

Conservation Access and Recreation

Report 1999/2000



ENVIRONMENT
AGENCY

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For your reference, the projects submitted into this report have been categorised and colour coded under six common themes

-  Implementing Biodiversity Action Plans
-  Conservation, Access and Recreation
-  Social inclusion
-  Surveys
-  Fisheries, Recreation, Conservation and Navigation (FRCN)
-  River restoration and re-engineering

Foreword

ENVIRONMENT AGENCY



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EA: RECREATION + NAVIGATION - BOX 3

I am pleased to present the fourth annual Conservation, Access and Recreation report from the Environment Agency. This will be my last as Chief Executive and I would like to thank everyone involved for their dedication and hard work, especially in a time when the demands on all of us are significantly high and show no signs of lessening.

In this past year of millennium celebrations, we aimed to encourage more people, of all ages and from all walks of life to go into their own local environment, to explore its potential and enjoy its benefits. Initiatives to improve awareness and understanding were launched with great success. Guides dealing with small sites and whole catchment areas, an educational CD-ROM bringing the environment into the classroom alongside all the other projects detailed in this report, all served to meet this purpose.

To present more information about the successful work each Region has achieved, this year for the first time a regional introductory paragraph has been developed. I hope this will illustrate even better the breadth and depth of recreation and conservation work carried out by the Agency.

Work has also continued throughout the year to increase our knowledge of cross functional environmental issues. Research and development has continued to be the key to this success, providing invaluable information in areas such as the recreational use of Agency assets, the restoration potential of navigations, continued support for UK Biodiversity Action Plans and the Agency's response to the open access debate.

As always, these successes could not have been achieved without the support of our partners, and I am grateful for their continuous co-operation.

Finally, responding to the Agency's continued commitment to use the latest information technology available, this report again will be presented on the Agency's web site. I hope you will find it useful in whichever form you read it.

Ed Gallagher
Chief Executive

National summaries

Recreation



Partnerships

As much of the Agency's recreation work involves influencing others to think positively about water-based recreation, many of our projects are partnerships with other organisations.

At a national level, our partnership with the Countryside Agency and Sport England continues through the sharing of information and advice in the areas where we all have an interest. During 1999, the Memorandum of Understanding between our organisations has been updated. A new action plan is being developed and will be formally agreed at a joint staff training event in autumn 2000. Following this, regional and area staff from all three organisations will use the action plan to influence their work.

Access

Our partnership with the Countryside Agency was effective in helping with the Government's access initiative. As part of their review of access to 'other forms of countryside', we, together with our Regional Fisheries, Ecology and Recreation Advisory Committees, provided information and advice on the issue of access to and onto water. A report, *Improving Access to Woods, Watersides and Coast* was published in summer 2000 following this work. The Agency provided recommendations to Government and is continuing to provide information and advice as part of our role to promote the use of water for recreation. We have also been invited by the Countryside Agency as an observer on the National Countryside Access Forum.

One of the difficult issues is that of canoe access to privately owned rivers. As part of our commitment to achieve successful voluntary agreements between canoeists, anglers and landowners, the Angling and Canoeing Liaison

Group (ACLG), which the Agency chairs, published *Agreeing Access to Water for Canoeing*. This has been widely distributed among interest groups and we look forward to sharing good practice from successful initiatives.

Research and development

Important research on the recreational use of flood banks had been completed early in 1999. To maximise the value of the research and the lessons learned, a number of workshops were hosted throughout the regions, where flood defence and recreation staff could discuss the results and identify what is needed to make further progress. Following these very successful discussions, significant work has begun on the public safety aspect of our recreation work.

We received the results of research carried out by the Field Fare Trust on access for the disabled. This is currently being translated into prioritised actions, which we will then take forward within all our recreation work. We have also worked with British Waterways (BW) on disabled access to waterways, and will continue to share expertise and experience.

Other research initiatives included a number of joint projects. An important area of work led by BW, to which we have contributed, is a practical approach to sustainable recreation. The research is using observation studies to measure the impact of a variety of recreational uses on the waterway habitat. First results will be available this winter.

The Agency has also contributed to a major project, *Making the Case for Leisure*, sponsored by the Institute of Leisure and Amenity Management (ILAM) and a number of other leisure-related businesses, and managed by the Local Government Association. The results will be available shortly, and should help to demonstrate the benefits of leisure to both quality of life and local economies.

Promoting water-based recreation

As part of our role to promote recreation on or near water, we have raised awareness of the importance of waterspace as an amenity in a number of ways, including comments on the Department of Culture, Media and Sport (DCMS) consultation on Local Cultural Strategies, and Regional Cultural Forum.

During the year, the Department of Environment, Transport and Regions (DETR) carried out a review of its Code of Practice on Conservation, Access and Recreation, which applies to the Agency (this report is part of fulfilling that code). We commented on the code, and used the publication of the updated version to re-emphasise the importance of our recreation work in promoting the understanding, appreciation and enjoyment of the water environment.

Conservation



UK Biodiversity Action Plan

We are now lead partner or contact point for 39 species and five habitats under the UK Biodiversity Action Plan (UK BAP). We continue to deliver our assigned actions through regulation and operational activities, plus numerous collaborative projects. We have recently published Focus on Biodiversity. This is our first comprehensive report summarising the Agency's obligation and contributions to wildlife conservation and, in particular, progress in delivering the UK BAP. It covers all aspects of our conservation work over the past five years, highlighting national and regional examples of project work.

Research and development

Our research and development programme continues to support the UK BAP, with major progress being made on issues such as: DNA analysis of otter spraints; genetic studies into black poplar; reintroduction strategies for triangular club-rush and water vole; dispersal dynamics of southern damselfly; the feasibility of signal crayfish control; captive breeding of twaite shad; and survey work of several mollusc species, including depressed river mussel and freshwater pearl mussel. The study on the impact of fishing tackle on mute swans has continued, with detailed analysis of the type of tackle recovered from swan rescue incidents being undertaken.

River Habitat Survey

Our River Habitat Survey (RHS) method continues to be implemented in various ways. The RHS database now extends to more than 13,000 sites in the UK, and RHS has helped, with geomorphological and other additional information, to determine local work programmes for flood-defence works and the best sites for sustainable river rehabilitation. A major project linking RHS with the British Trust for Ornithology's Waterways Bird Survey is well advanced. An initiative to develop non-statutory river

habitat objectives was approved by the Agency Board and development will be supported by a research and development project.

RHS has also been used as a standard method for surveying more than 400 stream and river sites across the UK in the Countryside 2000 survey. It will also be tested and refined to allow it to become a recognised European standard for assessing the hydromorphological character of rivers as required by the EC Water Framework Directive.

Riverside Explorer CD-ROM

Two years' hard work has resulted in our new interactive educational CD-ROM *Riverside Explorer*. This was launched by Sir John Harman and David Bellamy and has been distributed free to all 28,000 schools in England and Wales. Based on our River Habitat Survey (RHS) database, and developed through the Agency's research and development programme, the CD is the first of its kind and provides a great opportunity to feed RHS information into existing educational studies. It is specifically tailored to the National Curriculum key stages 2 and 3, in particular the science, geography and ICT components. The dataset included on the CD provides a unique opportunity to illustrate the range of rivers and their features occurring in England and Wales, and the impacts of the modifications resulting from urban, residential and agricultural development. It allows pupils to explore real photographs and real data from rivers on-screen and also to carry out a survey of their own in the classroom. Teachers have tested the system during the development and we hope that *Riverside Explorer* fulfils our aims of helping pupils understand why rivers look different and making the link between the environmental quality and sustainable management of rivers.

The aim is to provide a teaching resource, so that pupils can think and behave as scientists and geographers. Example units of work illustrate possible ways to use the database information to protect or improve our rivers and their wildlife. Cross-links with other datasets are important and there is a mass of information on individual rivers that is available, we have listed suggestions and sources of information both on our website and as publications. The link to maps is a crucial aspect of *Riverside Explorer* and we are most grateful to the Ordnance Survey for their support.

Collaborative projects

We are pleased that three major projects covering rivers, coasts and wetlands have been successful in obtaining European Union funding. We are principal partners in each and have seconded Agency staff to English Nature to help with two. The RSPB led the project on the 'wise use of wetlands', which includes the Somerset Levels as a study area, and where our latest strategy for managing water levels was launched by the Environment Agency Chairman, Sir John Harman.

Fisheries



Managing freshwater fisheries

Our vision for fisheries is that all waters of England and Wales will be capable of sustaining healthy and thriving fish populations and everyone will have the opportunity to experience a diverse range of good quality fishing.

Under the Environment Act 1995, the Agency has responsibility for the maintenance, development and improvement of salmon, freshwater fish and eel fisheries in freshwaters, estuaries and coastal waters in England and Wales. This involves both regulatory and operational aspects. In certain areas we act as a Sea Fisheries Committee under the terms of the Sea Fisheries Regulation Act 1966, where we have powers to regulate sea fisheries within three miles of the coast.

Wider environmental duties also apply to all of our functions, such as taking account of features of special interest, and the need to further their conservation when carrying out water management functions. The Agency's fisheries management function is integrated with wider water management activity including: regulation of discharges into and abstraction from surface waters, flood defence, navigation, recreation and general conservation activities.

Review of fisheries legislation

The Government's independent review of salmon and freshwater fisheries in England and Wales provides a unique opportunity to shape future policy.

The Review Group's report, which contains 195 recommendations, was published in March 2000. The report was well received both externally and within the Agency. Comments on the report were invited by the end of July, and we responded with our views. The government will respond to the review by the end of 2000.

We are looking forward to the prospect of freshwater fisheries management being developed to offer the best possible fishing opportunities while ensuring the sustainability of our natural fish stocks.

Funding

Direct expenditure on fisheries management by the Agency is approximately £23 million annually, of which about two-thirds is raised by licence duties from anglers and netsmen. The remaining third is provided in the form of grant-in-aid from Government, a reflection of the wider social benefits that accrue from fisheries management activity.

During the year, MAFF announced a plan to reduce the grant in aid for fisheries in England by £1.5 million in 2001. Modelling the impacts of this cut began during the year, as did plans for managing reduced expenditure. We have indicated that additional funding is required as opposed to a cut, and our work to conserve salmon stocks will be greatly reduced as a result. Other interested organisations have also supported our bid for increased funding for 2002 and beyond. The Review Group recommended that additional Government funding should be provided for Agency fisheries work.

Licence fees

Rod fishing licence duties were reviewed during 1999, and Ministers approved a £1 increase in price for both salmon and coarse and trout licences to take effect from 1 April 2000. The proposals drew only 8 objections from interested parties.

Year-on-year licence sales were similar to 1998/99, (over 1.1 million sold) with a reduction in the number of salmon licences sold. As part of the 10-year contract awarded to Post Office Counters to sell rod licences, a telephone sales service was available for the first time in 1999. The sales volume was small, but it is anticipated that demand will increase in 2000/01. An automated system of issuing licences has now replaced the manual system used in 1999. There are also 300 fisheries and other agencies selling licences, most of which have extended hours.

A licence specifically for beginners was developed during the year and was introduced in April 2000. For £1, beginners can fish for one day. If they then buy a season licence, the £1 will be refunded.

£1 million fisheries programme to benefit fishing

The increase in rod licence duties helped fund a programme of projects to develop and improve fisheries. The programme continued the Agency's work of restoring fish habitats in rivers, including improvements to spawning and nursery areas. This was in addition to the Agency's routine expenditure on fisheries in England and Wales. The projects are aimed at benefiting anglers, particularly in urban areas, to encourage youngsters and, wherever



possible, cater for the disabled. On many projects we worked in close partnership with angling clubs, local authorities, conservation groups and others to make the most of available resources.

We often follow habitat improvements with a stocking programme. During the year, 2.8 million fish were stocked. The projects restored fish populations to over 100km of previously fishless or low-value fisheries.

Conserving salmon stocks

Conserving salmon stocks is an important priority both internationally and at home. New byelaws were confirmed by Ministers and applied from 15 April 1999 for 10 years. The byelaws delayed the start of the net and rod fishing season, and introduced mandatory catch and release during the early season. Some net fisheries were granted an exemption to fish for sea trout provided that all salmon caught are returned. A video demonstrating good handling techniques for releasing salmon was provided free of charge to all licence holders on request. In addition, a magazine explaining the new byelaws, along with other issues, was mailed to all salmon anglers in August.

Ending the close season on canals

The coarse fish close season was reviewed nationally by the National Rivers Authority (NRA) in 1994. As a result, in 1995 the close season was dispensed with on stillwaters (with the exception of some SSSIs) and retained on rivers, streams and drains. The NRA's proposals for a consistent close season on all canals was not endorsed and the status quo remained.

Following research into the effects of a close season on fish stocks, breeding waterside birds and the wider environment, the Agency consulted on a proposal to

dispense with the canal close season. The findings were submitted to the Fisheries Legislative Review Group in January 1999 for consideration in the broader context of close seasons. The Ministry of Agriculture, Fisheries and Food (MAFF) subsequently advised the Agency to progress with the byelaw application. Two byelaws were promoted to dispense with the close season on canals in England and Wales respectively. The former received MAFF approval in March 2000.

Improving public awareness

As part of the fisheries marketing strategy, a magazine was produced and mailed to all 1999 licence holders. The mailshot had a range of objectives that included:

- informing our customers of the work we do for their benefit;
- promoting good practice among anglers;
- preventing a fall in licence sales by stimulating interest in fishing.

The impact of the magazine will be assessed by monitoring licence sales along with an analysis of the results of a telephone survey.

In addition to the magazine, a leaflet was produced promoting good angling practice to protect wildlife. The Golden Rules leaflet explains how to minimise the impact of angling on the environment.

Another awareness campaign focussed on informing buyers and sellers of wild salmon and sea trout of the relevant regulations. A leaflet Handling and Sale of Wild Salmon and Sea Trout, and an accompanying letter, was mailed to all fishmongers, hotels, inns and restaurants in England, Wales and the Scottish Borders.

Research and development

One of the major concerns of the Agency is the apparent deterioration of the coarse fish stocks of major river fisheries. Research and development was used to evaluate the ecology and management of coarse fish to identify those instances where factors have been found to limit the development or sustainability of the endemic fish stocks. The Agency reviewed the understanding of the basic requirements of the various fish species and how they influence the status of fish populations. The report provided a number of conclusions and recommendations regarding fisheries management.

Navigation



Partnerships with British Waterways

Following encouragement by the Department of the Environment, Transport and Regions (DETR), the Agency and British Waterways (BW) have successfully worked together on a number of projects, benefiting those who use our waterways.

The most significant one has been the development of a joint navigation licence - 'Gold licence' - which allows free access between BW and Agency waterways to those who buy this premium licence. By Easter 2000, 500 Gold licences had been sold. Work on joint licensing continues.

Other initiatives include:

- joint boaters code, where we are working with user groups and the trade;
- joint projects with the boat hire trade;
- joint approach to health & safety including Strong Stream Warning;
- access to each other's training courses.

We look forward to continuing work with BW on these and other projects of mutual benefit.

Together with BW, the Agency is an active member of the Association of Inland Navigation Authorities (AINA) and will continue to support the fulfilment of AINA's Strategy 'Steering a Fresh Course'.

Navigation restoration

As the number of navigation restoration and development projects grows, the Agency was asked to prepare guidance to help those involved with restoration understand the Agency's position, and the environmental appraisal process.

During 1999 Navigation Restoration and Environmental Appraisal - A Guidance Note, was prepared and consulted

upon. As part of this, an Agency policy statement was developed to explain how our wider responsibilities impact upon restoration projects. The guide was published and distributed in July 2000.

Related to this was our work with the Inland Waterways Amenity Advisory Council (IWAAC), to help with the review of their Restoration Priorities Report. We are continuing to help them with this and look forward to the publication of the revised report.

Managing our assets

Having developed a national asset management system for our navigation structures, we have used this system to prioritise our capital programme and identify the most urgent projects. Following several years of under-investment due to lack of resources, a number of structures are now a risk to health and safety. Using the asset management system, we have identified how much investment is needed over a five year period. This information is used within our bid to government for additional funds.

We have been successful in securing external funding for new enhancement projects. The most significant of these is the creation of a new waterway link on the River Ouse, including building a new lock at Denver Sluice. For this work, £600,000 has been secured from European funds.

We are continuing to investigate alternative sources of funds to help pay for non-statutory works.

Promoting our waterways

Through a number of initiatives, including exhibitions, shows and publications, we have continued to promote the use of our waterways, both nationally and regionally. River Views, our biannual newsletter, was published and distributed widely. Feedback continues to be positive.

We attended a range of waterway shows: the National Waterways Festival in Worcester; the London Boat Show; the International Canoe Exhibition in Birmingham, as well as many regional and local events.

Our work with the trade continued via the British Marine Industries Federation. We followed a joint research project, on customer views of the hire-boat trade with a successful workshop to discuss the issues raised. With a declining hire-trade industry, our work in this area will continue.

We look forward to continuing partnerships with other organisations and our customers in the future.

Regional summaries

For your reference, the projects submitted into this report have been categorised and colour coded under six common themes

-  **Implementing Biodiversity Action Plans**
-  **Conservation, Access and Recreation**
-  **Social inclusion**
-  **Surveys**
-  **Fisheries, Recreation, Conservation and Navigation (FRCN)**
-  **River restoration and re-engineering**

Anglian Region



Collaboration, partnership and consultation with others enable the Anglian Region of the Environment Agency to achieve our objectives whilst making best use of our resources. In some cases we are even able to support initiatives beyond the constraints of our own landholdings. Examples of this include the Boston Washbanks project, led by the Agency and in partnership with RSPB, Boston Borough Council and Lincolnshire County Council, to enhance conservation and improve recreational facilities and public access. Other examples include the development of 18km of public navigable waterways on the River Ouse and the Green Quay Environmental Visitors' Centre, which forms part of the North Sea Haven Project in partnership with Kings Lynn and West Norfolk Borough Council, RSPB and English Nature. There is also the Fens Waterways Regeneration Strategy, which implements recreational improvements throughout the Fenland area, a conservation pond at Brampton, and at Barrington a disabled access path and bridge over the River Rhee. The region has also been involved in the Millennium Green on the River Gipping, a Constable Country Walks leaflet, the River Stour navigation award, information boards at Slaughden and canoe sponsorship on the Broads.



Redgrave and Lopham

Redgrave and Lopham fen is one of Britain's largest and most important valley fens. Small ponds within the fen provide a feeding area for the Great Raft Spider, which is a Biodiversity Action Plan species. For 35 years Redgrave and Lopham Fen suffered from drying out caused by groundwater abstraction and over-dredging of the River Waveney. Since 1996, this damage has been tackled through a major partnership project, involving the Environment Agency, Essex and Suffolk Water Company, the Suffolk Wildlife Trust, who own and manage the site, and English Nature. The original chalk groundwater regime has been restored by moving the public water supply borehole. Extensive fen restoration work has been completed, including the introduction of novel grazing and peat-stripping techniques. 50 per cent of the £3.4 million project, was funded from the European L'instrument Financier pour l'environnement (LIFE) fund, and has won many awards, including the Chartered Institution of Water and Environment Management (CIWEM) Chris Binnie award for sustainable water management, 1999.

Euro cash award boosts Boston tourist bid

A major injection of European funding has helped improve tourism, recreation and conservation opportunities in the Boston area of Lincolnshire.

Nearly £800,000 has been awarded to the project to enhance conservation and improve recreational facilities and public access. It will complement proposed improvements to the area's flood defences, which include the creation of some 78 hectares of saltmarshes – a rare and valuable wildlife habitat.

The Agency, in partnership with the RSPB, Boston Borough Council and Lincolnshire County Council is working on the project, which is expected to stimulate renewed interest in the Wash foreshore and River Witham.

The Agency is assuming overall responsibility for the project and is providing matching funding. The package of improvements includes conservation enhancements and access improvements to an RSPB Nature Reserve. Twelve hectares of brackish and freshwater habitat are planned for Freiston Shore, and interpretation and information boards, as well as improved signage, will be introduced at various sites.

Other schemes include improved car parking, upgrading of existing roads and tracks, the renovation of a bird hide managed by Lincolnshire Bird Club and an access project officer and Wash farmland biodiversity officer will also be employed by the RSPB.



David Bellamy launches the project at a special open day.



A map to highlight improvements to tourism in Boston.

Angling platforms for the disabled

Angling on the River Ouse at Huntingdon Riverside Park is controlled by Huntingdon Angling and Fish Preservation Society. This is a very popular venue both with match and pleasure fishermen alike.

Mick Northrop, a keen wheelchair-bound angler and member of the Huntingdon Coalition Of Disabled People (HCOOP) had organised a petition and approached the local authority requesting safer access to the river bank. The Agency secured funding and an in-house workforce installed four platforms. Huntingdon District Council financed the construction of access paths. The newly installed platforms should continue to provide many years of safe, easily accessible fishing in pleasant surroundings for many years to come.



Disabled angling platform in use.

Wainfleet - River Steeping Improvements

A river improvement project that centres on the Lincolnshire Market Town of Wainfleet has been implemented. The project includes the provision of fishing platforms, car parking, and both in-river and bankside ecological improvements.

During 1997 a submission for external funding was made for a project to bring fresh vitality to an area of 42 parishes in East Lincolnshire, with the majority of proposals being focused on the three market towns of Spilsby, Alford and Wainfleet. Following the success of this bid, now known as the 'Three Towns' Rural Challenge bid, in principal funding of £90,000 (East Midlands Development Agency (EMDA)), and £80,000 (European Regional Development Fund (ERDF)) was allocated towards a potential £200,000 river improvement project of the River Steeping, Wainfleet. This project presented an opportunity to involve the Agency in a prestigious local project that has already secured significant European funding. The project intends to increase recreational interests in the local area and create an improvement to Agency-owned land assets.

Specifically the project comprises:

- the installation of 50 new angling pegs with associated car parking;
- localised deepening of the river to create a diversity of depths for the fish community;
- the in-river installation of more than 2,000 metres of coir fibre roll, part of which lines the riverbank and the rest as berms, backfilled with river dredge, protruding into the river channel. The coir roll and berms have been planted with indigenous aquatic plants;
- osier willow tree planting between fishing platforms, and Hawthorn hedging to screen car-parking areas;
- the Environment Agency is leading this project and overseeing the implementation of this scheme on behalf of the Joint Parish Council Group.



Examples of river improvements at Wainfleet.

Midlands Region



The Midlands Region is involved in many river restoration partnership schemes, such as the Severnside Countryside Management Project in Gloucestershire, the Severn/Vyrnwy Land Management Initiative, Landwise Farm Visits Scheme, the River Erewash Strategy and the On Trent Project. In addition to these major schemes, the fine details of our biodiversity plans have not been neglected, with work during 1999/2000 on key species (otters, water voles, crayfish, barn owls, and black poplars) and important designated sites.

In the Upper Trent catchment, our input to the planning process has persuaded a developer to create a network of new footpaths alongside the River Tame. Initiatives concerning recreation and the River Severn included the publication of a comprehensive guide to canoeing and a project to survey recreational users to help us form a recreational vision for the river. Improvements were made to car parks, pathways and platform facilities for disabled anglers under various schemes on the Rivers Severn and Tern, and pools at Telford. A new Fishing Guide was published and the region continued to be involved in representing the Agency on a national visitor safety to the countryside group.

Great crested newts

Great crested newts are a threatened species. Totally reliant on ponds for breeding purposes, the newts are in decline because of loss of habitat and urgent work is needed to both identify existing and create new breeding sites. Having initiated re-surveys of great crested newt populations in both Montgomeryshire and Shropshire, in partnership with the county Wildlife Trusts and local volunteers, we funded the production of leaflets designed to raise public awareness of the requirements of, and threats faced by newts. The leaflet also contains a survey record sheet so that details of newts and other amphibians can be logged by the Wildlife Trust and protective measures taken in the future. There is also an identification guide to help distinguish between great crested, smooth and palmate newts, the three species native to the United Kingdom. Three new ponds were constructed close to existing populations in an attempt to increase numbers rather than merely protect remaining populations. It is intended to construct at least two new ponds each year for the next five years to further boost amphibian populations.

Aerial survey of rivers in Upper Trent area

Using a police helicopter from Gloucester, the key urban rivers in the Upper Trent catchment were videoed from the air and slides were taken of key sites. The rivers covered included the Tame (90km), the Cole (45km) and the Blythe Site of Special Scientific Interest (SSSI) (45km). The videos are of very good quality and are extremely useful for planning habitat improvement works and the development of riverside paths on these highly modified rivers. Other uses include planning and development control work where it is possible to show both developers and the Planning and Development Control Departments of the Agency the site in the context of the catchment in a quick and easily understandable way. Aerial surveying can also be helpful in identifying sites of archaeological importance and can reveal many features that cannot be distinguished from the ground. Slides taken at the same time have proved extremely useful for talks and publicity of all types.



Great crested newt leaflet.



River Cole in Coleshill West Midlands.

River Avon navigation safety warning scheme

The first River Avon navigation hazard-warning scheme was drawn up in 1983 between the Severn Trent Water Authority and the Association of Pleasure Craft Operators (APCO). The main objective of the scheme was to be able to warn boat hire companies and boat skippers of when river conditions were hazardous to navigation. APCO membership has now declined in Warwickshire to such an extent that they can no longer provide the necessary operating personnel for the warning scheme and therefore a revision of signage, location, operators and signatories was undertaken. A revised scheme was agreed between the Agency and the two navigation authorities on the river, the Lower Avon Navigation Trust (LANT) and the Upper Avon Navigation Trust (UANT). The Agency is now able to provide up-to-the-minute information 24-hours a day on agreed river-level thresholds, thus considerably improving safety, especially for inexperienced boaters. A telephone warning that trigger levels have been reached is provided to a cascade system of communication that involves both navigation trusts and key hire-boat operators. The signs also carry the constant message that it is dangerous to navigate at times of high flow. The new scheme provides 68 signs at 40 locations at a cost of £20,000. The signs are designed to be tamper-proof and robust even under extreme conditions.



River Avon navigation warning scheme.

Toton Washlands

This Agency site, situated along the banks of the River Erewash near Long Eaton, is well used by both walkers and cyclists. A surfaced cycleway on top of the floodbank enables cyclists and ramblers to use a circular route. However, concerns raised by the police about young people using the site, causing disturbance to local residents and others using the link path from the Erewash Canal to the riverside land needed to be addressed. In partnership with British Waterways, Erewash Borough Council and the police, a youth shelter has been constructed to act as a focal point for young people. Although the shelter is on Agency property, the local authority will lease the land that it sits on to enable them to undertake all maintenance of the structure and its environs. Work undertaken by Thames Police has shown that these shelters work by providing an area that the young can call their own. In addition, the Agency has installed special gates improving access to the site for disabled people using Royal Association for Disability and Rehabilitation (RADAR) special keys at entrance gates. Although the entrances previously permitted wheelchair access whilst deterring motor cycles, they were not suitable for motorised buggies. The new gate arrangements improve access for disabled people who use electric motorised transport by creating not only an opportunity to enjoy the riverside trail but also establishing a link across Agency land from the canal to a local supermarket.



Toton Washlands - Youth Shelter.

North East Region



There have been a wide variety of conservation and recreation projects undertaken by the Agency staff this year, many in partnership with other organisations. This has involved improving the recreational values of areas and enhancement of the environment. There have been a number of millennium projects such as the Woodland Trust's 'Millennium Woodland on Your Doorstep', which focuses on providing ponds as the local feature of the woodland. Another millennium project was the 'Turning the Tide' project on the Durham coast, which included habitat restoration through the removal of spoil heaps from the coal industry, the provision of cycleways and interpretation centres with community involvement.

The community has also been involved in the restoration of a local Nature Reserve at Windy Nook in Northumbria, with other environmental improvements taking place on the Rivers Skell, Till, Team, Swale, Ure and Nidd.

A number of Biodiversity Action Plans have been delivered successfully, throughout the region. Other focuses include improved access, with a significant part of the Trans Pennine Trail and the Five Weirs Walk routed along riverside.

Harrogate breakfree pack

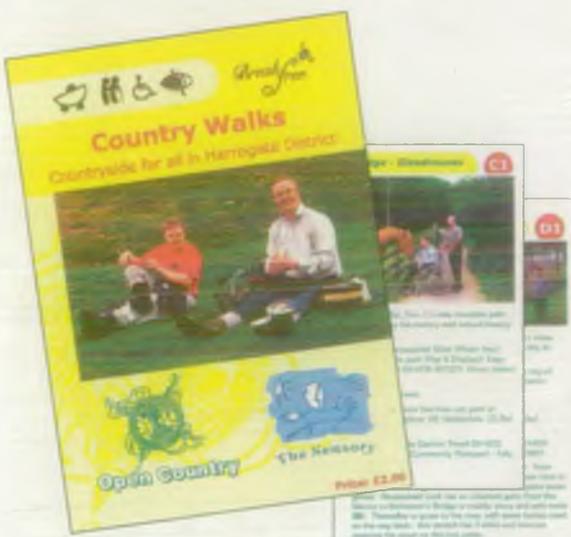
Breakfree is a partnership providing information for people who have difficulty getting into the countryside. These include disabled people, those with minor impairments, people who tire easily and families with prams and pushchairs.

The breakfree pack for Harrogate district was produced by Open Country, a local project group, in partnership with the Sensory Trust, Harrogate Borough Council, Environment Agency, Yorkshire Water, British Waterways and others to provide everyone in the area the opportunity to enjoy their local countryside.

A total of 17 cards give information on country walks around the district, which are suitable for all to enjoy, many of which are along rivers or around reservoirs. They give all relevant information, from steps, gates and stiles found en route to footpath surfaces, gradients and even location of benches. They also include concise information on how to get there, what you can do, features of interest, opening times, and facilities such as toilets, cafes, pubs and the like.

Some of the trails are along cycle tracks or are suitable for companion cycling, others are through existing parks or gardens, and some are along rivers, canals and reservoirs. All routes were tested by local disabled groups, which resulted in some access problems being identified and rectified.

The packs are on sale in local tourist information offices, shops and from Open Country. It is hoped that sales will be sufficient to make the pack self-sustaining, with the costs of future reprints and additions being covered by profits from the sale of the current packs. The long-term aim is to have packs covering the whole of the North east Region.



Selection of walks from the Harrogate breakfree pack.

Northumbrian Rivers Project

This project was initiated by the Agency in 1998 and is funded under the European Northern Uplands Objective 5b Scheme. The major partners are the Farming and Wildlife Advisory Group (FWAG) (lead partner), Ministry of Agriculture, Fisheries and Food (MAFF), the Environment Agency, The Northumberland Estates, Forest Enterprise, Northumberland National Park, the Tyne Riparian owners and occupiers Association, Ministry of Defence (MOD), Northumberland County Council and One North East. The Northumberland 5b area covers the rural part of the Tyne catchment, most of the Coquet and North Northumberland.

The aims of the project are to:

- support works in and around watercourses to improve habitat, accessibility and water quality for the benefit of fish and other wildlife;
- increase awareness among local people of how valuable, but vulnerable, their rivers are through a programme of training events;
- market the fisheries and wildlife of the area to benefit the rural economy through increased tourism.

This £750,000 project will be completed by June 2001. We are on-target to deliver all the important objectives of the project including 50km of riverbank fencing as well as several ambitious in-stream works. These include our flagship project to install a fish pass on the Devils Water at Dilston, restoring about 25km of potential spawning area to migratory fish on the Tyne.

It is expected that experience gained during the current partnership will be carried forward by a future initiative tasked to undertake similar but broader objectives.



Decreased pressure from grazing leads to healthier rivers.



Fish pass at Dilston.

The York Millennium Bridge Project

Environment Agency staff, have been involved in a trustee role in 'Marking the Millennium' in York. The project has enabled the construction of a new contemporary style footbridge for pedestrians and cyclists across the River Ouse in York. Integrated with this are improvements to the adjoining New Walk and Terry Avenue promenades alongside the River Ouse, that forms an attractive circular riverside walk to the centre of the city, by Clifford's Tower.

The £4.2 million project is supported by the Millennium Commission using funds from the National Lottery, City of York Council, Joseph Rowntree Foundation, Shepherd Building Group, CGU insurance company and Persimmon Homes.

Design work for the riverwalks, encompassing community consultation with residents and local ecological, angling, boating, heritage, disabled and safety interests, took place during 1998-1999, and was underpinned by a landscape strategy. The aim of this was to maximise the value of the bridge, which itself will become part of the National Cycle Network.

Viewing platforms have been introduced at points where people can obtain an unobstructed view of the river, and new seating with spaces for wheelchairs, lighting, paving and information signage has also been installed. Fisherman's steps have been introduced to give discrete access for angling whilst helping to prevent bank erosion created by trampling. Adding to this, the flora interests of the river bank have been enhanced by the planting of native hedging and areas of shrubs, and spreading wild flower seed, which in time it is hoped will encouraging natural flora to the more shaded areas beneath trees.



Viewing platforms along Terry Avenue promenade.

Mytholmroyd meanders

Presented with the opportunity to revisit old channel straightening works carried out on the upper River Calder during the 1960s, and prompted more recently by the start of an Agency flood-alleviation scheme through the township of Mytholmroyd, collaboration with operational interests has realised an example of a river-rehabilitation project more worthy of the area's natural heritage.

Substantial channel remodelling, within the confines of existing floodbanks kept intact for essential flood-defence purposes, has allowed the creation of meanders, and a variety of other features and bank works to naturalise the river. Riffles, pools and marginal areas for aquatic vegetation, berms, and a body of wetland adjacent to the channel further enhance the wildlife value of a formerly uninteresting river corridor.

The aesthetic and amenity value of the area has been similarly up-rated – with public access and boardwalk improvements along a newly landscape riverside.

A community liaison exercise has encouraged support for the project from schools in the area, the County Wildlife Trust and a variety of other local interest groups. Ryburn Valley and Calder High Schools nearby propose continuing participation for GCSE case study work in the Geography syllabus particularly.

Interpretation display material set prominently at the site identifies the Agency's involvement and offers information on the operational aims and objectives of the scheme, in addition to describing its natural history benefit.

Funding of around £35,000 for the meanders, was principally from the flood defence capital works budget.

The community now looks forward to seeing this habitat provision attracting a much improved range of plants and animals to the river – kingfishers, herons, coarse fish and trout, amphibians, invertebrates and, in the longer term perhaps water voles and otters.



Before: the straightened river channel offers little environmental value.



After: the creation of meanders adds much wildlife and environment potential.

North West Region



The North West Region has spent an industrious year collaborating with external partners to promote recreation and enhance biodiversity across the region. From a recreation and access point of view, we have worked with bodies such as Groundwork, Sustrans and various local authorities to deliver cyclepaths, footpaths, improved access to watersides and park lake regeneration. We have also been involved in Agency flood defence schemes for the Mersey and Roch, with a view to incorporating improvements in recreation and amenity value within them.

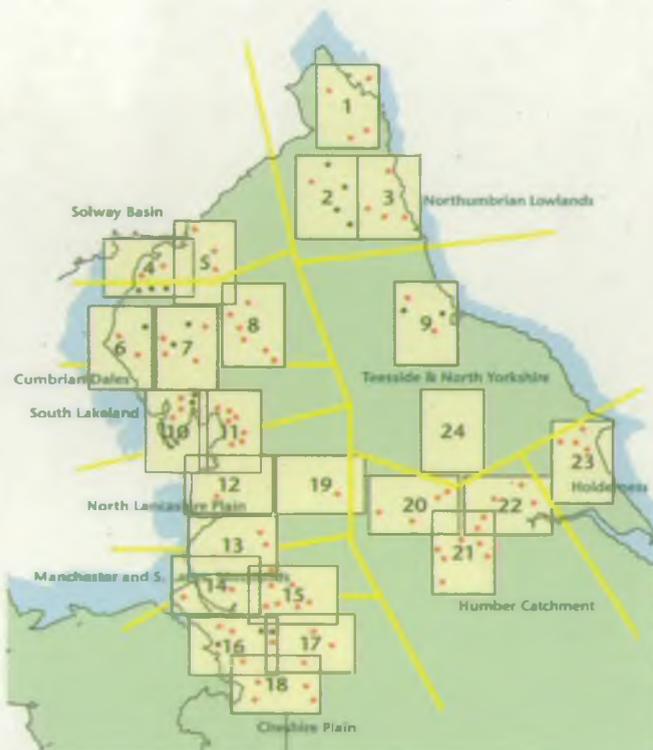
Similar collaboration has delivered many conservation objectives, including the development of the Cumbria, Lancashire, Yorkshire and North Mersey Biodiversity Action Plans (BAPs). The BAPs have been supported with work on medicinal leach, otter and pearl mussel

Here are just a few of the projects we have undertaken – more can be found in the North West Regional Conservation, Access and Recreation Report available from the regional offices.

North of England Wetland Project

The North of England Wetland Project is a partnership between Environment Agency (North West and North East regions), English Nature and RSPB to provide a co-ordinated approach to wetland creation and restoration, to help meet Biodiversity Action Plan targets for the main wetland Habitat Action Plans. The project aims to provide a comprehensive list of potential wetland sites in the North of England. Each site was assessed using three levels of criteria and progression to the next level depended on fulfilment of these criteria.

The end product is a list of sites suitable for wetland restoration or creation with detailed descriptions of the top 20 sites, including location plans. Each of the level three potential sites have brief descriptions of: existing and target habitats, major constraints, basic hydrology and water quality on site, nature conservation constraints and opportunities, owner/occupier attitude (if known), access and the like. It is hoped that these sites will be priorities as and when funding becomes available, either locally or through national Heritage Lottery Funding bids.



Map showing sites surveyed in the North of England Wetland Project.

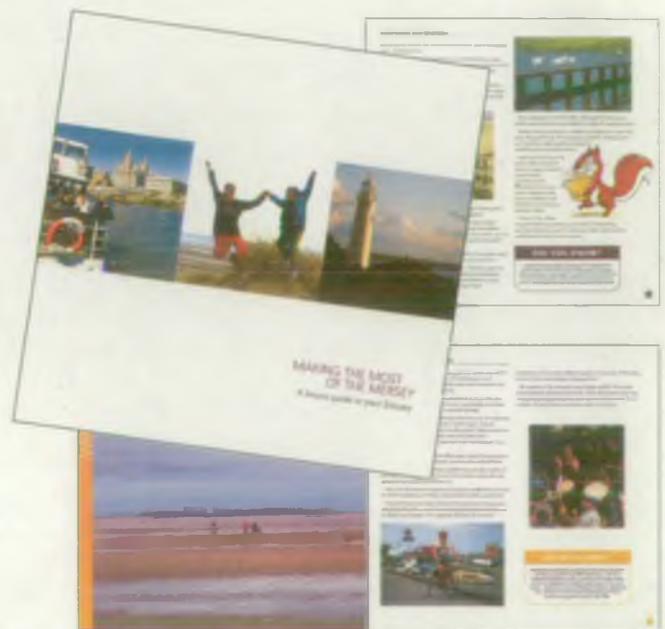
Mersey Estuary User Guide

The Mersey Estuary represents a significant recreational asset to the North West Region. At present it is not recognised as such by many locals.

The Environment Agency has worked with the Mersey Strategy, a multi-sectoral partnership and part of the Mersey Basin Campaign, to address this problem by producing a user guide.

Market research was carried out initially to find out what the local people wanted from the guide. The results of this research then shaped the production and contents of the guide.

It is now available free of charge and contains 40 pages of information on what is available around the Mersey Estuary, from places to fish to places to eat. Backed by maps and supporting text, the guide is easy to follow and includes information on local public transport. The initial print run was 20,000 and they are widely available from local information centre around the estuary area.



Mersey Estuary User Guide.

Archaeological surveys in north Manchester

Rivers have been important features in the development of England. They have been used as transport routes by the Vikings and Romans, provided much of the early power in the industrial revolution and have always been important as a water supply, as well as a waste disposal system. All these different aspects of rivers have left a legacy of riverine archaeology.

As well as conserving wildlife, the Environment Agency has a duty to consider the protection of our built heritage. Unfortunately, apart from nationally important sites, we do not know very much about our river's archaeology. We therefore commissioned surveys by Lancaster University of two catchments in north Manchester; the Roch/Irk/Medlock and the Croal/Irwell. These catchments are one of the birthplaces of the industrial revolution.

The survey revealed just how little is known about the archaeology of our rivers in this area. In the Roch/Irk/Medlock catchment, we increased the number of known archaeological sites significantly (379 per cent), 96 per cent of which were from the Industrial Age. In the Croal/Irwell catchment, however, adjacent to the Roch, fewer industrial sites were found. This may reflect recent development and reclamation destroying the industrial landscape.

Although both areas relied on the textile industry there are interesting differences in the type of industrial development between the two catchments. The Roch had far more mills spinning and weaving woolen and later cotton-based textiles, while the mills in the Irwell Valley were mainly concerned with the finishing of the textiles by dyeing or bleaching them. There was a lot of other industry in the area, although much of it was directly related to the textile industry. Paper mills used the rags from the textile industry as a raw material, chemical works produced chemicals for the finishing of the textiles and heavy mechanical industry made and repaired the machinery used in the mills. One can also follow the movement of industry from the small water-powered mills high in the catchment down the valley as coal-powered steam energy took hold. The rivers were still important, however, as a source of water and for the disposal of waste.

All the different sites identified are now on an Agency networked Access database and incorporated on the Agency's Geographical Information System (GIS). We can now carry out our works and give consents with a good knowledge of the archaeological resource present at a site. We plan to continue the survey in other catchments.

Wigan Flashes

The Wigan Flashes complex is a system of wetlands, lakes and pools on the edge of Wigan. The Environment Agency, in partnership with Wigan Council, English Nature, Lancashire Wildlife Trust and RSPB, have formed a management group to protect and enhance the considerable wildlife value of the Flashes. One target is to make the habitat suitable to attract bitterns to breed there, which would make it only the second breeding site outside Norfolk.

The Flashes area is one of historical wetland, which was then extended and deepened by the collapse of old coal workings. It now has a diversity of wetlands and areas of open water, and is a popular recreation and conservation area.



Archaeological survey - our rivers have a wealth of industrial relics many unrecorded.



Wigan Flashes.

Southern Region



Southern Region has an extensive coastline and improving recreational access to coastal waters has been a key area of work this year. A number of schemes have been supported through partnerships. These have included improved launching facilities for the disabled and lottery application for new slipways. Discussions have been held with a number of coastal authorities, including Hastings, Arun, Adur and Gosport District Councils and the Isle of Wight Council, to discuss the best way to improve access for in-shore water users, as part of their local plans and water recreation strategies.

The Regional Recreation Database, a resource that provides valuable data on the location of watersports facilities and clubs within the region, has been reviewed and updated this year. This can be sourced to provide information for both internal and external use and has enabled the Agency to work closely with our partners, the Countryside Agency and Sport England, with whom we have a Memorandum of Understanding, to look at areas of joint working, deficiencies and improved provision.

Priority in conservation activities has been given to delivery of biodiversity and Habitats Directive objectives. Several regional staff have responsibilities as lead or contact co-ordinators resulting in significant work: our understanding of Southern Damselfly, for example, has been greatly increased. There has been significant input across the region to high profile Biodiversity Action Plan (BAP) species (such as water vole and crayfish) and wetland habitats (such as chalk rivers, reedbeds and wet grassland).

A Regional Habitats Directive project structure was established and Regional Habitats Directive Co-ordinator appointed. Across the region, staff from all functions have been progressing work on the review of existing permissions. Stage 1 has been completed for all sites, and work to complete Stage 2 (to identify all potentially impacting consents) remains on schedule. Significant efforts have also been made to ensure compliance with the Habitats Regulations in respect of new authorisations.

Otters, roads and railways, and culverts

Nationally, hundreds of otters are killed on our roads and railways each year. As otters remain so rare, this is a serious problem. Thankfully the pesticides, which brought the species to the edge of extinction, are no longer used. Otter numbers are now recovering, but not as quickly as they might. Poor bridge design is part of the problem. Historically, rivers and streams have too often been fed under roads and railways in cheap and inadequate culverts. Otters are fine swimmers, but often duck the challenge of negotiating these culverts, especially at times of high flow. They select the dry route over the top, only to end up under a car or electrocuted by a live rail.

In Hampshire and the Isle of Wight, staff are working with the Highways Agency, Railtrack and local authorities to identify and deal with problem locations. Remedial action is under way at over a dozen sites. Often the solution is as simple as bolting an otter walkway to the culvert walls above flood level.

At one otter death black spot on the River Lymington embankment road in Hampshire's New Forest, Agency Flood Defence staff have built a special underpass and erected signs asking motorists to drive slowly.

The sustainable solution is to build open-span bridges with existing banks and bed retained. This leaves otters and other wildlife a safe travel route. As open-span bridges don't get blocked with debris as easily as culverts, there are also fewer flooding problems. It is now Agency policy to oppose culverting of watercourses wherever alternative solutions exist. However, many poor culverts have already been built. Addressing the problem of otter road and rail deaths is a key part of achieving conservation targets set out in the UK Government's Biodiversity Action Plan. There is still much for the Agency, and the other public bodies, to do.



Flood defence staff erecting signs at Lymington in the New Forest, Hampshire.

Maidstone River Park

The Maidstone River Park, being developed as a millennium project, stretches along 10km of the River Medway, from Teston Lock through Maidstone to Allington Lock in the North. Each end is essentially rural whilst the central section flows through the town centre. It presents a range of increased opportunities for water-based recreation and enjoyment of the river environment by:

- creating new areas of public open space;
- enhancing existing access points known as gateways to the park;
- the acquisition of land to widen the river corridor;
- installing three pedestrian bridges;
- providing new facilities such as an open-air amphitheatre;
- creating new wildlife habitat.

The underlying concept is to enhance a neglected natural resource through creative design with a strong emphasis on heritage, landscape and ecological principles. The project has involved the users of the river, including boat owners, rowers, anglers and riparian owners, and local schools, designers and artists throughout planning and implementation.

The partnership involves local authorities, businesses and the Agency. The total cost of the project is £8.2 million, of which over £7 million has now been secured, including £4.1 million from the National Lottery Millennium Commission.

The River Medway running through the Park is maintained by the Agency as a navigation. As part of our support for the project, in 1999/2000 the Agency contributed £65,000 towards riverbank stabilisation and the refurbishment of a rowing club landing stage, which has improved it as a facility for the disabled.



Oakweir Lock.



Teston Lock on the Medway navigation.



Allington Lock.

Experimental water vole release at Arundel Wildfowl and Wetlands Trust Reserve

In the autumn of 1999, the first half of the 80 water voles to be reintroduced into the Arundel Wildfowl and Wetlands Trust (WWT) Reserve were released as part of an experiment to determine the most effective way of re-establishing a colony of water voles. The project was carried out by experts from Sparsholt College in Hampshire, with a large proportion of funding coming from the Agency, and with the WWT, the SE Otters and Rivers Project and English Nature also providing funding and staff time.

The experiment was divided into four parts; an autumn 'hard' release (animals just let free), and autumn 'soft' release (where they are allowed to dig out of pre-release pens), a spring hard, and a spring soft release.

By releasing animals in the autumn, the cost of keeping them in captivity during the winter is eliminated. However, a typical wild population of voles is expected to suffer a 70 per cent mortality over the winter period. Therefore the chances of establishing a population by releasing in the autumn is uncertain, whilst releasing just as the animals are about to start breeding is expected to be much more successful.

Half the animals were also fitted with radio collars, so that their movements immediately after release, and in subsequent months, could be monitored. Regular trapping of the site is also being undertaken and the individuals monitored using subcutaneous transponders.

As expected, about 80 per cent of the animals from the autumn release have disappeared, a few of them in the first few days. However, we are much more optimistic about the spring release, and hope to re-establish a core population in this reserve in the Arun valley. The valley has unfortunately lost all of its wild vole populations due to the presence of American mink, and habitat loss. With significant habitat improvements now taking place, and the prospect of a core population in this totally mink-free reserve (perimeter fenced), it is hoped that the long-term future will be better.



Animals being released into 'soft release' enclosures.



Animals being 'hard released' directly into the wild.

South West Region



The South West Region has been exploring external funding opportunities for projects contributing to nature conservation and providing opportunities for recreation. In particular, Conservation and Recreation staff have spent time influencing the development of the Single Programming Documents for the Objective 1 and Objective 2 funding for Cornwall and the Devon Arc.

The Agency owns and manages a number of sites in South West Region including the Wareham Royalty, a site that boasts over 100 moorings and offers both game and coarse fishing. Maintenance of footpath links and management of mooring facilities and the fishery are key issues that have been addressed through a site-management plan. Promotion of best practices for anglers and boat users are highlighted in a site leaflet. Recently, the Agency has commissioned a recreation survey at the site to assist in site management. The 'Wise-use of floodplains' project, funded from the European L'instrument Financier pour l'environnement (LIFE) fund, started in May 1999. An international partnership has been formed between the UK, Ireland and France including the RSPB, Environment Agency, English Nature, Ministere de l'Amenagement Territoire de l'Environnement and others. This is an innovative approach to securing the restoration and future management of floodplains incorporating environmental, social and economic factors. In the South West, the project focuses on the Somerset Levels and Moors.

Semington Brook enhancements

Land drainage works to the Semington Brook between Devizes and Trowbridge in the 1960s left a degraded channel and river corridor. Using £15,000 of national fisheries money, the Agency worked with several local farmers and the Parish Councils to enhance the Semington Brook and to create additional bankside habitat.

One of the three sites was next to a well-used public footpath and the local village green. This section was regraded to provide easy access and a gravel beach created. Some lengths were remeandered and several riffles created to provide flow variations and important fish habitats.

Bank regrading to create bays, the installation of riffles and use of willow hurdling has restored in-channel habitat. Fencing to prevent cattle poaching and to allow good marginal cover has taken place, along with the installation of cattle drinking points. Tree planting alongside the watercourse and on the village green will provide good habitat for wildlife and valuable shade for fish in the future.



Gravel beach created along Semington Brook.

River Tarrant project

The Tarrant Valley lies within the Cranborne Chase and West Wiltshire Downs Area of Outstanding Natural Beauty. The Tarrant is a chalk stream, with natural winterborne sections that only flow during the winter and early spring. Chalk streams are rare in Europe and represent one of the 14 most threatened habitats in the UK as listed in the UK Biodiversity Action Plan. A river corridor survey, carried out in 1999, confirmed the presence of otters and water voles, as well as typical chalk stream species such as water crowfoot, which in turn supports abundant aquatic invertebrates. There are concerns from local residents that the Tarrant is suffering from low flows. Extensive monitoring is being carried out by the Environment Agency to investigate the complex relationship between groundwater levels and stream flow, and whether groundwater abstraction is affecting flow.

The Agency is working in partnership with the River Tarrant Preservation Society to promote the importance of good river management for wildlife. Analysis of River Habitat Survey data has shown that the majority of sites on the River Tarrant have poor habitat quality when compared to sites of similar types, and that parts of the river would benefit from rehabilitation. A leaflet has been produced to raise awareness amongst local residents and several landowners have been involved in enhancement projects. Habitat enhancement carried out so far includes tree planting, pollarding, fencing off river meanders and building an otter holt. A farm walk is also planned to demonstrate a range of enhancement projects and promote best practice.



Newly constructed fencing to enhance habitat on the River Tarrant; with insert of local information leaflet.

Dune conservation at Dawlish Warren

In 1995, English Nature and the Environment Agency set up an investigation into perceived water level changes at three important dune system sites in Devon. One of these sites was Dawlish Warren National Nature Reserve (a Special Site of Scientific Interest (SSSI) within the Exe Estuary Special Protection Area (SPA) and Ramsar site), at the mouth of the Exe Estuary in south east Devon. Here, rare wetland plants such as adders-tongue fern and southern marsh orchid were being replaced by more common plants of dry ground such as bramble and birch.

The three-year study of water levels in the dune system, carried out by Plymouth University, indicated that water levels were, indeed, falling, largely due to drainage of the adjacent golf course. The solution to the problem was identified as the interception of the golf course drainage system, to redirect this back into the dunes. Teignbridge District Council (owners of the nature reserve) developed an electric pump facility to deliver the water to the dunes. As a result of the lack of a suitable nearby electricity supply and the desire to avoid the use of fossil-fuel-powered generators, a wind turbine was chosen as a power source. The project was designed and managed by Teignbridge District Council and was supported financially by the Agency, Devon Wildlife Trust and English Nature. The pumping project was completed in March 2000 and water began to return to the dunes in the same month.

Cornwall reed bed creation

As part of the Reed Bed Biodiversity Action Plan (BAP), reed beds and pools have been created at Drift Reservoir and at Marazion Marsh SSSI, in a joint project with South West Water (now Pennon group) and the RSPB.

Cornwall's wetland sites become particularly important in the winter for visiting wildfowl due to mild weather conditions. Species regularly seen include water rail and reed bunting, and more unusual visitors include the bittern, one of Britain's rarest birds. Creation of reed beds was carried out primarily to provide over-wintering territory for bitterns, with up to 20 per cent of the UK population over-wintering in west Cornwall.

In addition, the Agency has contributed to the purchase of a special reed harvester that will be used to manage the county's two largest reed beds, by the National Trust at Gunwalloe Marsh, near Helston, and by the RSPB at Marazion Marsh. Previously the reeds have had to be cut by hand; now, by using the cutter, the reeds can be more easily managed to provide different stages of growth and reinvigorate the reed bed by encouraging higher stem density the following year. The cut reed is used by local thatchers.



Pumping water using environmentally friendly wind turbines.



Agency and RSPB staff discuss reedbed management at Marazion Marsh.

Thames Region



During 1999/2000, the Thames Region spent £750,000, covering 51 conservation projects and £400,000 was spent on some 30 recreation projects either independently or in partnership with other organisations. The region continued to develop its sites for best use through the production of 'Integrated recreation and conservation site-management plans' and schemes to improve public access onto the Thames, canoe access at Thames weirs and creating new cycleways in partnership with Sustrans, were also initiated. Conservation projects ranged from localised channel narrowing and pond creation works to major wetland creation and river restoration schemes. One of the largest wetland schemes, in collaboration with the RSPB at Otmoor, is already exceeding biodiversity targets, with 85 pairs of waders breeding on the site in the spring of 2000. Ongoing access initiatives were promoted through interpretation panels and the raising of public awareness of water safety issues also featured throughout the year. Water level management plans continued to be implemented at wetland enhancement sites and biodiversity actions were implemented for a range of species and habitats including starfruit, desmoulin's whorl snail, bittern, white-clawed crayfish, water vole and otter.

Thames path improvements

During 1999/2000, the Agency continued its active role in the management, maintenance and improvement of the Thames Path National Trail. Working in partnership with Oxfordshire County Council, Oxford City Council and the Countryside Agency, it helped restore a crumbling 300m section of the Thames Path/towpath near Osney Bridge in Oxford, which had been closed to the public since February 1998. The towpath bank was replaced/reinforced using a traditional (and environmentally friendly) repair technique known as willow spiling. The aim of the design was not only to enable the Thames Path to be successfully re-opened to the public, but also to protect the environment and make that stretch of the Thames an attractive habitat for wildlife. As well as providing technical advice at all stages of the project, which was designed and managed by Oxford City's engineers, the Agency contributed 27 per cent to its total cost of £75,000.

At Culham, near Abingdon in Oxfordshire, the Agency successfully reconstructed Towpath Bridge No. 64, a structure that carries the Thames towpath and 'Thames Path' over the Swifts Ditch. This new 27m long timber footbridge, which crosses the Swifts Ditch at its point of re-entry to the Thames, cost a total of £118,000 and was fully funded by the Agency. It incorporated, for the first time at this location, facilities enabling access to be gained to the 'Path' by the disabled, as well as providing general improved pedestrian access.



The Agency has successfully reconstructed Towpath bridge No 64.

Spring Brook restoration at Bromley

The Spring Brook scheme is an urban river restoration scheme undertaken in partnership with the London Borough of Bromley at Shaftesbury Park, Downham. The river itself was originally put into a concrete channel as part of a historic flood-alleviation scheme, and had been identified as being of poor ecological and landscape value in the Ravensbourne catchment strategic River Corridor Survey and landscape assessment.

The goal of the scheme was to improve the habitat, and make the river an integral part of the park for the local people to enjoy, as well as maintaining the level of flood protection. This entailed breaking out the concrete and re-aligning the channel to something similar to its historical course. This enabled a variety of bed and bank features modelled on natural river systems to be incorporated. The biological targets included increased abundance in wetland species such as Water Cress and Water Forget-me-not, dragonflies and damselflies. A pond was also built next to the river to attract reptiles and amphibians.

Construction began in March 1999 and was completed in May 2000. The work consisted of the removal of 155m of concrete channel and the re-alignment of 139m of channel. Two beaches were created to allow safe and easy access to the watercourse and a new bitumen path was created to run alongside the new channel. A berm was constructed, which alternates on either side of the channel, relative to the position of the meanders. The wetland vegetation used to plant these areas was sourced locally.

Future work will include a post-project appraisal and development of a maintenance plan with the London Borough of Bromley to enhance the biodiversity of the park. Contacts have been made with a nearby school, which wishes to develop the site as an educational resource to study their local ecology and river systems.



Children playing by Spring Brook.

Cheshunt north reservoir - access and angling improvements

Cheshunt north reservoir is located on the Rags Brook, a tributary of the River Lee, in Hertfordshire. The site is an Agency-owned asset comprising a flood storage reservoir, and an urban stillwater fishery, which is leased to two local angling clubs. The angling clubs in turn manage the site for club members, and provide a set number of day tickets for visitors. The general public also has access to the site on a permissive basis.

During 1999/2000, a management plan for the site was produced that highlighted a number of potential recreational, fisheries and conservation enhancements, resulting in the development of a joint recreation/fisheries project to improve access and angling facilities.

A total of £30,000 was allocated to the project, which was targeted at improving footpath surfacing to and from residential areas and to the adjacent Cheshunt Park, upgrading and re-building angling platforms, including the provision of a platform with improved access for disabled anglers, and marginal planting to improve the visual amenity of the site and to provide a refuge for fish and other wildlife.

The reservoir will be monitored to assess the impact of the enhancements as part of the ongoing management of the site, and together with the agreed angling club management, the site will continue to mature as an informal recreation/angling facility.



Fishing platform on the reservoir.

Wandle Park River Enhancement at Colliers Wood

The Wandle Park River Enhancement Project was officially opened on 29 November 1999 by Beverley Hughes MP, Minister for Regeneration at the DETR. The scheme is a partnership with the National Trust, London Borough of Merton, Groundwork Merton and local residents.

The park is a popular local green space within a predominantly urban setting, of which the river channel is a principal feature. The channel pre-scheme had become neglected and polluted, and was considered to detract from the value of the park.

After public consultation, the four main elements of the scheme were identified as being improvement of: water quality, channel appearance, wildlife habitats, bridges and paths.

The project entailed the rehabilitation of 400m of concrete-lined channel through the removal of the concrete and the naturalisation of the banks. Other features created within the channel include pools and riffles, gravel beaches, sedge beds and a network of footpaths and footbridges.

To improve water quality, a reed bed was planted to treat surface water, and an off-take was created from the River Wandle to provide a constant flow of water through the channel.

A post-project survey of macro-invertebrates has shown that the Biological Monitoring Working Party (BMWP) score, (a nationally used pollution index, derived from the responses of various families of aquatic macro-invertebrates to known pollutants), has risen from 24 to 85, showing a significant overall improvement in the biological quality of the park channel.



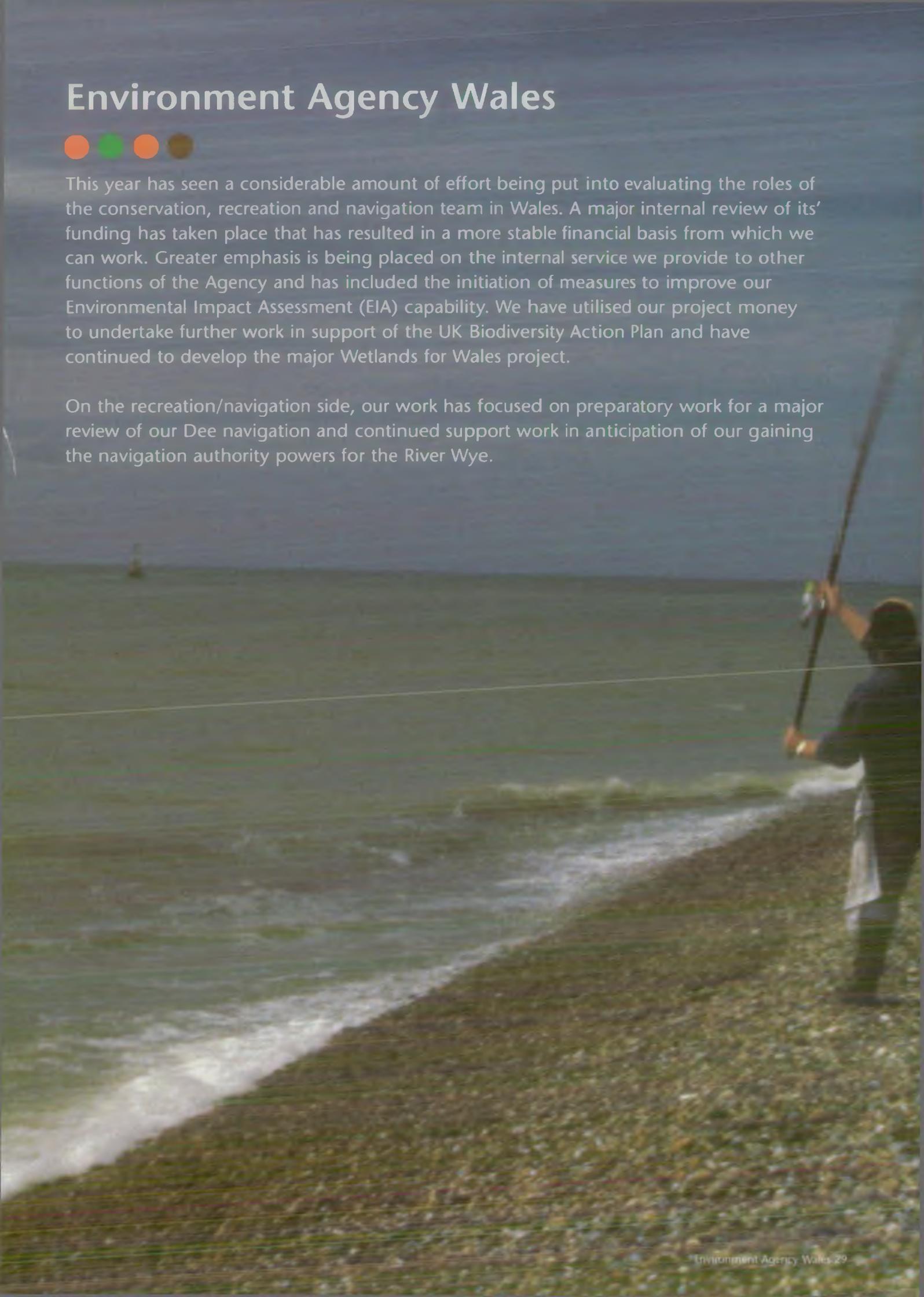
View of restored channel showing pools and riffles, beach and pond.

Environment Agency Wales



This year has seen a considerable amount of effort being put into evaluating the roles of the conservation, recreation and navigation team in Wales. A major internal review of its' funding has taken place that has resulted in a more stable financial basis from which we can work. Greater emphasis is being placed on the internal service we provide to other functions of the Agency and has included the initiation of measures to improve our Environmental Impact Assessment (EIA) capability. We have utilised our project money to undertake further work in support of the UK Biodiversity Action Plan and have continued to develop the major Wetlands for Wales project.

On the recreation/navigation side, our work has focused on preparatory work for a major review of our Dee navigation and continued support work in anticipation of our gaining the navigation authority powers for the River Wye.



Groundwater Regulations GIS Project

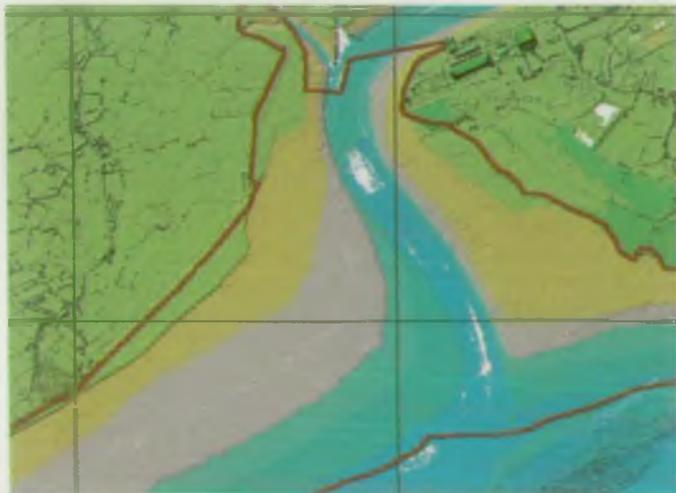
During 1999/2000, the regional conservation, recreation and navigation team has run a Geographical Information System (GIS) development project, employing a GIS specialist.

The officer has developed a set of tools that enable our colleagues in Environmental Protection to screen Groundwater Regulations applications (the majority of which are for sheep-dip disposal in Wales) against conservation constraints.

The conservation constraints are a suite of features that are considered to be especially vulnerable to Groundwater Regulations activities. They include designated water bodies; water bodies containing vulnerable species such as crayfish and freshwater molluscs; and protected terrestrial sites with invertebrate interests.

The GIS tools developed provide a wealth of information to assist consenting officers in their authorising decisions and make it very clear when conservation officers need to be involved in providing further expert advice on a consent. This has served to produce a more efficient interface between the consenting function and our conservation officers. The GIS officer has also been able to expand the project to examine the utilisation of Global Positioning System (GPS) in conjunction with GIS for our regulatory work.

Environment Agency Wales is in the early stages of developing its new Geographical Information System and the teams' early involvement in this emerging technology has been of great value. The project is to be widened and further developed in the following year.



Groundwater regulation GIS map.

Otter road deaths in Wales project

This project was instigated and funded by the Agency's conservation function and managed by the Otter and Rivers Project Officer Wales, part of The Wildlife Trusts, who are joint lead partners with the Agency for the otter Biodiversity Action Plan. The study was carried out by an expert consultant and cost £10,000.

Road deaths are an important cause of mortality in otter populations and a threat because of the naturally low rate of reproduction in the species. The aim of the project was to identify blackspots for road deaths by examining over 200 post-mortem reports since 1985 and produce site-specific solutions at the most important sites.

A total of 30 sites were considered to be a priority and, of these, 11 were considered to be particularly important. Detailed plans were drawn up for these sites and less detailed recommendations made for others. While many problems were found to be caused by culverts and bridges, which force otters out of rivers during high flows, 'shortcuts' and watersheds were also common causes of accidents.

The project included liaisons with highways engineers to establish the cost and practicalities of mitigation works and the general response was positive and encouraging with a lot of interest shown in the project. The intention now is to seek to implement as many of the recommendations as possible, while concentrating on the priority sites. This element will require the involvement and support of others. A small number of schemes will also be developed as case studies so that lessons learnt can be of benefit to otters elsewhere.



Road deaths are an important cause of mortality in otter populations.

Rheidol knotweed eradication project

Environment Agency Wales (EAW) and Countryside Council for Wales (CCW) joined forces in an exciting project to eliminate Japanese knotweed from the beautiful Rheidol valley near Aberystwyth. The five-year project is the first of its kind aiming to eradicate knotweed from an entire river catchment in Wales.

Knotweed was first introduced into Britain in the nineteenth century as a garden ornamental plant, but it soon escaped into the wild where it has become aggressively dominant. It quickly colonises a wide range of habitats, forming dense stands, displacing native vegetation and reducing biodiversity with its poor habitat value for insects, birds and mammals. This invasive plant also has the ability to regenerate from very small pieces of stem or rhizomes, with a piece as small as 2cm giving rise to a new plant. Rivers are particularly vulnerable to invasion, as once introduced into a catchment the rate of colonisation is speeded up by plants that are washed downstream.

The Rheidol valley was surveyed for knotweed in the spring of 1999 and the plant was found to be present throughout, being particularly abundant in the lower reaches, even growing on two Sites of Special Scientific Interest (SSSIs).

The survey indicated that if tackled immediately there would be a good chance of controlling the existing areas of knotweed and hopefully eradicating it completely. The Agency and CCW plan to undertake control of the knotweed by repeated chemical spraying over a five-year period, with the first spraying operation undertaken in August 1999. Regular surveys will monitor the progress of this important initiative.

Lon Las Cefni

An Environment Agency off-road cycle route finally got under way this year with the first 5kms being constructed in South west Anglesey. The project aims to develop the off-road infrastructure by creating a coast-to-coast route between Newborough and Red Wharf Bay. The route is approximately 35km in length, half of which is on Agency land, consisting of fluvial and coast defences.

The first phase, largely on Forestry Enterprise land, was jointly funded by the Agency and Ynys Mon Council, with the work carried out by engineering contractors from the Agency's Internal Business Unit (IBU). Total costs are likely to be of the order of £750,000 hopefully part-funded by Objective 1 grant aid.



Knotweed eradication.



Rivers are particularly vulnerable to knotweed invasion.

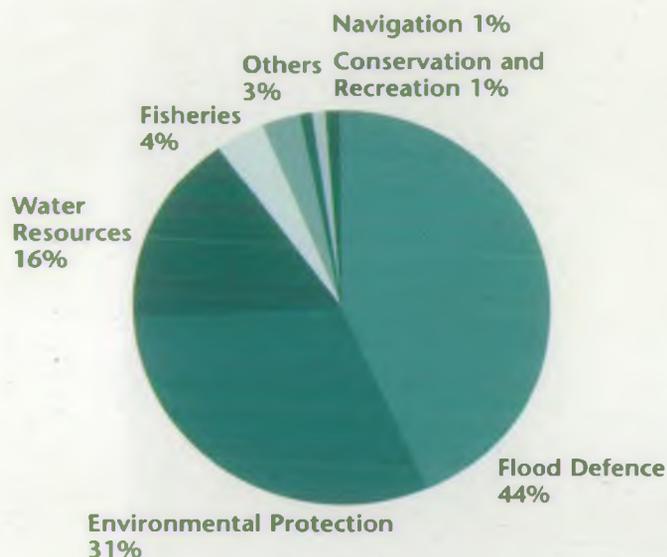


Lon Las Cefni Cydeway Project.

Statistical information

Agency expenditure

Fisheries, Recreation, Conservation, and Navigation are part of the Agency's Water Management functions, all of which are funded from the Agency's operating budget. In 1999/2000 the total operating budget was around £630million, from this 6 per cent was allocated to our specific functions. A detailed account of the Agency's expenditure is available in the financial schedules included in the Annual Report and Accounts 1999/2000.



Asset information

The following information describes some of the designations, facilities and amenities that occur on Agency owned sites.

The number of public rights of way

Public footpaths	334
Bridleways	39
Permissive paths	114

The number of designations

National Trial	44
Regional Trials	32
Country Parks	4
National Parks	11
Area of Outstanding Natural Beauty	29
Heritage Coast	2
Special Site of Scientific Interest	128
Site Nature Conservation Interest	85
National Nature Reserve	7
Local Nature Reserve	11
RSPB Reserve	2
Ramsar Site	29
County Trust Reserve	17
Special Protection Area	29
Scheduled Ancient Monument	8
Listed Building	5

The following tables give an insight into some of the work completed by the functions throughout the year of reporting

Habitat creation	Kilometres of degraded bankside restored	New angling opportunities created at urban sites	Fish passes and screens installed
Anglian	0	2	1
Midlands	19	1	1
North East	15	5	9
North West	23	3	2
Southern	15	2	7
South West	15	1	4
Thames	10	3	7
Welsh	38	4	11
Total	135	21	42

Surveying	No. sites surveyed for fish monitoring purposes	Length of river surveyed for fish monitoring purposes	No. of River Habitat Survey Sites completed
Anglian	399	650	570
Midlands	190	700	1
North East	380	841	4
North West	690	811	204
Southern	171	121	40
South West	683	1,301	375
Thames	143	556	4
Welsh	493	1,454	12
Total	3,154	6,434	1,210

Project Information	No. recreation projects completed	No. conservation projects completed
Anglian	9	8
Midlands	4	31
North East	9	34
North West	2	22
Southern	13	68
South West	21	42
Thames	21	51
Welsh	12	36
Total	91	292

Involvement in Capital Works Schemes	No. of new Agency capital work schemes incorporating recreation work	No. of new Agency capital work schemes incorporating conservation work
Anglian	9	8
Midlands	38	12
North East	22	29
North West	1	21
Southern	9	9
South West	0	3
Thames	8	31
Welsh	2	8
Total	89	121

Planning application and consent screening	No. planning applications, Agency consent applications & capital works screened for recreation implications	No. planning applications, Agency consent applications & capital works screened for conservation implications
Anglian	998	1,617
Midlands	2,239	2,234
North East	2,356	2,517
North West	665	1,068
Southern	1,067	1,396
South West	2,031	2,040
Thames	672	628
Welsh	1,572	1,989
Total	11,600	13,489

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