

# local environment agency plan

## SANKEY/GLAZE

ANNUAL REVIEW

FEBRUARY 1998



ENVIRONMENT AGENCY



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## **Foreword**

This Annual Review is the first to be produced in the South Area and details the work that has taken place in the Sankey/Glaze Area on the issues that were raised in the Local Environment Agency Plan (LEAP) consultation report back in May 1996. The LEAP process raises issues outside our core duties, and therefore this work that has taken place is on top of our day to day working. Some of the issues require other parties to work in partnership with us to achieve their resolution and this work will also be reported.

The document also details future activities that are planned for the resolution of issues and one new issue has been added. The LEAP process is a flexible process, allowing issues to be moved on as circumstances change and the addition or removal of issues. For this reason we need your continued involvement to ensure that we achieve the improvements in the local environment we are seeking.

Thank you for your continued interest in this plan and please let us know if you think we should be adding to it or changing the proposed actions.

**George Ager**  
**Area Manager**  
**South**

# **Local Environment Agency Plans (LEAPs)**

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## **What a LEAP Is for**

A 'LEAP' is the Environment Agency's integrated local management plan, for identifying and assessing, prioritising and solving local environmental issues related to the Agency's functions, taking into account the views of the Agency's local customers. The outcome of the process is a local agenda of integrated action for environmental improvement in order to optimise benefit for the local environment.

The Agency is the competent authority for managing and regulating the water environment, for regulating waste, major industrial processes, and contaminated land. We have duties to protect and enhance biodiversity in everything we do, to protect landscape and heritage, and to promote inland navigation and recreation. It is these areas that relate to our functions and dictate the fields in which we can raise specific issues.

## **The Process**

The production of Local Environment Agency Plans (LEAPs) within the Agency involves three stages:

- The Local Environment Agency Plan Consultation Report.
- The Local Environment Agency Plan five year Action Plan.
- The Annual Review.

## **Annual Reviews**

The Agency will be jointly responsible, with other identified organisations and individuals, for implementing the Action Plan. Progress will be monitored and normally reported annually, by means of a review document which will be publicly available.

The review document will comprise the following information:

- Details of progress that has taken place in the last twelve months.
- Identification of additional actions to maintain progress in the light of changes in the area.
- Consideration of the need to update the LEAP.

Update requirements will obviously depend on the particular needs of the area. It is possible to add new issues and advance those already put forward. Full updates to the LEAP will normally be undertaken every five years. Key organisations and individuals forwarding comments will receive an annual review paper to update them with the action plan progress.



## Local Environment Agency Plans (LEAPs)

### **Partnership**

The Department of the Environment's Statutory Guidance under Section 4 of the Environment Act 1995 (draft June 1996) describes how the Agency should contribute towards the objective of attaining sustainable development. In particular it concludes that the Agency should:

- make use of integrated catchment management planning or other integrated geographical management tools in order to take a holistic approach to the protection and enhancement of the environment
- strive to develop close and responsive relationships with the public, local authorities and other representatives of local communities, regulated organisations and public bodies with environmental responsibilities. It should also strive to work in partnership with all such groups.

The protection of the environment on a local and global scale requires partnership and cooperation, if we are to be successful in achieving sustainable development as described by the World Commission on Environment and Development, in the Brundtland Report. To this end the Environment Agency is involved in many partnerships and funds many projects.

### **How this plan fits**

The South Area of North West Region has been split into seven LEAP areas. This Annual Review is the first to be produced in the South Area. This area is bounded by five other LEAPs, the Lower Mersey, Croal/Irwell, Mersey /Bollin, Douglas and Alt/Crossens. The Lower Mersey is at Action Plan stage and all others will be produced as consultation reports by the end of 1999.

## **The Sankey/Glaze Area**

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### **The Area**

The Sankey/Glaze area covers 409km<sup>2</sup> and includes the catchments of Sankey and Glaze Brooks, the River Mersey (from Bollin Point to Howley Weir) and the catchments of Padgate, Spittle, Fishington and Whittle Brooks. These watercourses drain an area to the west of Bolton and the north and north west of Warrington, taking in areas around St Helens, Leigh and north Warrington. The Brooks drain either into the Manchester Ship Canal or the River Mersey. The area includes widely diverse land use, including protected woodlands, mixed agriculture, urban development and sites of historical importance.

### **The Environment Agency's Vision For The Sankey/Glaze Area**

The Environment Agency has a vision of "A better environment in England and Wales for present and future generations."

From this, the vision for this LEAP area is of a sustainable environment capable of supporting diverse natural species and habitats, providing opportunities for recreational usage and access, and one which is valued by local people.

In achieving this vision of the Sankey/Glaze area the Agency will continue to advise and work in partnership with organisations and enforce, where necessary, the relevant regulations. We cannot achieve these objectives on our own and we depend on the commitment and enthusiasm of others.

# The Issues

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## 5.1 Implementation

This section gives information on the progress of the implementation of the Action Plan for the Sankey/Glaze LEAP. Progress since the production of the Action Plan in February 1997 is reported and future plans are identified. Two extra issues have also been added to the Action Plan.

## 5.2 Issues

The issues are presented with a number of actions, a target time table and the identification of responsible parties. Where the lead agency has been identified as the Environment Agency, the name of the functional area manager responsible is identified in brackets. Where possible, costs have been outlined for the period covered by the plan. This does not necessarily reflect the total cost of the schemes and is sometimes a projected estimate to be more accurately costed later. This document is produced in good faith, recognising current priorities, both within the Agency and other organisations.

### Key

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

### Abbreviations

AMP	Asset Management Plan
CLA	Country Landowners Association
EN	English Nature
FRCA	Farming and Rural Conservation Agency
FWAG	Farming and Wildlife Advisory Group
CSO	Combined Sewer Overflow
GIS	Geographical Information System
GMEU	Greater Manchester Ecological Unit
JCAS	Joint Countryside Advisory Service
LAs	Local Authorities
NEP	National Environmental Programme
NFU	National Farmers Union
NWW Ltd	North West Water Limited
RSPB	Royal Society for the Protection of Birds

## Issue 1

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### IMPACT OF CONTAMINATED SURFACE WATER DISCHARGES ON SURFACE WATER QUALITY

The Environment Agency compiles lists of identified contaminated discharges and prioritises them on how significant the impact of the discharge is on the local watercourse.

The rectification of wrong connections is largely undertaken by Local Authorities as Agents for North West Water Ltd (NWW Ltd). NWW Ltd. make available funds for the correction of the problems, however this work is not part of the companies capital programme and only when funds are available can the priority work be undertaken. Negotiations are taking place and a list of the works that will be done before the year 2000 will be finalised in 1997.

#### Update of Actions since February 1997

During the annual review year a regional priority list of contaminated surface waters (CSWs) has been compiled to identify where cross connections are having the greatest impact on watercourses. A national promotional CSW campaign has been launched which will target prevention activities such as development of educational material and promotion of surface water interceptors or grassy swales in locations with continuing problems. A sum of money has been secured within NWW's capital expenditure to address a large proportion of the highest priority wrong connections in the North West region. Many of the highest priority CSWs are located in the Sankey/Glaze catchment and these should have money allocated to them prior to 31st March 2000. The remaining and newly identified wrong connections will be prioritised and costed for inclusion in AMP3.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Identification and prioritisation of wrong connection problems.	Environment Agency. (Roger Lamming, Stewart Lever)	LAs.	R	●	●	●	●	●
2. Correction of wrong connections.	NWW Ltd.	LAs, Householder, Site Owner.	U		●	●	●	●

## **Issue 2**

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### **IMPACT FROM OVERFLOWS ON THE SEWERAGE NETWORKS ON SURFACE WATER QUALITY**

The increase in residential and commercial development over recent years has resulted in increased flows in the sewerage network. In older systems there is inadequate sewer capacity and problems with blockages which result in the premature operation of the storm overflows.

NWW Ltd. will be carrying out work on a number of sewerage networks up to the year 2000 and further problem areas have been identified for improvement up to the year 2005.

#### **Update of Actions since February 1997**

The reduction of unsatisfactory combined sewer overflows (CSOs) is a continuous responsibility for the Agency and involves identifying the overflows, assessing their impact and prioritising them for remediation along with other unsatisfactory CSOs. Funding to address the above overflows falls under AMP2 expenditure which covers the period 1995 to 2000. Schemes to improve the remaining unsatisfactory overflows fall under AMP3 expenditure which covers the period 2000 to 2010. Prioritisation of these overflows has already begun.

There were five unsatisfactory CSOs scheduled for improvement on the Borsdane Brook catchment. The improvement works for 3 of these overflows was completed in January 1998 and the remaining 2 unsatisfactory overflows in Atherton Road were abandoned in August 1997.

The improvement strategy for overflows on Millingford Brook falls under the Urban Pollution Management procedure which is an industry standard for assessing sewer overflow problems and developing solutions which minimise the impact on aquatic ecosystems. Discussions regarding the extent of the solution are currently taking place and the work to address these overflows will be completed by 31st March 2000, the final year of the AMP2 programme.

There are a number of unsatisfactory overflows within the Moss Brook catchment which includes Shaw Brook, Astley Brook and Ellen Brook. These overflows also fall under the Urban Pollution Management procedure and a solution to improve their status is currently being developed.

## Issue 2

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Reduce the number of unsatisfactory combined sewer overflows.	NWW Ltd.	Environment Agency.	U	●	●	●	●	●
2. Improve status of overflows on Borsdane brook and tributaries.	NWW Ltd.	Environment Agency.	8(a)	●				
3. Improve status of overflows on Millingford Brook.	NWW Ltd.	Environment Agency.	8(a)	●	●	●		
4. Improve status of overflows on Shaw Brook and Tributaries.	NWW Ltd.	Environment Agency.	6(a)	●	●	●		

(a) Expenditure required for investigating and prioritising unsatisfactory overflows.

## Issue 3

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### **IMPACT OF DISCHARGES FROM WASTE WATER TREATMENT WORKS (WwTW) ON SURFACE WATER**

A number of Wastewater Treatment Works (WwTWs) have a significant impact on water quality, particularly on the Glaze and its tributaries. NWW Ltd have proposed improvements to some of the treatment works in the area. Westhoughton WwTW and Leigh WwTW have had extensive work carried out on site and in the near future work on the inlet overflows at Irlam and Worsley will be undertaken. Also at Worsley WwTW there are proposals for improvements to be carried out.

#### **Update of Actions since February 1997**

The improvement works at Westhoughton WwTW and Leigh WwTW have been reflected through better water quality downstream of the works. This has been identified through the routine monitoring programme which has shown improvements both chemically and biologically and is reported through the General Quality Assessment scheme. However, additional improvements are perceived to be required before the long term objectives of the receiving waters are met.

The capital project to improve Worsley WwTW is ongoing and will be progressed in 2 stages. The first stage will incorporate rebuilding of the inlet works, new CSO arrangements, new storm tanks and a new pumping station. This will be completed early in 1999. The second stage will involve the provision of a tertiary treatment plant in addition to the existing primary and secondary treatment facilities. This will be completed by 31st March 2000.

Assessing the impact of all the NWW Ltd. wastewater treatment works in the LEAP area is currently being undertaken as part of the procedure for identifying works which are to be put forward for AMP3 expenditure for the period 2000 to 2010. Initial prioritisation of the schemes and cost benefit analysis has already been completed. The treatment works in the Sankey/Glaze LEAP area which have been proposed for expenditure are St. Helens, Leigh, Tyldesley, Westhoughton, Glazebury and Irlam. However, it is not currently possible to say whether all or some of these schemes will attract funding when prioritised with other schemes in the North West region.

Under the Urban Wastewater Treatment Directive two watercourses have been identified as being eutrophic or may become eutrophic in the near future. These watercourses are Pennington Brook/ Glaze Brook and Hall Lee Brook / Westleigh Brook. The qualifying discharges for these proposed sensitive areas are Leigh WwTW and Westhoughton WwTW respectively. A monitoring programme has been set up for the next 4 years to assess the impact of these works on the trophic status of the proposed sensitive areas. If these areas are designated as sensitive in the next round of designations in 2001, NWW Ltd. will be required to install nutrient removal at these qualifying works.

Issue 3

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Evaluate impact of the improvement works at Westhoughton and Leigh.	Environment Agency. (Roger Lamming, Stewart Lever)		U	●	●			
2. Worsley WwTW improvement to be carried out as part of the NEP.	Environment Agency, NWW Ltd.	NWW Ltd.	U	●	●	●		
3. Assess the impact of the remaining WWTWs on water quality.	Environment Agency. (Roger Lamming, Stewart Lever)	NWW Ltd.	U	●	●			
4. Undertake monitoring programme to assess the impact of Leigh WwTW and Westhoughton WwTW on the eutrophic status of their receiving watercourses.	Environment Agency. (Roger Lamming, Stewart Lever)		U	●	●	●	●	●

## Issue 4

### IMPACT OF CONTAMINATED LAND ON THE ENVIRONMENT

Section 57 of the Environment Act 1995 contains important new provisions on the regulation of contaminated land in England, Wales and Scotland. It inserts a new part IIA into the Environmental Protection Act 1990 and places a duty on local authorities to inspect their areas for the purposes of identifying land which falls within a new statutory definition of contaminated land. Land formally designated as 'contaminated land' is subject to a number of provisions intended to ensure unacceptable risks to health and the environment are properly controlled. Both local authorities and the Environment Agency have an important role to play in achieving this objective.

The type and degree of harm to be taken into account, what is to be regarded as 'significant' and how the remaining provisions of the legislation are to be discharged are to be set out in statutory guidance which is still being prepared.

#### Update of Actions since February 1997

- Burgy Banks, Rainford Brook; Site currently being investigated by site owners.
- Sankey Valley Industrial Estate; Major investigation and remediation carried out by the Agency and the Newton 21 Partnership. Further risk assessment being carried out.
- Sherdley Colliery; Investigation of former landfill site by St Helens MBC.
- Sutton/Hardshaw/Sankey Brooks; 3 sites. Site A is being investigated /remediated. Sites B and C are being investigated.
- Former British Sidac Site; Remediation of site by St Helens MBC.
- Princess Road; Investigation of former landfill site by Wigan MBC.
- Former Monkshall Steelworks; Investigation of former steelworks site with remediation agreed through planning controls.
- Lord St, Cadishead Risk assessment of acid tar lagoons by Salford City Council.
- Howbridge Depot, Atherton Site investigation of diesel spillage by site owners.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Undertake detailed site investigations.	Site Owners, Developers, LAs.	Environment Agency.	U	•	•	•	•	•
2. Develop a database of sites.	Environment Agency. (Stewart Lever)	LAs.	U					

*Issue 4*

3. Initiate and co-ordinate action on sites.	Environment Agency. (Stewart Lever)	LAs, Landowners, Developers.	R	●	●	●	●	●
4. Remediation of sites.	LAs, Developers, Landowners.	Environment Agency.	U					
5. Set up and undertake additional monitoring to assess the impact of contaminated land on Sutton, Hardshaw and Sankey Brooks.	Environment Agency. (Stewart Lever, Roger Lamming)		U(a)	●	●	●	●	●

(a) In order to assess the impact of leachate on Sutton, Hardshaw and Sankey Brooks further monitoring is required. Additional determinands, which are contained in the tip leachate, are to be included in the analytical suites for the routine monitoring sites both upstream and downstream of the contaminated land. Additionally, 3 new sample points are to be located at Sutton Brook prior to its confluence with (ptc) Hardshaw Brook, Sutton Brook ptc Sankey Brook and Sankey Brook downstream of the confluence with Rainford Brook. The results from these sample points would allow a more accurate assessment of the impact of the contaminated land on Sutton and Sankey Brook and also demonstrate how this impact is affected by dilution from Hardshaw Brook and Rainford Brook. Once remedial work has been undertaken at these contaminated sites, the data collected at these sample points will then be used to evaluate the improvements to the water quality of the adjacent watercourses.

## **Issue 5**

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### **CONTAMINATED RUN-OFF FROM SPOIL HEAPS AND DISCHARGES FROM ABANDONED MINES CAUSING POLLUTION TO SURFACE AND GROUNDWATER**

Currently, landowners and former operators of abandoned mines causing pollution are exempt from key legislative controls and are not liable for clean up costs. The Environment Act, 1995, will introduce some improved measures to deal with mines abandoned in the future.

A National table of sites has been produced by the Environment Agency and the Coal authority is currently seeking funding to remediate some of them. A study of these sites is to be undertaken to assess the impact of the mine drainage and how to rectify the situation. Spoil heaps are not included in the National scheme but an assessment of their impact is to be undertaken for future use.

#### **Update of Actions since February 1997**

There is currently a national database which already ranks and prioritises identified abandoned coal mine workings for restoration. Other abandoned coal mine workings, such as the one causing water quality problems in Hockery Brook, need to have their impact assessed to enable it to be ranked and prioritised in this database. Funding for restoration of these sites will be made available by the Department of Trade and Industry and consideration will be given to costs and benefits prior to any work being carried out.

Planning permission for redevelopment of the spoil heaps at Astley Green has been granted. Discussions regarding restoration works are currently being progressed, but will result in water quality improvements to the surrounding watercourses. The work will involve excavation of clay to use as a capping material for the spoil heaps. This will reduce percolation of rainwater through the spoil heap which emanates as a contaminated discharge to watercourse. A consent application has been submitted for contaminated site drainage while the work is being carried out. This is currently occurring naturally and is untreated, but under the consent it will be discharged via settling ponds to Moss Brook and its tributaries.

The planning application for the redevelopment of spoil heaps at Cutacre have been deferred. In addition to spoil heaps, funding for the restoration of Bold, Sutton Manor and Clock Face collieries has been secured. Focusing on Bold Colliery, as part of a Millennium project this will be restored for public open space and to optimise the full recreation and conservation potential of the site. Contaminated run-off will be reduced through a new site drainage network incorporating reed beds and weirs and also through woodland planting.

Issue 5

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Assess the impact of abandoned mine discharges.	Environment Agency. (Roger Lamming, Stewart Lever)		U (a)	•	•			
2. Restoration and redevelopment of spoil heaps. 1) Astley 2) Cutacre	Developer, Owner.	Environment Agency.	1 U	•	•			
3. Restoration of collieries. a) Bold b) Sutton Manor c) Clock Face	St. Helens MBC, Developer.	Environment Agency.			•	•	•	•

## Issue 6

### IMPACT FROM INDUSTRIAL AND TRADING ESTATES DRAINAGE ON SURFACE WATER

The Environment Agency seeks to reduce contamination of surface water discharges by promoting good housekeeping on trading estates and through pollution prevention guidance. Where known problems exist the Agency, in negotiation with site owners, the Local Authorities and North West Water Ltd, seek to rectify the situation through the installation of interceptor devices or other engineering solutions.

#### Update of Actions since February 1997

This issue can partly be considered in relation to Issue 1 which addresses the impact of contaminated surface water discharges on surface water quality. Many of these discharges emanate from industrial estates and by resolving these, the impact of drainage from problematic industrial estates is reduced. The regional priority list of contaminated surface waters contains a number of discharges which are derived from industrial estates in the Sankey/Glaze LEAP area. In addition to these a number of individual sites have been visited and pollution prevention advice has been given. This is an ongoing process which has resulted in many incorrect connections such as vehicle wash draining to surface water being rectified.

There are many other problems associated with industrial estates relating to accidents, negligence, poor storage and the mishandling of oil, chemicals and waste. These problems are identified through ongoing investigation and then rectified, for example, the successful elimination of the long-standing intermittent oil pollution in Hardshaw Brook which was discharging from a leaking pipe.

Site improvement and pollution prevention has been promoted through the posting of an Environment Agency produced Pollution Prevention Action Pack to occupiers of many of the Sankey/Glaze LEAP area industrial estates. The 'Site Right' pack is designed as an advisory pack offering both practical measures and ideas to help industrial sites implement effective measures principally for the prevention of water pollution.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Undertake site visits to identify drainage problems.	Environment Agency. (Roger Lamming)		R	•	•	•	•	•
2. Promote site improvement and pollution prevention.	Environment Agency. (Roger Lamming)		R	•	•	•	•	•
3. Rectify identified problems.	Owners, LAs, NWW Ltd.		U	•	•	•	•	•

## Issue 7

### IMPACT OF URBAN RUN-OFF AND DRAINAGE FROM MAJOR ROADS AND MOTORWAYS ON SURFACE WATER

A number of major roads cross the area covered by this plan. On some watercourses there is an impact from road drainage, but the effect of the intermittent discharges on other watercourses is not fully known. On new road schemes the installation of interceptors and stormwater controls is promoted at the planning stage.

One of the problems that the Agency has is that no single database contains the information on all the motorway drainage overflows. If the information had been easily available the recent pollution of the Mersey following a road accident could have been reduced or prevented if the oil was intercepted at the outfall.

#### Update of Actions since February 1997

A project has been proposed, for which funding is currently being sought, to develop a portable database of all major trunk road and motorway drainage outfalls within the Sankey/Glaze LEAP area. This will enable field officers to quickly identify the precise destination and consequences of pollutants entering a drainage system following a pollution incident involving the road drainage network. The database will also allow new drainage infrastructure, such as interceptors and penstocks, on many new and substantially altered road drainage systems to be documented in a way which could be easily and immediately accessed, often in emergency situations. For the database to be utilised to its full potential, further information on drainage outfalls for major roads needs to be collected. This will allow problem areas where drainage controls are inadequate to be identified and prioritised for improvement.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Collect information on known drainage outfalls for major roads in the area.	Environment Agency. (Roger Lamming)	Highways Agency, LAs.	U	●	●	●	●	●
2. Identify and prioritise problems areas.	Environment Agency. (Roger Lamming, Stewart Lever)	Highways Agency, LAs.	R	●	●	●	●	●

*Issue 7*

<p>3. Encourage source control of surface water runoff from new developments by employing best management practices for example, grass swales, attenuation ponds, infiltration trenches, or porous pavement.</p>	<p>Environment Agency.</p>	<p>North West Water, Local Authorities, Highways agency, Developers, Landowners.</p>	<p>U</p>	<p>•</p>	<p>•</p>	<p>•</p>	<p>•</p>	<p>•</p>
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## **Issue 8**

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### **DIFFUSE DISCHARGES CAUSING POLLUTION TO BOTH SURFACE AND GROUNDWATER**

In many cases water quality problems can be traced to a point source or to a known pollutant. However, on some lengths of watercourse there is biological evidence of pollution which is not picked up by chemical sampling, or chemical sampling can indicate a type of pollutant but the source is unknown or natural.

Diffuse pollution can occur as a result of agricultural practices such as crop spraying, fertilisers and general agricultural practices. These pollutants can enter a watercourse over a period of time as they slowly leach through the ground and are washed off by the rain. The pollutant then gradually accumulates. In many cases they cannot be detected as the amount present is below the analytical detection limit.

Due to the difficulty and cost of investigating this problem, it is not envisaged that this issue can be pursued within the time period of this LEAP. It remains in the plan incase resources become available.

## Issue 9

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### **RIISING GROUNDWATER LEVELS INCREASING THE RISK OF POLLUTION**

The cessation of mining and the associated pumping of minewater for dewatering purposes will inevitably lead to a return to natural water table levels. This return to natural water table levels is expected to take many decades. The Agency is commissioning work to assess the timescales and identify where there may be potential seepage at the surface.

#### **Update of Actions since February 1997**

North West Water have, as part of their £85 million drought alleviation programme, recommissioned its Houghton Green and Winwick water treatment works by installing membrane filtration plants to guard against the risk of cryptosporidium. This now enables the use of the boreholes serving these treatment works.

It is anticipated that an average total of 4 - 5 MI/d will be abstracted; during the peak summer period (June to August), from the boreholes. In drought conditions it is expected that abstraction will take place at a higher abstraction rate and for a longer period of time.

The use of the Winwick and Houghton Green boreholes is for public water supply purposes only and not for the purpose of constraining the local rise in groundwater level.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Investigate problem and establish priorities for action.	Environment Agency, NWW Ltd.		95(a)		●			

(a) This project is dependent upon the release of the necessary resources.

## Issue 10

### CULVERTS CAUSING FLOOD RISK, POOR WATER QUALITY AND LOSS OF HABITAT

Culverts can prevent or impede the free flow of water and wildlife along watercourses. In urban areas culverts can cause flooding to property due to blockage or collapse, unless regular maintenance is carried out to keep them clear. The detection of pollution is complicated when surface water systems discharge within culverts.

#### Update of actions since February 1997

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey Catchment. As part of this consultants have identified stretches in the Sankey catchment which are culverted for a significant length and made some evaluation as to whether they could or should be opened up.

Action	Responsibility		Total cost (£K)	1997/8	1998/9	1999/2000	2000/1	Future
	Lead	Other						
1. Identify and gather information on all culverts suitable to be opened up when the opportunity arises. Section 105 investigation.(a)	Environment Agency, LAs. (Phil Younge)	Developers Owners.	U	●	●			
2. Install debris screens and telemetry as appropriate on culvert entries.(c) Telemetry installation on Windle Brook at Rivington Rd.	Environment Agency. (Phil Younge)		266 (b)		●	●		126
3. Reduce flows into culverts by attenuating flows, storing flood waters or providing alternative routes for flood flows.	Environment Agency, LAs, NWW Ltd, Owner. (Phil Younge)	Developer, Owner.	10	●	●	●	●	●

The Agency's policy is that culverts should be opened up and restored to open river corridors wherever possible. (Agency National Policy Document on Culverts in preparation at the moment)

(a) Section 105 Investigations aim to identify the extent of 100 year flood plains (areas that would expect to be flooded at least every 100 years). Culverts affecting flood levels will also be clearly identified.

(b) Regional project

(c) Telemetry is also planned on Down Brook on the culvert screen under Ashton-in-Makerfield town centre.

## Issue 11

### LITTER AND ILLEGAL TIPPING INTO WATERCOURSES CREATING MAINTENANCE AND AMENITY PROBLEMS

Illegal tipping of litter and other debris into watercourses is a particular problem in urban areas.

As well as looking unsightly, rubbish in rivers can be a danger to wildlife, pets and waterside users. Debris can build up blocking the flow of water, especially in culverts and under bridges, increasing the risk of flooding to roads and property.

#### Update of Actions since February 1997

Two flytipping enforcement campaigns have been run in the St. Helen's area at the Sankey Valley Industrial Estate, Newton-Le-Willows, (assisting decontamination works) and on land off Vista Road, Newton-Le-Willows.

A number of vehicles were stopped from tipping in the area and legal action is now likely to be taken against a waste carrier for the deposit of waste at Vista Road.

#### Multi-Agency Police checks

The Agency in conjunction with the Police and other agencies are carrying out regular vehicle checks. This allows Enforcement Officers to advise individuals, establishments or undertaking of the legislation and to take action against person who are committing offences.

The most recent check was Operation Mermaid, which had Officers across the South area, checking vehicles for breaches of the legislation. This can include registration as waste carriers, Duty of Care and Special waste offences.

These initiatives assist the Agency in regulating the waste industry and preventing the illegal carriage and disposal of controlled waste.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Local initiatives to prevent illegal tipping and littering of watercourses including the promotion of litter removal teams.	Environment Agency, LAs, Owners, Water-watch, Streamcare. (Roger Lamming, Phil Younge)		U	•	•	•	•	

*Issue 11*

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2.Promote the control of unauthorised vehicular access to watercourses. (a)	Environment Agency. (Roger Lamming)	LAs, Owners.	U(ii)	●	●	●	●	
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(a) Improving access for maintenance and recreational activities (see Issue 13) increases the opportunities for flytipping and illegal dumping. We will, therefore, actively encourage landowners to take measures to prevent vehicular access to watercourses.

The Agency as part of its core duties will continue routine maintenance to remove debris from watercourses.

Although maintenance work is not aimed at litter removal, through the activities of our enforcement officers we will continue to take action against those responsible for littering and tipping.

As part of our core duties we have and will continue to prevent development from contributing waste or other materials to watercourses, and promote an awareness raising of waste disposal services, recycling and waterside rubbish related issues.

WaterWatch and Stream Care initiatives continue to be supported by the Agency.

## Issue 12

### MAINTENANCE PROBLEMS CAUSED BY UNSTABLE BANKS

Erosion and bank slips are natural processes which can create variety and diversity in bank profiles as well as providing habitats for plants and wildlife. However, where these processes reduce flood defence standards regular maintenance works are required. Additionally, slipped materials may be washed downstream, contributing to shoals in areas of deposition, increasing flood risk in urban areas.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Reduce slopes and support banks in danger of slipping, as need arises. (a)	Owners.	Environment Agency.	U					
2. Investigate and implement more environmentally sensitive maintenance methods. [Ongoing]	Environment Agency. (Phil Younge)	Owners.	U	●	●			
3. Carry out works to return channels to more natural section.(b)	Owners, Environment Agency, LAs. (Phil Younge)		U		●	●	●	●

As part of our national standards of service we regularly review our maintenance regime and will discontinue works in any areas where the watercourse has stabilised.

We will continue to identify areas where there is a need to protect banks from erosion

(a) Subject to Agency consent and consideration of environmental impacts, on Main Rivers.

(b) The River Rehabilitation Scheme at Padgate Brook, completed in 1996, is an example of works carried out to return a watercourse to a more natural section.

The Sankey Brook Improvement Scheme at, an estimated cost of £421,000, is required to alleviate the effects of erosion and bank slips in a semi-urban area.

## Issue 13

### POOR ACCESS TO WATERCOURSES FOR MAINTENANCE WORKS AND RECREATIONAL ACTIVITIES

Poor access to stretches of watercourse can impede regular maintenance, emergency works and recreational activities. Rivers and streams may become neglected and undervalued where people cannot walk along them. Development to the top of banks leaves no habitats for wildlife. The provision of linear green spaces along watercourses can act as a buffer against damaging activities as well as providing access for maintenance and recreational purposes.

#### Update of Actions since February 1997

Three sites within the Leigh Area have been identified as part of the Urban Channel Access Scheme on Bedford Brook at : (i) Widdows Street, (ii) Park Lane, & (iii) Hooten Lane.

In July 1997 the Agency issued a Policy Document on Policy and Practice for the Protection of Floodplains which has a bearing on this issue.

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey Catchment. As part of this consultants have identified stretches where public access is poor and could be improved.

Action	Responsibility		Total cost (£K)	1997/8	1998/9	1999/2000	2000/1	Future
	Lead	Other						
1. Identify where improvements to public access to watercourses are necessary and encourage the creation and extension of linear parks. CROSS REF ISSUE 17	Environment Agency, LAs. (Phil Younge, Bob Lee)	Owners.	U	●	●	●	●	
2. Three ramps are proposed in the Leigh area to provide access to watercourses for maintenance and emergency works.	Environment Agency. (Phil Younge)	LAs, Owners.	85*	●	●			

As a core duty we seek to increase public awareness of the existence, nature and purpose of watercourses.

Through the development control process and land drainage byelaws we encourage Local Authorities, developers and landowners to provide and enforce access strips along watercourses.

## Issue 14

### IMPACT OF RESIDUAL EFFECTS OF MINING SUBSIDENCE ON FLOOD RISK

Extensive mining activities in the past has left a legacy of deepened and regraded watercourses. These must be maintained to continue existing standards of flood protection and land drainage. Localised subsidence depressions have been allowed to flood or require pumping to protect land and property.

Within the LEAP area the recent completion of the Bedford Brook Pumping Station Improvements Scheme has improved flood protection in the Leigh area, as part of our core duties we will continue to operate our existing land drainage pumping stations

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Review present regime and discontinue where watercourses have stabilised.	Environment Agency. (Phil Younge)		U	●				
2. Investigate and implement more environmentally sensitive protection measures, returning channels to more natural sections.	Environment Agency. (Phil Younge, Bob Lee)		U		●	●	●	
3. Proposed Pennington Brook Improvement Works.(a)	Environment Agency, Coal Authority. (Phil Younge)	Wigan MBC.	U		●	●	●	

(a) Works are proposed to improve defences to Kirkham Road, Pennington. The Agency is in discussion with the Coal Authority who will fund the works.

At Jennets Lane Pumping Station an investigation into the condition of the pumping mains is being carried out - any works arising from this will be carried out in 1998

## Issue 15

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### SILTATION CAUSING FLOOD RISK

Sand and silt is washed into the upper reaches of watercourses and collects forming shoals in the lower urban reaches. In tidal zones sand and silt build up, blocking flap valves and obstructing river channels. The Agency through its programme of regular maintenance works clears natural silt traps and tidal siltation in order to prevent flooding.

#### Update of actions since February 1997

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey catchment. As part of this consultants have carried out a River Habitat Survey which may provide some useful information as to river activity, erosion and deposition in the Sankey catchment

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Identify appropriate locations to construct silt traps to catch sand and silt: (a)	Environment Agency. (Phil Young)		U	●	●			
2. Identify and control sources of sand / silt entering watercourses. (b)	Environment Agency. (Phil Young)	LAs, Owners.	U	●	●	●	●	

(a) No progress on this however a number of locations prone to siltation and therefore ideal sites for Silt traps have been identified in the past.

(b) In 1997 the Agency carried out desilting works on the following Watercourses: Hardshaw, Sutton and Sankey Brook in St Helen's, Landside Brook, Rainford Brook, Deans Brook, Pennington Brook and Whittle Brook.

## Issue 16

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### LACK OF SUSTAINABLE FISH POPULATIONS

Water quality within the Sankey/Glaze area is poor and the watercourses are unable to sustain coarse fish populations. Improvements in water quality will therefore increase the available habitat suitable for fish. Such improvements are routinely monitored by the Agency.

#### Update of Actions since February 1997

The next routine fisheries survey of the Sankey Brook and River Glaze catchments are planned for 1998 and 1999 respectively. The results of these surveys will be used to assess whether stocking is appropriate.

No stocking has taken place this year.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999 /2000	2000 /1	Future
	Lead	Other						
1. Stock with coarse fish as water quality improves sufficiently to maintain coarse fish populations.	Environment Agency. (Bob Lee)	Angling Clubs.	U(i)					

## Issue 17

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### LACK OF WATER ASSOCIATED RECREATION AND AMENITY SITES

Public open space, adjacent or close to watercourses, is of particular amenity value in urban areas, and provides informal access to the water environment for a wide range of people. There are opportunities within the Sankey/Glaze area for providing and upgrading public access and recreational activities, whilst still protecting conservation interests. This is important as access is a sensitive issue requiring informed debate between parties on both sides.

#### Update of Actions since February 1997

Lack of resources have prevented any progress on this issue.

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey Catchment. As part of this consultants have considered where recreation opportunities could be improved.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. To carry out a survey of existing locations and demand in order to assess the need for water based recreation and to produce a recreational action plan.	Environment Agency. (Bob Lee)	LAs, Sports Council.	U	●				

## Issue 18

### EXTENT OF CHANNELIZED AND OVER-MANAGED WATERCOURSES CREATING LOSS OF HABITAT AND AMENITY

Many watercourses in the area have been straightened, deepened and shortened. To create more space for development and agriculture and to drain the land more effectively banks have been reinforced or re-profiled, long lengths have been floodbanked and relatively few river corridor habitats have been left undamaged. The lack of variety and natural features also means that rivers are less attractive and can be less valued.

The Environment Agency works to protect those stretches of watercourse and river corridor which retain some value for wildlife. We also aim to enhance those which are more degraded. Some stretches may be suitable for rehabilitation.

#### Update of actions since February 1997

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey Catchment. As part of this consultants have identified stretches of channelised and over managed watercourses which may be suitable for enhancement or rehabilitation.

In May and June of 1997 £6,000 was spent on planting reeds and aquatic plants as part the Padgate brook rehabilitation scheme in Warrington.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Identify stretches suitable for enhancement and restoration.	Environment Agency. (Bob Lee)	LAs, Groundwork Trusts.	U	●	●			
2. Implement appropriate enhancement and restoration schemes.	Environment Agency. (Bob Lee, Phil Younge)	LAs, Groundwork Trusts, Mersey Forest, Forestry Authority.	U		●	●	●	

## Issue 19

### **INTENSIVE CULTIVATION OF LAND TO THE EDGE OF WATERCOURSES INCREASING THE RISK OF POLLUTION AND LOSS OF HABITATS.**

Many waterside fields are ploughed and cultivated to the very top of the bank leaving no buffer against spray drift, run-off, disturbance and erosion. An uncultivated bankside strip can provide wildlife habitats and a bank protected by natural vegetation is likely to be more stable and prevent excessive erosion which can cause damaging siltation downstream.

Nitrogen, can be removed from field run-off and drainage by passing through vegetated buffer strips. Removal of Phosphorous is less successful. The efficiency of these strips is reduced if land drains are present and continue to flow direct to the watercourse.

#### **Update of actions since February 1997**

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey Catchment. As part of this consultants have identified stretches which are cultivated to the bank top and where riparian habitat quality is poor.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Identify watercourses where uncultivated strips would be most beneficial.	Environment Agency. (Bob Lee)	MAFF, FWAG, NFU, Wildlife Groups, LAs.	U	●	●			
2. Identify landowners willing to create uncultivated strips along watercourses.	Environment Agency. (Bob Lee)	MAFF, FWAG, NFU, Wildlife Groups, LAs, Forestry Authorities.	U			●	●	

## Issue 20

### THREATS TO THE HABITATS OF GREAT CRESTED NEWTS

Ponds in the area are known to provide a stronghold for great crested newts (GCN), but changes in land-use, development pressures and agricultural intensification have led to a loss of ponds and wetland habitats. Over-wintering habitats around a pond are necessary to sustain a viable population.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Create a database of existing GCN sites on GIS for use in the Agency's regulatory responses.	Environment Agency. (Bob Lee)	Wildlife Trusts, English Nature, Pondlife Project.	U	●				
2. Input into and help to implement Biodiversity Action Plans and Local Biodiversity Audits for GCNs.	Environment Agency. (Bob Lee)	Environment Agency, Wildlife Trusts, Pondlife Project.	U	●	●	●	●	●

English Nature are the "Lead Authority" for biodiversity issues relating to great crested newts, but the Environment Agency will assist in implementing the Biodiversity Action Plan and get involved in Local Biodiversity Audits for this and a number of other water-related species.

The Agency is working in partnership with the Pondlife Project who are producing a GIS data base of ponds in this area.

See also New Issue 25 "The need for continued habitat improvement and protection of existing wildlife habitats to conserve and enhance biodiversity."

## Issue 21

### INVASIVE NON-NATIVE PEST SPECIES

Many foreign plants were introduced to Britain in the 19th century, mainly for ornamental reasons. A few grow very strongly in the wild and have come to dominate river banks. Japanese knotweed and Himalayan balsam are widespread in the area, particularly where land has been disturbed. They out compete native plant communities and can worsen problems of bank erosion. Giant hogweed, whose sap causes severe irritation and painful blistering, is a problem in certain areas and is controlled as part of an agency-wide spraying programme.

#### Update of actions since February 1997

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey Catchment. As part of this consultants have identified and mapped sites where these alien invasive species occur along the Sankey catchment.

The Agency has produced a leaflet "Guidance for the control of invasive plants near watercourses" which is widely available.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Investigate the extent of Japanese knotweed, Himalayan balsam and giant hogweed in the area.	Environment Agency. (Bob Lee)	LAs, Ranger Services, Landowners.	U	●	●	●	●	
2. Carry out appropriate control programme.	Environment Agency.	LAs, Ranger Services, Landowners.	U	●	●	●		

## Issue 22

### THE PRESENCE OF BLUE/GREEN ALGAE IN PENNINGTON FLASH LEADING TO PUBLIC HEALTH AND AMENITY PROBLEMS

Pennington flash is of high amenity value however problems of nutrient enrichment have lead to the periodic growth of Blue/Green algae. This can result in a pea green discolouration of the water which may be poisonous to humans and pets.

#### Update of actions since February 1997

As a result of blue-green algal blooms on Pennington Flash, the Environment Agency set up a sub-group to coordinate actions laid out in this LEAP. Surveys commenced in Oct 1996 to assess current nutrient loads entering and leaving the Flash. Sampling was also undertaken by our Marine & Special Projects function on approx monthly basis. Monitoring programmes will be reviewed in Spring 1998. In addition to water sampling , 3 samples of sediment were taken from different points in the Flash and analysed by the Institute of Freshwater Ecology to assess Phosphorous availability. Data collected will be run through relevant computer models during 1998 and suitable management options will be identified.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Investigate the reasons for the nutrient enrichment.	Environment Agency.		U	●				
2. Formulate an action plan to combat the problem.	Environment Agency.	NWW Ltd, LAs, Landowners.	U		●			
3. Pursue the recommendations	Environment Agency.	NWW Ltd, LAs, Landowners.	U			●	●	●

## Issue 23

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### **LACK OF KNOWLEDGE OF THE EXTENT OF USE OF WOOLSTON FISH PASS BY MIGRATING FISH**

A fish pass has been included as part of the new Woolston Weir. No work has been undertaken to assess its efficiency. In addition there is an inherent problem with blockages caused by debris.

#### **Update of Actions since February 1997**

The Manchester Ship Canal Company have had a debris deflector designed and have consulted the Agency with the plans which have been approved.

They are also investigating the options to construct a stop log or penstock system to the upstream exit of the fish pass to enable safe maintenance within the structure itself. This would also allow the installation of a fish trap to investigate the extent of use of the pass by migrating fish.

Work is expected to be completed during the Summer of 1998.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Install a debris deflector to prevent blockages.	Manchester Ship Canal Company.	Environment Agency.	U(i)		●			
2. Install a fish trap to assess fish pass efficiency.	Environment Agency.	Manchester Ship Canal Company.	U(i)		●			

## New Issue 24

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### UNAUTHORISED WASTE ACTIVITIES: METAL RECYCLING SITES

Metal Recycling Sites (MRSs) are classified as recovery operations for the purpose of waste management licensing and are a source of benefit to the environment and sustainable development. Such sites are also recognised as potential sources of pollution. The application of the Waste Management Licensing (Amendment Etc.) Regulations 1995, requires that such facilities operate in accordance with the requirements of a waste management licence or an exemption from such licensing.

A large number of MRSs are currently operating or applying to operate under a waste management licence or an exemption from such licensing. However, there are still MRSs operating without the benefit of a waste management licence or an exemption from such licensing. These sites may pose a pollution threat to the environment.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Identify all unauthorised MRSs in the area.	Environment Agency. (Roger Lamming)	Operators.	U	●	●			●
2. Regularise MRSs through the licensing or exemption system.	Environment Agency. (Roger Lamming, Stewart Lever)	Operators.	U		●	●		●

## New Issue 25

### THE NEED FOR CONTINUED HABITAT IMPROVEMENT AND PROTECTION OF EXISTING WILDLIFE HABITATS TO CONSERVE AND ENHANCE BIODIVERSITY.

When the UK signed the Convention on Biodiversity in 1992 at the Earth Summit it committed itself, amongst other things, to protect ecosystems and natural habitats and maintain viable populations of species. One of the means of doing this was to develop a national strategy which was endorsed by the Government in 1996. So far action plans have been drawn up for a short list of 116 of the most threatened and declining species and 14 key habitats. A middle list and a long list were also produced. To be implemented successfully these national targets will be translated into effective action at a local level through Local Biodiversity Action Plans (LBAPS).

There are several such initiatives being undertaken in the area to such as, the Biodiversity Audit being produced by Greater Manchester Ecology Unit and other audits of biological resources. A Merseyside Biodiversity Action Group is proposed as is a Merseyside Environment GIS system.

Species on the short list of globally threatened or declining species in UK biodiversity Steering Group Report 1995 known to occur in the LEAP area include:

Water Voles the Agency is the contact point for this flagship species.

Species on the medium/long list which are relevant to this area include bats, a number of bird species Common frog, common toad and smooth and palmate newts. Relevant key habitats for which costed action plans will be drawn up in the next three years include canals, ponds and lodges, unimproved grassland, woodland and hedges.

#### Update of actions since February 1997

The Environment Agency has provided funding to the Sankey Now River Valley Initiative to carry out a Conservation Assets Register of the Sankey Catchment. As part of this consultants have carried out a preliminary water vole survey which identified water vole activity on the Sankey in Warrington, Clipsley, Union Bank, and Cloghe brooks.

Action	Responsibility		Total cost (£K)	1997 /8	1998 /9	1999/ 2000	2000 /1	Future
	Lead	Other						
1. Contribute to the development of Biodiversity initiatives, for example, LBAPs, Species Action Plans, Local Biodiversity Audits, Species Recovery Programmes.	Local Authorities, Wildlife Trusts, JCAS, EN, RSPB, specialist local groups.	Environment Agency (Bob Lee).	R(a)	●	●	●	●	●

*New Issue 25*

<p>2. Further the conservation of important species and habitats, (eg Newts, water voles, bats ) through opportunist projects, as funds become available.</p>	<p>Wildlife Trusts, Local Authorities, local wildlife organisations and specialist groups.</p>	<p>Environment Agency (Bob Lee).</p>	<p>U(b)</p>					
<p>3. Identify, record and monitor the distribution and status of the Great Crested Newt and water vole within the study area in order to protect and enhance populations.</p>	<p>Environment Agency Wildlife Trusts, GMEU.</p>	<p>EN, Local specialist groups, local authorities, Cheshire Agenda 21.</p>	<p>U(C)</p>					
<p>4. Work in partnership and exchange available information with other organisations to protect and promote vulnerable landscape and river corridor features.(eg via River Valley Initiatives).</p>	<p>Environment Agency (Bob Lee).</p>	<p>Cheshire Wildlife Trust, JCAS, EN, FRCA, FWAG, Local specialist groups, local authorities, RSPB, National Trust, CPRE, Merseyside Museums, Cheshire Econet, CLA, NFU, BTCV.</p>	<p>20</p>	<p>20</p>	<p>●(D)</p>	<p>●</p>	<p>●</p>	

A = As and when required.

B = As and when funds become available. These will be reported on in future reviews of this plan.

C = Funds may be made available for specific surveys. These will be reported on in future reviews of this plan.

D = Future budgets have not yet been confirmed. These will be reported on in future reviews of this plan.

## **The Future**

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### **Future Review and Monitoring**

The Agency will be jointly responsible, with other identified organisations and individuals, for ongoing implementation of the Sankey/Glaze Action Plan. Progress will continue to be monitored and reported annually by the Agency to all key partners and other interested parties.

The next annual review will be published in February 1999 and will:-

- Examine the need to update the LEAP in the light of changes in the area.
- Compare actual progress with planned progress, and explain the reason for any changes to the content or timing of individual actions.
- Report on other matters, including any legislative and classification scheme changes, affecting the LEAP.
- Roll forward the detailed activity plans.

## **Glossary**

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<b>ABSTRACTION LICENCE</b>	A licence to abstract water issued by the Environment Agency. The maximum annual, daily, and hourly abstraction rates are normally set within the terms of the licence.
<b>AQUIFER</b>	A layer of underground porous rock which contains water and allows water to flow through it.
<b>CHANNEL</b>	A cutting in land along which a river flows.
<b>CULVERT</b>	A man-made structure, for example a pipe, carrying a watercourse underground.
<b>DEBRIS SCREEN</b>	A grid used to trap debris in a watercourse to prevent it entering and blocking culverts.
<b>DEPOSITION</b>	Where a river flows more slowly it may deposit gravel, sand and silt in its channel - often on the inside edge of bends or meanders.
<b>DISCHARGE</b>	The release of waste into the environment.
<b>DOWNSTREAM</b>	In the direction of the flow of a river, i.e. away from its source
<b>FAUNA</b>	Animal life.
<b>FLORA</b>	Plant life
<b>FRESHWATER FISH</b>	For the purpose of the Salmon and Freshwater Fisheries Act 1975, fish other than salmon, brown trout, sea trout, rainbow trout and char.
<b>INCINERATION</b>	Specialist high temperature incineration is the best option for many hazardous wastes, but for household and similar wastes, the main advantage is volume reduction. Expensive, but the heat may be recovered as an energy source.
<b>LANDFILL</b>	The deposit of waste into or onto land, which can then be restored to some other use. The predominant method for the disposal of controlled waste in the UK
<b>LEACHATE</b>	Liquid containing material in solution, draining from the ground.
<b>MAIN RIVER</b>	Some, but not all, watercourses are designated as Main River. Main River status of a watercourse must first be approved by MAFF. The Environment Agency has the power to carry out works to improve drainage or protect land and property against flooding on watercourses designated as Main River.
<b>MEANDER</b>	A curve in a winding river

## Glossary

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<b>OCHRE</b>	Iron based orange discolouration.
<b>POTABLE</b>	Drinkable
<b>RIPARIAN</b>	Of, or on, the banks of a river.
<b>RIPARIAN OWNER</b>	Owner of land abutting a river or lake. Normally riparian owners own the bed of river to the mid point of the channel.
<b>RIVER CORRIDOR</b>	Stretch of river including its banks and the land close by.
<b>SHOAL</b>	A sand and/or gravel deposit at the edge of or within river channel.
<b>SILTATION</b>	The build up of sediment on the bed of a watercourse
<b>STILLWATER</b>	A non-flowing body of water such as a lake.
<b>SUBSIDENCE</b>	The sinkage of land, often as the result of mining.
<b>TOPOGRAPHY</b>	Physical features of a geographic area.
<b>TRANSFER STATION</b>	A licensed depot where controlled waste is stored and sorted for disposal or recycling.
<b>TREATMENT</b>	The physical, chemical or biological processing of certain wastes to reduce volume or pollution potential before recovery or disposal.
<b>URBAN RUN-OFF</b>	Rainfall from towns and cities that is carried off by streams and rivers.
<b>WASTE MINIMISATION</b>	Reducing the quantity and/or hazard of waste produced.
<b>WATER TABLE</b>	The surface of a body of groundwater within the underground strata. The water table will fluctuate as a result of natural or artificial causes.

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**ENVIRONMENT AGENCY  
GENERAL ENQUIRY LINE**

**0645 333 111**

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

**ENVIRONMENT AGENCY  
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