourses would benefit nature conservation, heritage, landscape and water quality and will be encouraged by the NRA wherever possible. A range of financial incentives are available to landowners for such schemes.

Culverts, River Diversions and Wetlands:

Culverting of any watercourse requires a Land Drainage consent from the NRA. The installation of short lengths of culvert in small watercourses is generally acceptable practice. However, the NRA may, as part of its general conservation and fisheries duties, oppose the culverting of long lengths of watercourse used simply to facilitate development. The NRA also opposes infilling of wetlands. Wherever possible, the retention of a natural watercourse is encouraged. If river works are unavoidable, any new watercourses formed should be designed to be as natural as possible and compensatory measures for loss or damaged aquatic habitats incorporated into plans. Early consultation with the NRA is recommended for such developments.

AGRICULTURE

The Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 have set minimum standards of construction for new or substantially altered structures which handle agricultural effluent or oil. The NRA is using these Regulations, and its contacts with farming organisations, to secure more effective pollution prevention and long term solutions for effluent control.

Much of the Usk catchment is farmland. These Regulations have raised the general awareness of farmers about effluent management and the NRA will continue to ensure compliance with them.

The NRA also recognises that while much of the farmland is improved grassland, there are several areas of significant conservation value and opportunities for improvements using various financial support schemes such as WOAD's Habitat Scheme.

Wastes from sewage and industrial sources which qualify for exemption from licensing under the 1994 Waste Management Licensing Regulations and can be demonstrated to have an agricultural and/or ecological benefit to the land, are applied to farmland in the catchment. Sewage sludge from municipal sewage treatment works is also applied to land under the Sludge (Use in Agriculture) Regulations 1989. These activities need to be carefully monitored and controlled and the NRA works closely with the Waste Regulatory Authorities, Her Majesty's Inspectorate of Pollution, Water Companies and Waste Disposal Contractors to ensure best practices are applied to prevent water pollution. The NRA is also in the process of drawing up a document in conjunction with the National Association of Waste Regulation Officers to give further guidance on responsibilities in the sludge disposal activities.

FORESTRY

The Forestry Authority has published the Forests and Water Guidelines which lay down the best practice standards for the protection of water. The NRA is committed to promoting application of these guidelines in forestry planning and management. We are consulted on new planting applications and liaise closely with local authorities to ensure that water is properly taken into account in their plans and policies.

THE USK BARRAGE PROPOSAL

This has now been removed as an issue. The £70 million scheme was rejected by the Secretary of State for Wales, William Hague, during October 1995.



Usk at Abergavenny

Courtesy of Wales Tourist Board

ACTION PLAN FOR THE RIVER USK CATCHMENT

This following section outlines the actions that have been agreed in order to tackle the issues identified within the Usk CMP Consultation Report. The organisation(s) responsible for implementing the actions, the costs involved, and the agreed timescales within which the actions are to be undertaken are shown. Actions are only included where agreed and signed up to by the body responsible for undertaking the work/investment. Where an action is subject to constraint or is awaiting approval, this is made clear within the action table.

The Action Plan looks largely to the five year period from publication of the Consultation Report to the year 2000. Where Issues are unlikely to be resolved within this timescale, this is indicated clearly within the tables. CMPs should be seen to be continually evolving, and therefore if priorities change or new opportunities for improvements present themselves, they will be reflected in annual reviews of the plan. In

the Consultation Report, 32 issues were identified where targets were not being achieved and therefore requiring some action in order to resolve them. These issues were presented, together with various management options, for discussion as part of the consultation process. All the responses received from external interests were considered, and where necessary further discussions were held to resolve issues and to agree appropriate, realistic and affordable actions.

All of the 32 identified within the Consultation report have been listed in the following tables but Issues 8, 22, and 32 no longer require actions as stated in the tables. Issues 33 and 34 have been added since completion of the consultation process.

Some costs have been listed as 'routine' which means that they are revenue costs and funded within the normal working budget ie. staff time.

SUMMARY TABLES OF ISSUES AND ACTIONS FOR THEIR RESOLUTION

ABBREVIATIONS USED IN TABLES

AC	-	Angling Club	LA	-	Local Authority
AMP	-	Asset Management Plan	m	-	million
BBNP	-	Brecon Beacons National Park	NBC	-	Newport Borough Council
BCU	-	British Canoe Union	NFU	-	National Farmers Union
BOD	-	Biochemical Oxygen Demand	NRA	-	National Rivers Authority
BW	-	British Waterways	OPW	-	Otters in Wales Project
CCW	-	Countryside Council for Wales	RE	-	Rivers Ecosystem
CSO	-	Combined Sewer Overflows	SSSI	-	Site of Special Scientific Interest
DCWW	-	Dŵr Cymru Welsh Water	STW	-	Sewage Treatment Works
DO	-	Dissolved Oxygen	TBC	-	Torfaen Borough Council
FUW	-	Farmers Union of Wales	UUFA	-	United Usk Fishermens Assoc.
HA	-	Highways Authority	WCA	-	Welsh Canoeing Assoc.
ha	-	Hectares	WOAD	-	Welsh Office Agriculture Dept.

USK CMP ACTIONS

ISSUE 1: WATER QUALITY TARGET FAILURE IN THE MONMOUTHSHIRE AND BRECON CANAL BETWEEN GOYTRE AND PONTYPOOL

A 7 km stretch of the Monmouthshire and Brecon Canal between Goytre and Pontypool fails to meet the River Ecosystem target (RE4). The canal deteriorates in quality from its source at Brecon to Newport. This is due to low levels of dissolved oxygen caused by the physical characteristics of the canal. The effect of abstractions from the Usk to the canal is addressed in Issue 12.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will increase monitoring to more accurately confirm extent of water quality failure by Dec. 1996						2.6	Extent of water quality failure determined and reported.
2. NRA will investigate this stretch of canal for point sources of pollution by Dec. 1996.						0.5	Point sources eliminated as cause of failure.

ISSUE 2 : WATER QUALITY FAILURE IN THE AFON LWYD

There is one stretch of the Afon Lwyd between Blaenavon and its confluence with the Nant Ffrwd which fails to meet its long term quality target of RE2. This is due to high biochemical oxygen demand (BOD) on some occasions. The combination of sewage discharges in the Blaenavon area from three combined sewer overflows (CSOs), within a one kilometre stretch may be the pollution source. Additional sampling has therefore been instigated to assess this problem.

1. NRA will undertake investigation into cause and extent of BOD failure, particularly CSOs.						2	Cause and extent of BOD failure determined and reported.
2a). NRA/DCWW will prioritise remedial works to CSOs if required.						Routine	Remedial works programmed.
b) DCWW will improve/relocate CSOs in accordance with agreed priorities.						Est. 49m	CSOs improved/relocated by agreed date.

USK CMP ACTIONS

ISSUE 3: POOR WATER QUALITY IN MINOR TRIBUTARIES DUE TO AGRICULTURAL ACTIVITIES: NANT-Y-WILCAE, WECHA BROOK, BRYNICH BROOK TRIBUTARIES, LLANGYBI TRIBUTARY, DOWLAIS BROOK.

This is likely to be due to diffuse agricultural inputs. These are minor watercourses and therefore no official water quality targets have been set.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will target catchment control work to identify sources of pollution by Dec. 1996.						2	Sources of pollution identified.
2. NRA will identify farms requiring improvements to farm waste and handling and to comply with the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991 by Dec. 1998 in order to improve water quality in the long term.						depends on (1)	Water quality improved to meet unofficial targets of RE 2 for Nant-y-Wilcae and Wecha Brook, and RE1 for Brynich Brook tributaries, Llangybi tributary and Dowlais Brook.

ISSUE 4: POOR WATER QUALITY IN SOR TRIBUTARY BELOW LLANHENNOCK CHESHIRE HOME SEWAGE TREATMENT WORKS




A tributary of the Sor Brook downstream of the Cheshire Home at Llanhennock has poor water quality as a result of discharges from the small sewage treatment works (STW). This is a minor watercourse and therefore no official water quality target has been set.

1. Cheshire Homes will undertake improvements to Llanhennock Cheshire Home STW by June 1996 to achieve long term consent standards.						Not yet known	Water quality in Sor Brook tributary improved to meet unofficial target of RE2.
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USK CMP ACTIONS


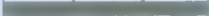

ISSUE 5: POOR WATER QUALITY IN PONTYRHYDON BROOK BELOW RAGLAN SERVICES STW

The Pontyrhydun Brook downstream of Raglan Services on the A40(T) has poor water quality as a result of discharges from the sewage treatment works (STW). Historic problems with this STW resulted in remedial work being undertaken in 1994 and some improvements to the quality of the receiving watercourse. However there is still scope for further improvement, particularly in relation to the ammonia level. This is a minor watercourse and therefore no official water quality target has been set.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. Granada Services to continue with operational improvements to STW.						Not yet known	Improvement to water quality in Pontyrhydun Brook to meet unofficial target of RE2.
2. NRA will re-assess quality conditions of consent to discharge to ensure that it is environmentally protective by June 1996.						0.6	Consent conditions confirmed or reviewed.
3. Granada Services will undertake capital works if required to achieve long term consent standards.						Costs to Granada	Improvement in water quality if not achieved in 1.

ISSUE 6: POOR BIOLOGICAL QUALITY OF CLYDACH IN UPPER AND LOWER STRETCHES

In the upper stretches of the Afon Clydach the quality of the biology is worse than expected. This is likely to be caused by the operation of the combined sewer overflow at the Heads of the Valley roundabout at Brynmawr. The poorer biological quality in the lower stretches may be due to intermittent sewage discharges which need further investigation, as well as to the impact of the high volume of treated effluent from Brynmawr STW.

1. DCWW will carry out improvements to CSO at Brynmawr roundabout. Timescale dependent on priority assigned. At present not known.						500	Improved biological quality commensurate with unpolluted conditions in upper reaches of Clydach.
2. NRA will carry out chemical and biological monitoring in the lower stretches to determine impact of any intermittent sewage discharges.						4.6	Extent of problem determined.
3. Implement remedial actions and/or improvements.					on-going	Depends on 2. above	Improved biological quality in River Clydach commensurate with unpolluted conditions.
4. NRA to reassess Brynmawr STW consent to determine whether it is environmentally protective.						0.6	Consent conditions confirmed or reviewed.

USK CMP ACTIONS

ISSUE 7: POOR BIOLOGICAL QUALITY IN THE AFON LWYD CATCHMENT DUE TO DISCHARGES FROM ABANDONED MINES

The closure and abandonment of mines has led to discharges of iron-rich minewater and the deposit of orange coloured iron hydroxide solids on the beds of watercourses. Under current legislation, these discharges are exempt from regulatory control. For mines abandoned after 31 December 1999, the Environment Act 1995 removes statutory protection from prosecution. This will ultimately enable the forthcoming Environmental Agency to deal with pollution from these mines. Nevertheless discharges from existing mines abandoned before this date may continue to cause problems.

There are currently several sizeable minewater discharges to the Afon Lwyd. These discharge into the Cwm Sychan Brook at Abersychan, the Trosnant Brook at Pontypool and the Llwyllyn at Blaenavon. The poor biological quality in the affected river stretches suggest that these discharges are having a detrimental effect on the aquatic life. There are also poor trout populations in these stretches of water (see also Issue 28).

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will continue to look for collaboration between interested parties and take advantage of all opportunities as they arise to implement remedial schemes.					on-going	Routine	Discharges stopped. Aesthetic and biological impact minimised.

ISSUE 8: REMOVAL OF ANIMAL CARCASSES FROM WATERCOURSES AND RIVER BANKS

The above issue has been removed from the action plan since consultation as it was classified as a low priority issue by consultees. This is an ongoing activity applicable to many catchments and therefore will be carried out within routine work subject to funds available.

ISSUE 9: CONTAMINATION OF GROUNDWATER WITH SOLVENTS AND ASSOCIATED CONTAMINATED SEEPAGES FROM EMBANKMENT BELOW ANACOMP MAGNETICS, BRYNMAWR.

Historic leakage of solvent (Cyclohexanone) from the site now occupied by Anacomp Magnetics, (AM) Brynmawr, has resulted in local contamination of groundwater. Seepages of this contaminated water from the ground below the site also cause strong odours and under certain circumstances could affect the water quality of the Afon Clydach.

1. Anacomp Magnetics will determine the extent of contamination and options for remediation by Dec. 1996.						AM 24.5 plus NRA 2.6	Report produced and options identified.
2. NRA and Anacomp Magnetics will continue to monitor the embankment seepages to determine the impact on water quality.					on-going	5.6	Impact on water quality determined.
3. Anacomp Magnetics to replace underground solvent storage tanks with double skinned tanks by July 1995 to prevent further contamination.	Completed					AM 48.5	Storage tanks replaced
4. Anacomp Magnetics to implement remedial options for removing contaminaton.						Unknown as yet	Remedial measures implemented.

USK CMP ACTIONS

ISSUE 10: THE IMPACT OF UNTREATED SEWAGE DISCHARGES TO USK ESTUARY

The 14 untreated sewage discharges into the Usk estuary in Newport contribute to the oxygen demand of the sediment and, at low summer flows, the ammonia levels in the river can also become significant. Free passage of migratory fish is thought to be adversely affected by these water quality conditions. Additionally, the estuary carries waterbourne litter, which combined with the discharges of sewage, causes an unsightly visual impact in the estuary running through the centre of Newport. All these discharges must be given secondary treatment by the end of the year 2000 in order to comply with the terms of the Urban Waste Water Treatment Directive.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. DCWW will convey discharges to Nash STW by 2000 to improve the water environment.	0.72 m*	1.43 m*	18.85 m*	15.87 m*	-----	Total 36.87 m*	Scheme completed.

ISSUE 11: IMPACT OF DŴR CYMRU - WELSH WATER ABSTRACTIONS AT RHADYR AND LLANTRISANT

The DCWW public water supply abstractions at Rhadyr and Llantrisant are only a few miles upstream of the tidal limit. Under low flow conditions, the combined abstraction has to be balanced by releases of water from the Usk and Crai reservoirs. Under some flow conditions, the flow below the abstractions equates to the natural flow of the river when averaged over a day. However, pumping constraints mean that the abstraction takes place over less than 24 hours so that there can be a significant variation in the flow to the estuary over a day. This can affect fish migration. Small floods, or spates, in late spring and summer stimulate and encourage the migration of salmon from the estuary upstream. However, these spates can be abstracted under the current licence conditions and fish migration can consequently be affected. Alterations to the regulation and abstraction need not affect the yield of the water supply. However, any implications for the system's yield must be carefully examined with reference to potential reductions in demand.

1. NRA / DCWW will discuss the amendments to the regulation and abstraction pattern to allow more scope for fish migration.						4	Report and recommendations for action.
2. NRA will undertake further investigations to define more fully the environmental impacts of the abstractions.						1.5	Report produced.

* Figures based on 1992/1993 budgeted costings.

USK CMP ACTIONS

ISSUE 12: IMPACT OF WATER SUPPLY TO CANAL AT BRECON WEIR

The Monmouthshire and Brecon Canal transfer does not require an abstraction licence since it is authorised by an Act of Parliament. The amount taken by the canal has, in the past, been in excess of that required. Amounts up to about 43 ML/d have been taken in periods of low flow. This reduces the flow in the river by more than is necessary and, if uncontrolled, can represent around a third of the river's typical summer flow (Q95) at Brecon. Whilst the abstraction is lawful and cannot be stopped, it can be controlled to minimise unnecessary abstraction. Control at present is by manually operated sluice.

Fish passage is not possible at lower flows over Brecon weir, and unnecessary abstraction of water causes these conditions to occur more often than they would do otherwise. Salmon are vulnerable to illegal fishing as they congregate below the weir and as they ascend the fish pass.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA & BW will install flow meter at the canal intake by March 1996 to increase knowledge of canal water use.						15	Flow measurement installed allowing understanding of pattern of water use.
2. NRA and BW will agree operating rules for the canal abstraction at Brecon by December 1996 to minimise impact of canal abstraction on river.						2	Operating rules agreed and implemented.
3. NRA & BW will install an automatically controlled sluice at canal intake by December 1996 to reduce unnecessary diversion of water.						15	Control systems installed. Increased flows over weir. Improved fish migration under low flows.
4. NRA will progress discussions with BW to upgrade one of the two fish passes in the weir by July 1996						0.5	Decision on how to proceed on this fish pass made.
5. NRA will introduce byelaw or rule to ban fishing from the weir by 1998 to stop illegal exploitation of fish.						2	Byelaw introduced. Illegal fishing stopped.

USK CMP ACTIONS

ISSUE 13: INSUFFICIENT INFORMATION ON GROUNDWATER LEVELS TO FULLY PROTECT WATER RESOURCES AND THE ENVIRONMENT

The NRA must assess the amount and quality of the water resource throughout the catchment and during different times of the year to:

- understand how much water can be abstracted without adversely affecting existing abstractors or the aquatic environment;
- implement groundwater protection policies to prevent pollution.

At present the NRA has no monitoring network to measure the quality and quantity of groundwater flows.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will increase monitoring of groundwater levels within the aquifers of the catchments between 1996 and 1998 to gain better understanding of the water resources available.						35	Monitoring borehole numbers increased by up to 4 dependent on capital available.

ISSUE 14: AREAS SUBJECT TO TIDAL AND FLUVIAL FLOODING

The most significant Main River flooding of properties occurs at Crindau, Usk, Chainbridge, Gobion, Llanover, Abergavenny, Llanwenarth, Glangrwyney, Crickhowell, Llangynidr, Talybont and Llanhamlach. Flooding also occurs from minor watercourses.

1. NRA/ LAs will monitor flooding to identify need for new defences as part of routine work.					on-going	Routine	Flood records. Quarterly reports from Local Flood Defence Committee.
2. NRA and LAs will promote flood defence schemes as appropriate to protect people and property once options have been considered.					on-going	To be determined subject to schemes proposed	Promotion of schemes
3. NRA will continue to warn of flooding as part of its Flood Warning Scheme.					on-going	Routine	100% compliance with flood warning procedures.

USK CMP ACTIONS

ISSUE 15: FLOODPLAIN AND RIVERSIDE DEVELOPMENT

Although in comparison with some other catchments the Usk Valley is relatively rural, there are many areas attractive to developers, particularly near towns and villages. Flood plains are an integral part of the overall river system, and the NRA considers it essential that they are kept free from development for flood defence reasons. In addition, the NRA recognises the importance of protecting the existing biological resource and the heritage features associated with them. Thus, the NRA objects to the development of floodplains.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will continue to advise against development on the floodplain.					on-going	Routine	LAs support objections.
2. NRA will conduct a national survey of flood risk areas (in accordance with Section 105 of the Water Resources Act 1991) over the next 5 years to further assist the LAs in their consideration of planning proposals and the need for flood alleviation works.						50	Maps produced.
3. NRA will make use of statutory powers to control flood risk.					on-going	Routine	No increase in flood risk due to new structures.

USK CMP ACTIONS

ISSUE 16: LOSS OF WETLAND HABITATS IN CATCHMENT

Improved land drainage, agricultural changes and urban development in recent years has led to the loss of many wetland habitats from the Usk catchment. While large areas of open water are provided by reservoirs, some habitats such as lowland wet grasslands suitable for breeding waders, upland bogs, small ponds and marshes are much more limited in extent. The existence of schemes such as the Welsh Office Agricultural Department (WOAD) Habitat Scheme may provide encouragement for the creation of new wildlife habitats and the restoration of degraded sites.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will promote the improvement and creation of aquatic habitats via consenting procedures and planning responses as part of routine work.						Routine	All opportunities exploited to improve or create aquatic habitats.
2. NRA/BBNP/Conservation Organisations will determine the distribution of wetland habitats in the catchment by 1996 and identify priorities for creation and improvements.						Routine	Report produced. Priority areas identified.
3. NRA/BBNP/Conservation Organisations will seek to negotiate and collaborate with landowners in order to provide at least 20 ha of damp grassland in the lower catchment for breeding waders by Dec. 1997.						To be assessed *	20 ha of damp grassland provided.
4. NRA/BBNP/Conservation Organisations will seek to negotiate and collaborate with landowners to create or improve wetland habitats in the upper catchment, by 1997, for the benefit of plants and animals. (see also Issue 30, option 2).						To be assessed *	More wetland habitats created.

* Note: NRA budgetary provision has yet to be approved for actions 3 & 4.

ISSUE 17: LACK OF NATURAL REGENERATION OF RIPARIAN TREES AND SHRUBS IN SOME AREAS

Surveys suggest that regeneration of bankside trees is lacking in some areas. This has long-term implications for wildlife, landscape and riverbank erosion. Overgrazing, lack of fence maintenance and the spread of alien plants may be contributing to this potential problem. In the lower catchment there are more extensive lengths of open riverbank and little sign of replacement of large trees or groups of trees which could be significant landscape features in the floodplain.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will protect and further the conservation of riparian vegetation during Flood Defence operations as part of routine work.						Routine	Confirmation of adherence to FCRN specifications by area audit.
2. NRA will promote the creation of riparian buffer zones by landowners, through consenting procedures and liaison with LAs. This will result in conservation, landscape and engineering benefits.						Routine	Number of buffer zones created.
3. NRA/BBNP/CCW/ Conservation Organisations will assess the need for fencing, coppicing, pollarding and planting and identify priority locations for this by Dec. 1996.						Routine	Action plan produced.
4. NRA/BBNP/Conservation Organisations will identify a programme of fencing/planting, coppicing and pollarding to encourage regeneration of trees and shrubs with landowners by Dec. 1997.						To be assessed *	Agreements with landowners finalised.
5. NRA will, with landowners permission, plant individual or groups of trees in the Usk floodplain for long-term conservation and landscape benefits.						To be assessed *	Planting undertaken and reported.

* Note: NRA budgetary provision has yet to be approved for actions 4 & 5.

USK CMP ACTIONS

ISSUE 18: CONTROL OF ALIEN WEEDS, PARTICULARLY GIANT HOGWEED

In recent years three alien plant species have colonised the catchment, particularly the lower part of the system. Giant Hogweed, Japanese Knotweed and Himalayan Balsam all pose a threat to the native flora and fauna. Other problems are the difficulty of and increased need for flood defence scheme maintenance and the health hazard posed by Giant Hogweed to those working on or enjoying the river.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will determine the most appropriate strategy for dealing with invasive weeds on the basis of the criteria identified in the draft National Policy on the Control of Invasive Riparian Plants.						0.4	Production of Strategy Document.
2. NRA will undertake control of invasive alien plants on the basis of priorities derived from the above strategy.						to be determined	Control of alien plants in priority areas.
3. NRA will collaborate with others in the control of alien plants elsewhere in the catchment on the basis of the above strategy.						to be determined	Improved control of alien plants in other areas.

ISSUE 19: LACK OF CONSERVATION STRATEGIES FOR RIVERINE ANIMALS

The majority of animal species normally associated with a river such as the Usk are found within the catchment but many are potentially threatened by human activities. At present there are no strategies in place for the conservation of these species, neither rare nor protected species such as water voles and little ringed plovers, or more widespread species such as dippers and sandmartins. A Regional Conservation Strategy has been prepared for the otter. NRA nationally has identified species requiring conservation strategies and will produce national strategies over the period 1996-99.

1. NRA will produce catchment strategies over the period 1996-99, the first phase to be completed by March 1996. Phases 2-4 to be completed by Dec.1999.						4 12	Strategies completed.
2. NRA/CCW/Conservation Organisations will cooperate with OPW in the production of a Priority Otter Catchment Management Plan.						2	Priority Otter Catchment Management Plan produced.
3. NRA/OPW/Conservation Organisations will work with landowners to implement the otter habitat enhancement measures where appropriate, as opportunities arise.						Routine	Habitat enhancement measures undertaken and reported.

USK CMP ACTIONS

ISSUE 20: NO STANDARDS OF SERVICE AGREED WITH CCW FOR NRA OPERATIONS AFFECTING SITES OF SPECIAL SCIENTIFIC INTEREST

Many NRA operations can directly or indirectly affect wetland SSSIs. There is therefore a need to identify sites which are sensitive to such operations and agree standards to be applied when dealing with the sites, eg working only at certain times of the year, maintaining a certain groundwater level.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA and CCW will agree standards of service by end 1998 to ensure a consistent approach which will protect SSSIs.						Routine	Standards of service agreed and implemented.

ISSUE 21: BARRIER TO FISH MIGRATION - CRICKHOWELL BRIDGE

1. NRA will progress discussions with the HA to improve fish passage with simple fish pass in bridge weir by early 1996, with the aim to install a properly designed pass within 3yrs subject to funding.						1 10	Fish pass installed.
2. NRA to discourage the dredging of the pool immediately downstream of Crickhowell Bridge and leave it to scour naturally so that fish passage is improved.							Improved fish passage.

ISSUE 22: BARRIER TO FISH MIGRATION - LLANFOIST BRIDGE

This is now not considered to warrant attention within the plan period.

ISSUE 23: BARRIER TO FISH MIGRATION - PONTENHAFOD GAUGING STATION

NRA will replace Crump weir with an alternative design by 1999 to improve trout passage						11.5 - 40 Dependant on option selected	Crump weir replaced. Trout numbers increased.
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ISSUE 24: BARRIER TO FISH MIGRATION - TALYBONT GAUGING WEIR

1. DCWW has installed fish pass during upgrade to gauging station in Oct. 1995.	Completed						Fish recorded ascending.
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USK CMP ACTIONS

ISSUE 25: BARRIER TO FISH MIGRATION - LLANGENNY LEAPS

This weir is an obstruction only under low flows. Under medium flows fish pass quite easily and the site is consequently popular with people enjoying watching salmon leaping. Ownership of the weir cannot be traced and liability would pass to anyone altering the structure. Therefore no fish passage improvements will be proposed. Crickhowell and District Angling Society have a club rule restricting fishing in the Grwyne after 30 Sep. This is a suitable conservation law and precludes the need for an NRA byelaw. However, the efficiency of the existing fish pass can be improved by removing gravel from the pools every 3-5 years.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will remove gravel build-up from fish pass pools every 3-5 years.	■				■	2	Gravel removed. Fish passage improved.

ISSUE 26: BARRIER TO FISH MIGRATION - PANTYMOEL AQUEDUCT (AFON LWYD)

1. NRA and BW will progress discussions on improving passage for salmon, trout and sea trout, by Dec. 1996.	■					Routine	Agreement reached. Options for fish passage evaluated.
NRA and BW will aim to have installed fish passage facilities by Dec. 1999, if cost effective and funding available.		■	■	■	■	50	Fish passage installed. Fish migration recorded.

USK CMP ACTIONS

ISSUE 27: DECLINE IN SALMON STOCKS, ESPECIALLY LARGE SPRING FISH

Apart from the wet years of 1988, 1993 and 1994, the Usk's salmon rod catch has been below the long term average, every year for the past 20 years. The decline in the number of spring salmon caught has been the most dramatic. The most likely causes of this are legal and illegal over-exploitation in the river, estuary and high seas and droughts in recent years. Changes in the marine environment may also have contributed. Many of the recommendations of the report "Usk Salmon - Recommendations for Action" (G W Mawle, 1992) have been implemented, to arrest this decline, whilst a number have yet to be instigated. Recent data from the Trostrey Fish counter indicates some success as stocks have increased since 1993. The review of the 1985 Net Limitation Order in 1994 concluded that the drift net fishery be phased out under a "Reducing Net Limitation Order".

Prior to 1989, a large number of salmon destined for the River Usk were taken illegally in the Severn Estuary by fishermen under the guise of sea fishing. Bailiffing had reduced this between 1987-92 and it was virtually eliminated with the introduction of new Sea Fisheries Byelaws, in September 1992. Illegal salmon fishing still takes place on the River Usk and in the Usk and Severn estuaries. There is also widespread concern amongst fishery interests that fish-eating birds are having a significant impact on salmon stocks.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. Anglers and netsmen will adhere to new fishery byelaws to control exploitation and to allow escapement to spawn. NRA will enforce byelaws.						2	Spring salmon catches reduced in short term; runs increased in medium term.
2. NRA, fishery owners and angling associations will encourage "Catch and Return" of large salmon by Dec. 1995 to increase spawning and stocks through publicity.	Completed						"Catch and Return" leaflets distributed. % fish released increased.
3. NRA has conducted a feasibility study of a breeding programme at Cynrig Hatchery. As use of Cynrig is not suitable, the feasibility of an alternative site will be investigated.						6	Feasibility study completed.
4. NRA, weir owners and fishery owners will improve fish passage at Brecon weir and other obstructions according to priorities and available resources over the next 5 years. (see Issue 12)						See Issue 12	Fish passage improved.
5. NRA will facilitate discussions between anglers and netsmen for a 'buy- our' of the net fisheries so that the fishery may be phased out more quickly and increased spawning and stocks can occur.						Routine	'Buy-out' completed if agreement reached.
6. NRA will contribute to a national study into the effect of piscivorous birds on fish populations through objective research to allow for development of a control strategy.						(10k NRA national budget)	Control strategy determined. Report completed.
7. NRA will comment as requested on applications to WOAD to control cormorants and goosanders according to NRA Policy.						Routine	Comments made.

ISSUE 28: DECLINE IN BROWN TROUT STOCKS

There is a perceived decline in the catches and stocks of brown trout. Poor trout populations have been detected in the upper Lwyd, Olway Brook, Berthin Brook, Gavenny, Clydach and some tributaries in the upper catchment. Reasons for this may include water quality problems (see issues 6 and 7) and siltation of spawning gravels. Trout are also eaten by cormorants and goosanders as well as herons, mink and otters.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA and fishery owners to enforce fishery byelaws (increased takeable size limit) to control exploitation and to allow greater escapement to spawn.						Routine	Byelaws enforced. Improved juvenile densities.
2. NRA will act on the Brown Trout Strategy recommendations including controls on stocking, establishment of database, introduction of catch monitoring and effects of predators on stocks.						10	Increased stocks.
3. NRA and fishery owners will complete the Usk Brown Trout Investigation by Dec. 1997 to establish status, cause and solution to perceived decline.						5	Report produced.
4. NRA and fishery owners will encourage "catch and release" and bag limits for brown trout by Dec .1996.						Routine	Increased spawning and stocks.
5. Fishery owners will stock areas identified as underpopulated with Usk origin trout. Designed to regenerate the populations more rapidly over the next 5 years.						10 pa	Stocking undertaken. Stocks increased.
6. NRA will contribute to a national study into the effect of piscivorous birds on fish populations through objective research to allow for development of a control strategy.						(10k NRA national budget)	Research completed, report produced.
7. NRA will comment, as requested, on applications to WOAD to control cormorants and goosanders according to NRA Policy.						Routine	Comments made.

USK CMP ACTIONS

ISSUE 29: IMPROVEMENT IN COARSE FISHING FACILITIES

There are significant stocks of coarse fish in the River Usk but coarse anglers have limited access to fish for them. More fishery owners may be encouraged to make their water available to coarse anglers, particularly during the close season for game fishing (18 October - 2 March).

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will encourage fishery owners to make river stretches where facilities are limited available to coarse anglers.						Routine	River stretches available.
2. NRA, BW, TBC, NBC and ACs will enhance coarse fish stocks by stocking in the Monmouthshire & Brecon Canal to encourage more coarse anglers to use this facility.						2 pa	Stocks enhanced.
3. NRA will continue to give advice to landowners and angling clubs seeking to develop new stillwater fisheries.						Routine	Advice given.
4. NRA will continue to assist and advise landowners and angling clubs on managing and improving existing coarse fisheries.						Routine	Advice and assistance given.

ISSUE 30: DEGRADED RIVER HABITAT

River engineering schemes and some agricultural practices can lead to the reduction of bankside and instream habitat and cover, resulting in reduced fish populations and wildlife habitat diversity. Similarly, third parties (with or without NRA Consent) undertaking erosion protection works and shoal removal, cause loss of biological diversity and impacts on the landscape. The use of the WOAD Water Fringe Habitat Scheme may provide landowners with alternatives to such practices.

1. NRA will encourage landowners to allow the natural processes of river erosion and deposition where property and infrastructure is not threatened and will give advice on sympathetic practices, where work is unavoidable.					on-going	Routine	Improvements completed.
2. NRA, fishery owners and landowners will implement river bank and channel improvements where habitat is identified as degraded to increase fish stocks and habitat diversity (ongoing basis).						5 pa	Improvements completed.

ISSUE 31: CONFLICT BETWEEN DIFFERENT RECREATIONAL USER GROUPS AND THEIR IMPACT ON WILDLIFE CONSERVATION

The principal conflict amongst recreational water users in the catchment is between canoeists and anglers. Canoeists may only use the river with the permission of landowners and riparian owners. There is an Informal Access Agreement between the United Usk Fishermen's Association, which represent the majority of fishing interests on the river, and the Welsh Canoeing Association, with support and input from the NRA. This agreement outlines permitted access points and times and conditions for canoeing and is available from the NRA and WCA. Unfortunately, some canoeists are not aware of, or do not abide by the terms of the agreement. Consequently, angling is sometimes disturbed by canoeists and this may lead to conflict. Occasionally there is also concern over the impact of angling, canoeing, general public access and river engineering works on wildlife conservation in the catchment's watercourse.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA will liaise with WCA, UUFA to facilitate the production of a workable canoeing access agreement; updated annually.						1 pa	Canoeing access agreement produced.
2. NRA will discuss with UUFA and WCA the formation of a liaison group to progress agreements and resolve problems.						0.5 pa	Formation of liaison group.
3. NRA, BCU and WCA will, annually over the next 3 years, improve communications with canoeists so that they are aware of legal situation and potential conflict of canoeing without permission through targetted publicity.						1 pa	Leaflets and articles in magazines/newspapers.
4. NRA will provide advice to site owners and each user group, in an attempt to resolve conflicts and educate in good practice for the protection of the conservation interest as problems arise.						on-going 1 pa	Problems resolved and agreements made.

USK CMP ACTIONS

ISSUE 32: USK BARRAGE PROPOSAL

This has now been removed as an issue. The £70 million was scheme rejected by the Secretary of State for Wales, William Hague, during October 1995.

ISSUE 33: RESTORATION OF LOWER SECTION OF MONMOUTHSHIRE AND BRECON CANAL BELOW PONTYPOOL TO NEWPORT

This is a new issue that has arisen since the production of the Consultation Report.

The Monmouthshire and Brecon Canal below Pontymoile is in the ownership of the local authorities and has been closed to navigation since the 1960s largely due to disrepair. A Steering Group has been set up with a view to the formation of a Trust to restore navigation on that stretch. Rights to abstract are believed to exist under Act of Parliament. The impact on the donor rivers of renewing abstractions to provide a water supply to the canal is uncertain (See also issue 12). Whilst the local authorities may have powers to abstract, they have indicated that they wish to do so in an environmentally sustainable way.

The project is in its infancy at present, and further actions which cannot be directly identified at this stage, may develop over the coming years.

ACTIONS	1996	1997	1998	1999	2000	COST (£k)	SUCCESS MEASURE
1. NRA to advise Steering Group of matters requiring consideration in preparation of Water Resources Strategy for Canal and on likely consultees on that strategy.						1.5	NRA assistance provided. Steering Group/Trust produce Water Resources Strategy.

ISSUE 34: DESIGNATION OF RIVER USK AS A SITE OF SPECIAL SCIENTIFIC INTEREST

This is a new issue that has arisen since the production of the Consultation Report.

The River Usk is currently in the process of being notified as an SSSI. A Memorandum of Understanding is proposed between the NRA and CCW concerning the management of river SSSIs. The Memorandum will require the production of an agreed Conservation Strategy and a Consenting Protocol.

1. Produce draft Conservation Strategy and Consenting Protocol within 3 months of SSSI notification and final draft within 9 months of notification.						Routine	Strategy and Consenting documents prepared and implemented.
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FUTURE REVIEW AND MONITORING

The NRA will be jointly responsible, with other identified organisations and individuals, for implementing this Usk Action Plan. Progress will be monitored and normally reported annually. These reviews will examine the need to update the CMP in the light of changes in the catchment. The period between major revisions will normally be five years. The annual review will take the form of a short progress report, to include work achieved compared with that planned, and to highlight any changes in the plan. The annual review will be made available to all those who received consultation reports.

From 1st April 1996, the new Environment Agency for England and Wales will take over the roles of the NRA, Her Majesty's Inspectorate of Pollution and the Waste Regulatory Authorities. It will be the largest environmental protection agency in Europe and will be primarily concerned with integrated pollution

prevention and control, of air, land and water. It will seek to balance the interests of business with those of the environment, the philosophy of sustainable development underpinning its approach to environmental protection and enhancement.

The government recognises the value of integrated river basin management, as practised by the NRA through the implementation of its CMPs. It is therefore envisaged that the CMPs will continue as the focus for river basin management in the Agency, although they will need to become more extensive management plans to cater for the protection and enhancement of water, land and air.

The implementation of this Action Plan will now be actively pursued and any changes introduced by the new Agency must be smoothly integrated as a positive evolutionary development of the plan.

APPENDIX 1 - LIST OF CONSULTEES WHO RESPONDED WITH DETAILED COMMENTS

Dr K Benson-Evans	Gwent Land Reclamation Joint Committee
Big Pit	Institute of Chartered Foresters
Borough of Newport	Inland Waterways Association
Mr C Brain	Mr R J Lyle
Brecon Beacons National Park	Llanover Estate Office
Brecknock Wildlife Trust	Monmouthshire, Brecon and Abergavenny Canals Trust
British Association for Shooting and Canoeing	RSPB
British Waterways	Royal Commission on the Ancient and Historical Monuments of Wales
CADW	The Salmon and Trout Association
Crickhowell and District Angling Society	Sports Council for Wales
CCW	Water Power Engineering
Dŵr Cymru Welsh Water	Welsh Canoeing Association
Glamorgan Gwent Archeological Trust	Welsh Office -Environment Division
Mr R Gover	Welsh Office Agricultural Department
Gwent County Council - Planning	
Gwent County Council - Chief Executive	

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RESPONSES TO CONSULTEES AND ACTIONS TAKEN

Respondent	Main Points raised	Response/reference in Action Plan
Dr K Benson-Evans	<ol style="list-style-type: none"> 1) Spellings/additions to glossary etc. 2) Standard Section change -downstream of point of abstraction. 3) Alternative biological indicators needed. 	<ol style="list-style-type: none"> 1) Update consultation document. 2) Update future consultation documents. 3) No alternatives realistically available.
Big Pit	<ol style="list-style-type: none"> 1) Mineral extraction - hydrogeological consequences of British Site. 2) NRA should be more involved with mineral licensing procedure. 3) We need central government funding to solve minewater problem. 	<ol style="list-style-type: none"> 1) Noted. See also Issue 13. 2) Noted. 3) See Vision and Issue 7.
Borough of Newport	<ol style="list-style-type: none"> 1) Crindau Pill flooding should be dealt with as an individual issue. 2) Appendix 3 - No reference to cost of possible improved protection. 3) Dumping of waste and fly tipping along tidal reaches should be raised as an issue. 4) Issue 10 option 1, the disadvantage of numerous STWs in urban locations in planning terms is not mentioned. 5) Map 7 - Add Glebelands and Rogerstone (former sites). 6) One-sided account of Usk Barrage. 7) NRA should provide copies of flood risk surveys. 	<ol style="list-style-type: none"> 1) Included in Issue 14 with other schemes which will be prioritised appropriately. 2) Dependent on individual schemes. 3) Noted. Difficult for NRA to take any action. 4) Noted for future consultation documents. 5) Update consultation document.. 6) Barrage proposal rejected - no longer an issue. 7) Section 105 maps will be provided when completed.
Mr C Brain	<ol style="list-style-type: none"> 1) Many comments on questionnaire and preferred options. 2) NRA must reduce amount of water abstracted. 	<ol style="list-style-type: none"> 1) Noted. 2) Noted. Raised in Issues 11 and 12.
Brecon Beacons National Park	<ol style="list-style-type: none"> 1) Usk Valley walk has been extended to Brecon. 2) Importance of Black Poplar in Usk Valley. 	<ol style="list-style-type: none"> 1) Update consultation document. 2) Included in Action Plan 'Conservation' text.
Brecknock Wildlife Trust	<ol style="list-style-type: none"> 1) Set ecological context early on in plan. 2) Issue 14 - biodiversity of catchment changed rather than nature conservation interests. 3) Support Issue 13,15, 16, 17, 18, 19 & 30. 4) Option 7, Issue 12 not sustainable. 5) Issue 19 - Major benefits to all species not just otters (Option3). 6) Issue 27 & 28 Option 7 - should not be included. 7) Environmental Requirements - seek to enhance not just protect. Also conserve existing species too. 8) A number of SSSIs missing from Map 11. 	<ol style="list-style-type: none"> 1) Included in Action Plan Vision, Uses and Issue 34. 2) Update future consultation documents. 3) Noted. 4) Option excluded. 5) Noted. 6) Option excluded 7) Noted for future consultation documents. 8) Update consultation document.

Respondent	Main Points raised	Response/reference in Action Plan
British Association for Shooting and Conservation	1) Add sporting shooting to list of amenities. 2) Use sporting shooting as incentive for promoting wetland habitat creation. 3) Support the control of avian predators and offer expertise. 4) Increase management and access to rights of way.	1) Update future consultation documents. 2) Noted as contributing to wetland habitat conservation.. 3) Noted. 4) Noted.
British Waterways	1) 30 MI/d at Brynich bypass not 40-60 MI/d as published. 2) Prepared to enter into discussions about operating agreement, flow metering, automatic sluices. 3) Supports Issue 12 Option 8. 4) NRA should consider contributing to maintenance costs of Options 1,2 &3 of Issue 12.	1) Regauged and still found to be 40-60 MI/d, but reduced to 30 MI/d. 2) See Issue 12. 3) Noted. 4) See Issue 12.
CADW	1) Did RCS include historic environment? It should do. 2) Mention historic interest of old mine workings and canal system. 3) Add to p67 "sites of historic or heritage interest may be designated SAMs or as listed buildings which have statutory protection but can be any feature of interest". 4) p104 rephrase to " Sites and buildings of interest should where cost effective, be protected from damage by flooding, winter erosion and/or drought, but their protection must be a key issue when other NRA schemes and projects are drawn up" 5) Add target " to include the historic environment in RCS to enhance knowledge of sites in the catchment."	1) Not enough expertise to do this. 2) Included in Action Plan 'Landscape and Heritage'. 3) Update future consultation documents. 4) Noted. 5) Limited resources.

Respondent	Main Points raised	Response/reference in Action Plan
Crickhowell and District Angling Society	<ul style="list-style-type: none"> 1) All aspects of salmon lifecycle should be considered. 2) Options should be listed in priority order and include costs in final document. 3) Strongly oppose byelaws to ban fishing at Crickhowell and Llanfoist weir pool. Support Option 1 & 2 of Issue 21. 4) Issue 21, Option 3 could impact on Red Barn Fishery. 5) Oppose Issue 24 Option 1. 6) Add sea trout to p11. Also mention carp and tench in stretches of river between Abergavenny and Crickhowell. 7) Support need for amendments to Rhadyr and Llantrisant abstractions. 8) NRA need to take stronger line with British Waterways on leakages from canal. 9) Lack of emphasis on avian predators as well as other predators eg mink. 10) There has been a decline in coarse fish too. 11) Support licencing of canoeists. 12) Could enhancement of stocking be re-examined? (ref to American stocking programme). 	<ul style="list-style-type: none"> 1) Noted. 2) This is done in final plan. 3) Options for byelaws excluded. 4) Option excluded. 5) Noted. 6) Update consultation document. 7) See Issue 11. 8) BWB investigating. 9) Further discussions to take place. 10) See Issue 29 , Actions 2 & 4. 11) Noted 12) Real problem is lack of resources.
CCW.	<ul style="list-style-type: none"> 1) Vision, overview and general ecosystem sections should include a list of all species of special importance eg allis shad, bullhead and freshwater crayfish and further reference to nature conservation of the wider catchment. 2) Support options for Issues 1-5, 8-10, 11-13, 15-20, 27, 28, 30, 31. 3) Issue 30 - would encourage adoption of Code of Good Practice to deal with riverbank erosion. 4) Map 11 lacks detail. 	<ul style="list-style-type: none"> 1) Included in Action Plan Vision and Uses. 2) Noted. 3) See Issue 30, Action 1. 4) Asked CCW to provide detail. Only the river related SSSIs were included.

Respondent	Main Points raised	Response/reference in Action Plan
DWr Cymru Welsh Water	<ol style="list-style-type: none"> 1) More important issues get lost in mass- need prioritisation. 2) Not aware of any adverse impact of abstractions (vision statement). Should have been raised in forum meetings if there was a problem. 3) Can you quantify length of river on Map 5 where "quantity affects migratory fish" and what is basis for clarification? 4) Do Maps 4 & 5 conflict with each other? 5) They know of no hands-off flow restrictions on Ffynon Gisfaen abstraction. 6) Want quantities abstracted for different uses on Berthin Brook. 7) Where is evidence to prove that abstraction at Rhadyr and Llantrisant affect fish migration. 8) Issue 24 already being addressed. 9) Licence quantity for Usk Reservoir is 8.4 mgd (38MI/d). 10) p73, last sentence of penultimate para does not make sense. 11) Should mention that NRA are party to regulation releases which augment the flows over virtually the whole length of the Usk and positive environmental role of reservoirs. 12) It is not a 'preference to abstract privately but a 'necessity" due to distance from mains source. 13) Is it Llwyd or Lwyd? 	<ol style="list-style-type: none"> 1) More detail in final plan. Prioritisation is part of consultation process. 2) See Issue 11, Actions 1 & 2. Has been a source of dispute in the past. 3) Further investigations to be carried out, Issue 11, Action 2. 4) No. Show Water Quality and Quantity respectively. 5) Noted. 6) Information on Public Register. 7) See Issue 11. 8) Solution not finalised at time of going to press. Should have been clearer. 9) Noted. 10) Update consultation document. 11) Noted. 12) Noted. 13) Afon Lwyd and Llwyd - Welsh language.
Glamorgan Gwent Archaeological Trust	<ol style="list-style-type: none"> 1) Add more info on archaeological sites. Note that alluvial deposits hide many. 2) Mention Roman occupation of area. 3) Add "identified" to aim 4) Creation of wetland areas can affect archaeological sites. 5) Consult with Regional Archaeological Trust when producing Water Level Management Plans. 	<ol style="list-style-type: none"> 1) Included in Action Plan and future consultation documents. 2) Update consultation document. 3) Noted. 4) Noted. 5) Noted.
Mr R Gover	<ol style="list-style-type: none"> 1) Trees cause water quality failure. 2) Inland waterways should dredge canal, let in more light and slow down pleasure boats. 3) Over 7000 ducks on river near Crickhowell which prevent fish stopping at Glanusk estate. 4) Issue 25 not important if fishing stopped from 1st Sept 20 yards either side of Llangenny Leaps. 	<ol style="list-style-type: none"> 1) Would contribute. BWB to action. See also Issue 1. 2) Not NRA action. 3) No water quality problems identified at Crickhowell bridge. 4) Noted.

Respondent	Main Points raised	Response/reference in Action Plan
Gwent County Council - Planning	1) Need for NRA and Land drainage authority to liaise to prevent flooding.	1) This is carried out, but it is not possible to prevent all flooding in the Usk Valley.
Gwent County Council - Chief Executive	1) What measures are being taken to control the spread of Giant Hogweed on river banks. 2) Should highlight important role of Usk Barrage and environmental advantage of preventing greenfield development elsewhere. 3) Seems to be emphasis on fisheries for benefit of fishermen not environment.	1) Only tackled on NRA flood defences at Usk Town. 2) Barrage proposal rejected. No longer an issue. 3) Noted.
Gwent Land Reclamation Joint Committee	1) There are other smaller schemes within the area which are on the Derelict Land Programme - may want to include them. 2) Have been involved with restoration of Mon-Brec Canal between Pontypool and Newport. 3) Suggest publication giving details for creating special habitats would be helpful.	1) Update consultation document.. 2) See Issue 33. 3) Noted.
Mr Richard Howell	1) What is justification for Class 2 target for Clydach. 2) Issue 7 - significant minewater input to the Clydach may cause water quality problems.	1) Will not be used for potable supply therefore no justification for Class 1 and extra investment that this would entail. 2) Does not affect water quality to that extent.
Institute of Chartered Foresters	1) Map 21 and text seem to suggest potential for substantial new woodland planting.	1) Noted. Would be subject to Forest and Water Guidelines.
Inland Waterways Association	1) Mon-Brec Canal a tourist attraction - should be in summary document. 2) Farm slurry was draining into the canal...could have caused water quality problem. 3) Suggest taking water from major tributaries rather than Usk. 4) Generally speaking, very little conflict between angling and boating users of the canal.	1) Included in Action Plan Uses. 2) Noted, Will be investigated as part of Issue 1. 3) See Issue 12. 4) Noted.

Respondent	Main Points raised	Response/reference in Action Plan
Mr R J Lyle	1) Far too much water abstracted from the river above the confluence with the Senny so that fish run too late for fishing season.	1) See Issues 11 & 12.
Llanover Estate Office.	1) Add to vision " to advise and assist landowners and riparian owners in the daily management of the catchment" and " to work with the United Usk Fishermen's association in the management and improvement of the Usk fishery. 2) Need to give priorities for resources in CMP. 3) Suggest appointment of dedicated fisheries managers. 4) Should remove trees at risk rather than emergency removal. 5) More must be done to stop spread of Japanese Knotweed and Giant Hogweed. 6) Are any steps being taken to remedy effects of alder fungus. 7) Need to add more detail about informal agreements between canoeists and landowners. 8) Should mention Tredegar Estate Fishery.	1) Included in Action Plan Vision as appropriate. 2) Included in Action Plan. 3) Discussion ongoing as part of fisheries review. 4) Routine workload. 5) Noted. See Issue 18. 6) Monitoring spread of it. 7) More detail in Action Plan Issue 31. 8) Noted.
Monmouthshire, Brecon & Abergavenny Canals Trust	1) Dredging of canal by Torfaen Borough Council and British Waterways between Goytre and Five Locks, Cwmbran would help water quality. 2) If an automatic sluice was installed at Brecon Weir there would have to be a connection with the lock at Brynich. 3) Support the construction of the Usk Barrage.	1) Noted. Will be considered in investigations in Issue 1. 2) Noted. 3) Noted.

Respondent	Main Points raised	Response/reference in Action Plan
RSPB	1) Issues 27 & 28 option 7 - add " only if they are demonstrated to be causing significant adverse impact on fish stocks". 2) Issue 16 Opt.5 could be cross-referenced to Issue 28, Opt. 2. Trout could also benefit in option 5 issue 16. 3) Issue 19 Opt.1 should be addressed by CCW etc as part of biodiversity targets. 4) Issue 30 should include reference to illegal bank protection works by landowners. Middle and lower reaches of the river should be free to meander and move across floodplain.(unless valuable assets at risk).	1) Option excluded. 2) Noted. 3) See Issue 19, Action 1. 4) Included in Issue 30.
Royal Commission on the Ancient and Historical Monuments of Wales	1) Identical wording "where cost effective" Ancient Monuments and Listed buildings should always be protected - cost effectiveness not relevant to unique structures.	1) Update future consultation documents as appropriate.
The Salmon and Trout Association	1) 'Catch and release', knotless mesh landing nets and better fishing methods should be encouraged. 2) Season should finish on 30th Sept. 3) Should there be a bag limit of 2 fish per day? 4) NRA must do something about fish-eating birds. 5) Comment on interpretation of evidence that abstractions affect salmon migration. - DCWW should have restricted time for abstraction -ie when flows above 18cumecs unless compensation flows. - How is DCWW abstraction at Rhadyr & Llantrisant monitored? How often and is it independent of DCWW? - concern about Mon-Brec canal abstraction at Newton Weir - is it exempt from any control? are BW liable if any impact on river? How much water is being taken now/in the future? When will fish passage at weir be improved. 6) NRA should produce timetable for implementation of Mawles' recommendations.	1) See Issue 27, Action 2 and Issue 28, Action 4. 2) See Issues 27 & 28, Action 1. 3) See Issue 28, Action 4. 4) See Issue 27 & 28, Action 6. 5) See Issues 11 & 12. 6) See Issue 27.

Respondent	Main Points raised	Response/reference in Action Plan
Sports Council for Wales	1) Target for Boating, Recreation and Navigation should add "to identify opportunities for"	1) Update future consultation documents.
Water Power Engineering	1) Should mention potential for Hydropower.	1) Update future consultation documents.
Welsh Canoeing Association	<p>1) Urge NRA to consider an evaluation of the catchment in terms of its attractiveness to each type of canoeing. There are areas where canoeing could be further developed without need for access agreements ie touring.</p> <p>2) Canoeing under represented, particularly Mon-Brec Canal. Map inaccurate as far as extent covered by "informal agreements" is concerned.</p> <p>3) Should mention "slalom courses eg Sennybridge and Llangynidr.</p> <p>4) Touring canoeing should be classed as boating.</p> <p>5) Define levels of water beneath which canoeing should be discouraged.</p> <p>6) Restrict access to small number of points.</p> <p>7) Where there are rights of navigation - NRA should create access.</p> <p>8) Would support an overall liaison group where all legitimate interests were represented.</p> <p>9) enhancement of coarse fisheries may have a detrimental effect on already fragile access agreements.</p> <p>10) Where barriers to fish migration are to be removed - must take into account other recreational users.</p> <p>11) Ensure that there is adequate access to the water at the tidal limit.</p> <p>12) Define head of navigation</p> <p>13) Change target " to support current and future uses".</p>	<p>1) Noted.</p> <p>2) Update consultation document.</p> <p>3) Update consultation document.</p> <p>4) Noted.</p> <p>5) Noted.</p> <p>6) See Issue 31, Action 1.</p> <p>7) See Issue 31, Action 2.</p> <p>8) See Issue 31, Action 2.</p> <p>9) Noted.</p> <p>10) Installing fish passes rather than removing weirs.</p> <p>11) Issue 31, Action 1.</p> <p>12) Noted.</p> <p>13) Update future consultation documents.</p>
Welsh Office - Environment Division	<p>1) Issue 27 - Change "to cull" to "to shoot some of these birds (as an aid to scaring)".</p> <p>2) Update references to development plan progress.</p>	<p>1) Option excluded.</p> <p>2) Update consultation documents.</p>

Respondent	Main Points raised	Response/reference in Action Plan
Welsh Office Agricultural Department	1) Issue 3 - note that you do not see any short term improvements in water quality if farm waste schemes are built. 2) Include reference to WOAD Habitat Scheme. 3) Support need for research into fish-eating birds.	1) Overall benefit will be long-term. 2) Include in final Action Plan and future consultation documents. 3) Noted. See Issues 27 & 28, Action 7.

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