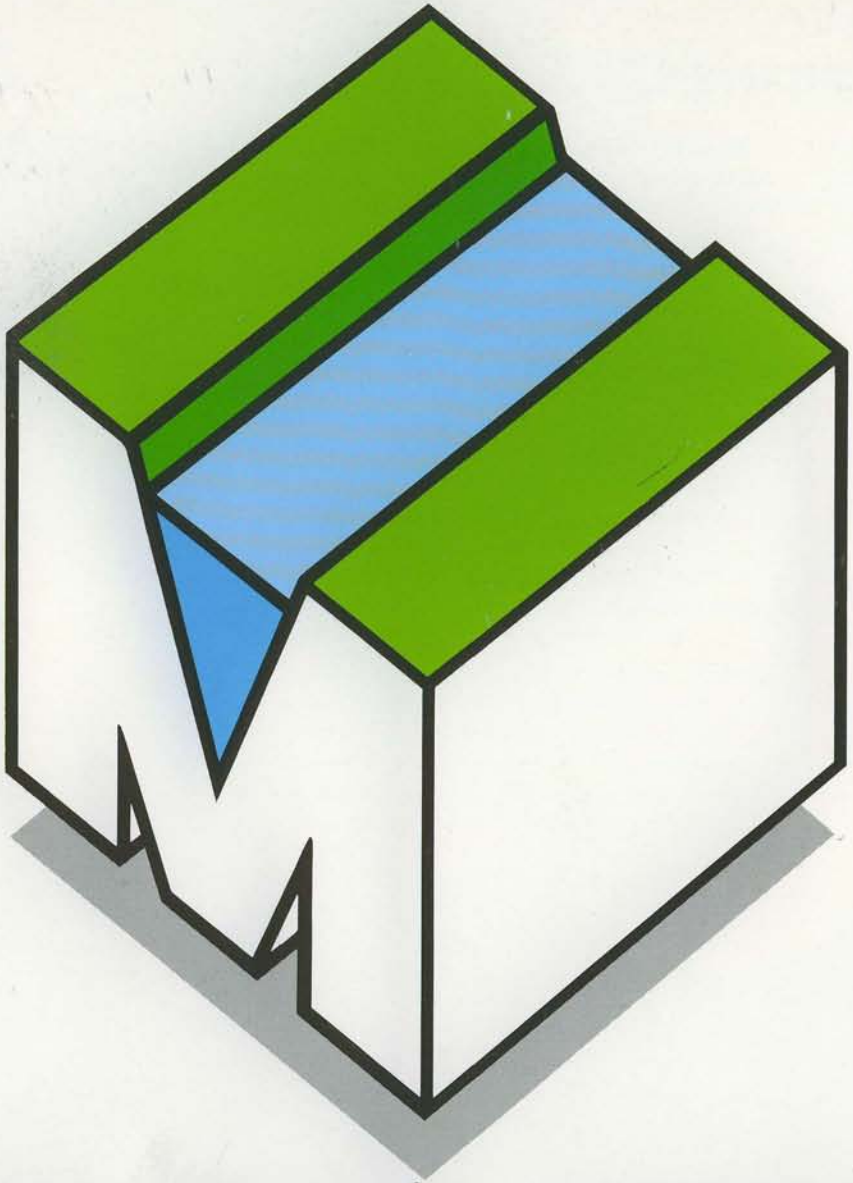


Mersey Basin Campaign

New life for the North West

The aims of the campaign

Message from the Secretary of State for the Environment

The Rt. Hon. Kenneth Baker, MP.

My top priority as Secretary of State is care for the Environment. A decent Environment is worth pursuing for its own sake; and without that it will be much more difficult to secure the economic regeneration on which our future prosperity depends.

In the Mersey Basin it is essential that we stop polluting the river system and remedy two centuries' abuse of both watercourses and waterfront.

A good start has been made. This brochure shows the massive scale of the scheme and it describes the steps which have been taken and our future plans to put things right.

I am encouraged that this campaign has firm backing from the European Community. It has my full support.

Kenneth Baker

The Mersey Basin Campaign is supported by European Community funds

Introduction by the Chairman of the Campaign Organisation

John Tavaré, CBE.

The regeneration of the Mersey Basin is a great challenge. The pioneering qualities of enterprise, energy and inventiveness which gave rise to the Industrial Revolution in the North West are still present and can be harnessed to restore its greatness.

The Mersey river system was the original element enabling that fundamental advance to take place – and Britain to become the world's first industrial leader. But increasing pollution caused our towns and cities to turn their backs on these water-courses, which have since become a damaging liability – sapping confidence and deterring the investors upon whom real wealth and job creation depends. A cleaned-up Mersey Basin can once again become the great asset that will stimulate the region to regain its historical importance.

Like man, rivers need oxygen to survive. Our first task is to breathe new life into the rivers by removing the suffocating effects of long-term pollution. The North West Water Authority has already started this task of resuscitation with an immense programme of renewal for sewers and sewage treatment.

On the landward side we need to match, or even anticipate, steadily improving water quality with imaginative schemes for riverside development – recreational, residential, commercial and industrial. We must clear away the dereliction which disfigures so much of our riverside land and replace it with an environment which present and future generations will enjoy and investors will seek for their new projects.

The whole community will benefit from the Mersey Basin Campaign. It calls for the wholehearted support of the public, private and voluntary sectors in realising its objectives.

John Tavaré

A brighter prospect for the region's rivers

In the early years of the Industrial Revolution apprentices employed at a cotton mill near Macclesfield complained of a monotonous diet of salmon. As a result salmon was restricted to two days a week! In view of the distance from the sea this illustrates in striking fashion the purity of the waters at the time and, by contrast, the extent of their subsequent deterioration.

Restoring the water quality to its original purity throughout the total 1080 mile length of all the rivers in the basin is plainly unrealistic; but much is being, and will be, done. The North West Water Authority (NWWA) has set the following short and long-term targets.

In the short term, ie by about 1995, to prevent further deterioration in river water quality; to reduce and, as far as possible, to eliminate any pollution of rivers that constitutes a gross nuisance. In the long term, within the next 25 years or so, to improve the worst parts of the river system to a 'Fair' condition (Class 2) and to put some of the existing 'Fair' waters into the 'Good' (Class 1) classification. 'Fair' water quality is suitable for coarse fishing and surface water sports such as sailing. 'Good' water quality can support game fish.

At present some 575 miles of river are in the 'Poor' or 'Bad' categories of water quality. The cost of achieving their targets is estimated by NWWA at more than £2 billion over 25 years, the timescale being the minimum compatible within financial resources and the willingness of customers to pay a significant increase in water rates over the full period; though charges in the North West are among the lowest in the country. To secure some discernible water improvements early in the campaign, efforts will be made to accelerate progress in selected areas.

NWWA estimates that over half the 13,000 miles of sewers and most of the 1200 storm sewage overflows in the Mersey Basin need renewing or improving and many of the existing 220 sewage treatment works will require upgrading.

The Water Authority has already embarked upon a programme of 375 new sewerage and sewage treatment projects for the period 1984/7 costing an estimated £230 m.

Each of the three areas shown on the map has distinctive problems – and each is covered by a Project Group within the campaign organisation (see final section).

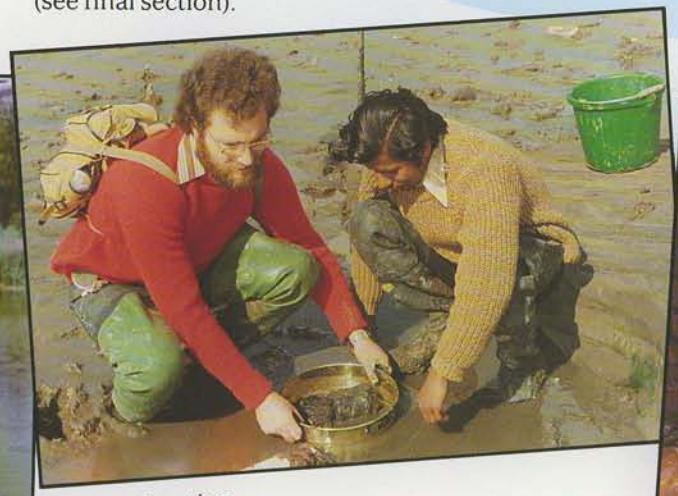
The Estuary

Population 1.4 m
Total river length – 150 miles

The particularly poor quality of the water is due to a combination of three factors – (i) a very high pollutant load, (ii) an exceptionally inadequate inheritance of sewerage, sewage disposal and treatment systems, and (iii) the configuration of the estuary with its wide, shallow basin leading to a narrow outlet. With the ebb and flow of the tide it can take up to 30 days for pollution entering at the tidal limit – Howley Weir, Warrington – to clear the mouth of "the Narrows", 30 miles away.

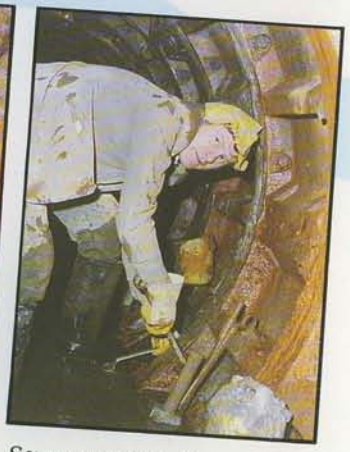
Every day the estuary receives 135 million gallons of untreated domestic sewage, trade effluent and surface water run-off from Liverpool and other towns on both shores. There are nearly 50 outfalls in the lower estuary and further pollution loads from upstream. The combined effect is acute oxygen deficiency leading to severe restriction of aquatic life, and often an agglomeration of offensive solids – sewage, fat and oil – deposited on the shores and coastlines. A major £170 m programme of sewerage and sewage treatment was launched by NWWA in 1981 with the aim of achieving 'Fair' water quality and the removal of solids from shorelines and beaches by 1995.

Sampling water quality.



Biological testing.

Old sewer in bad condition.



Sewer construction.

Mid Mersey and Southern Catchment

Population 1.2 m
Total river length 500 miles

A complex of rivers mainly of a rural nature with industrial concentrations at Warrington, Widnes, Runcorn, St Helens, and Northwich. Typical problems, particularly in the Halton and Warrington districts, are structurally unsound sewers, flooding and pollution of watercourses – all concentrated in a relatively small area.

The notoriously poor water quality downstream from Warrington is being improved by NWWA as part of their major programme of capital schemes for the estuary started in 1981. A new sewage treatment works at Widnes, opened in 1984, provided primary treatment for this densely populated and heavily industrialised area for the first time.

In the southern catchment a substantial programme of smaller schemes is in progress and planned for the mainly rural districts of Vale Royal, Crewe and Nantwich, Congleton, Macclesfield the cumulative effect of which will be to achieve NWWA's short and long-term targets within the agreed timescale.

Extending the sewage treatment plant at Ellesmere Port.

Upper Catchment

Population 2.7 m
Total river length 430 miles

The Greater Manchester area contains the greatest concentration of problems in the Mersey Basin due to woefully inadequate investment in the past. Much of the sewerage system was constructed in the last century when the towns developed from villages. As the towns grew rapidly, the sewerage systems were extended piecemeal with crude overflows to watercourses. The result today is lengthy stretches of polluted rivers.

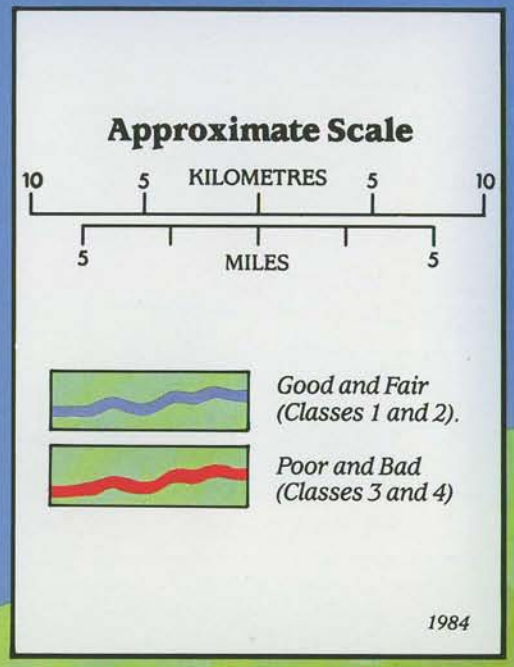
The sewage treatment situation is not as bad because many districts did invest in sewage treatment works. However many of these now need to be extended to restore the river water quality and a number of schemes are in hand at Whaley Bridge, Salford, Hyde and Bury at an estimated total cost of £30 m.

The effect of upgrading or adding more sewage treatment works is to produce more sludge with the attendant need for disposal. A new sludge pipeline is planned which will connect Davyhulme sewage treatment works to a new tideway sludge terminal at Sandon Dock, Liverpool from where sludge ships can operate directly to approved disposal sites at sea.

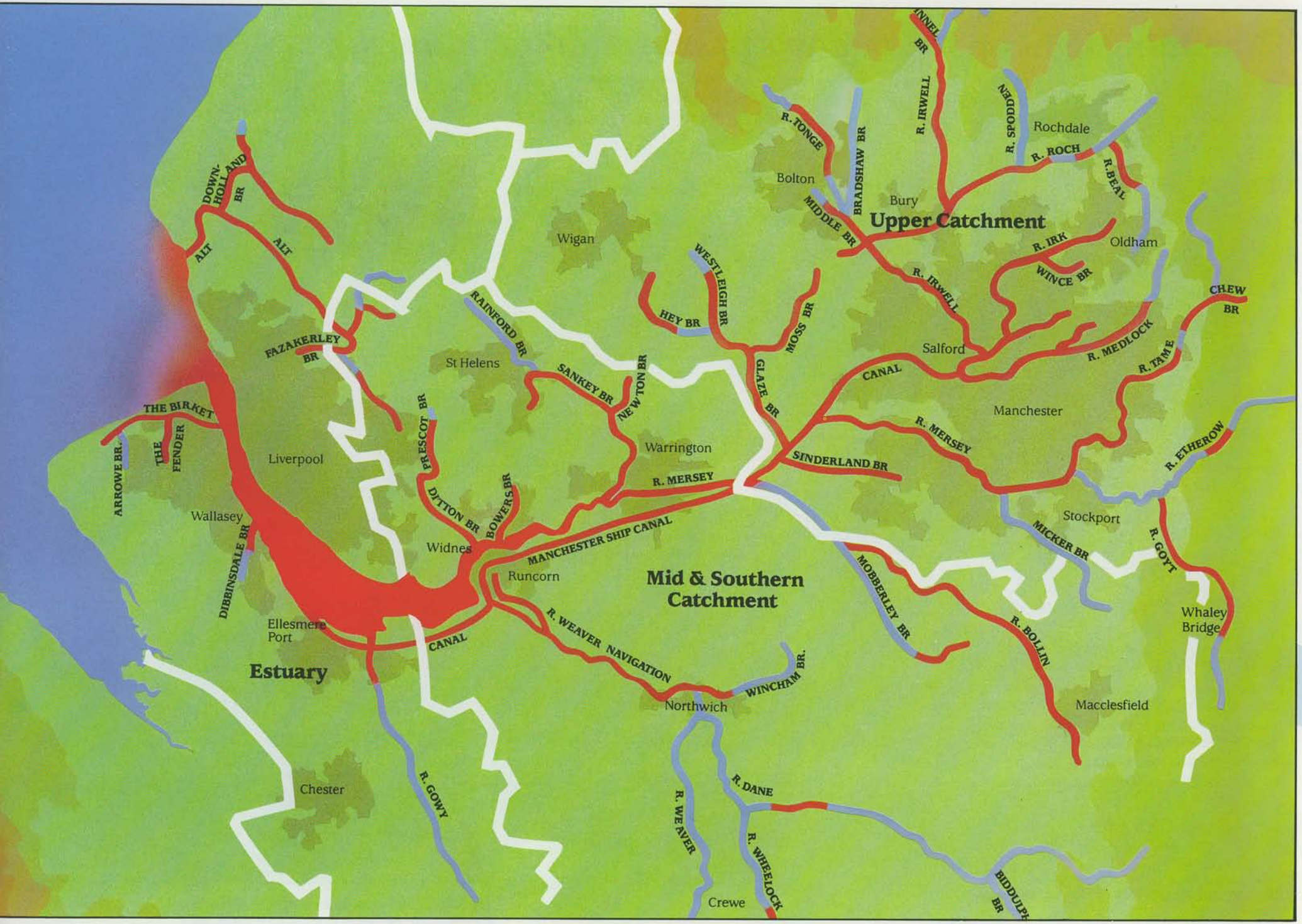
A topic of major significance to the area is the future role of the upper part of the Manchester Ship Canal.

The water quality of the rivers in the Pennine and Peak districts is generally acceptable. Indeed waters in the Pennine valleys have been impounded as water supply reservoirs. The poor quality of the water in the River Goyt, in the Whaley Bridge area, is being improved through sewage treatment extensions and associated sewerage works.

Improving water quality in the Mersey Basin.



Project Group Boundaries.


Upper Catchment
Mid & Southern Catchment
Estuary
Rochdale
Bolton
Bury
Oldham
Salford
Manchester
Stockport
Wigan
St Helens
Warrington
Liverpool
Wallasey
Widnes
Runcorn
Ellesmere Port
Chester
Northwich
Crewe
Macclesfield
Whaley Bridge
R. TONGE
BRADSHAW BR
R. IRWELL
R. SPODDEN
R. ROCH
R. BEAL
MIDDLE BR
R. IRK
WINCE BR
CHEW BR
R. MEDLOCK
R. TAME
R. ETHEROW
CANAL
R. MERSEY
SINDERLAND BR
GLAZE BR
MOSS BR
WESTLEIGH BR
HEY BR
RAINFORD BR
SANKEY BR
NEWTON BR
PRESCOT BR
DITTON BR
BOWERS BR
MANCHESTER SHIP CANAL
MICKER BR
R. GOYT
MOBBERLEY BR
R. BOLLIN
R. WEAVER NAVIGATION
WINCHAM BR.
R. DANE
R. WEAVER
R. WHEELOCK
R. GOWY
DIBBINSDALE BR
ARROWE BR.
THE FENDER
THE BIRKET
FAZAKERLEY BR
ALT
DOWN-HOLLAND BR

Shedding light on the region's past...

The rivers of the Mersey Basin were essential to the Industrial Revolution – a period of spectacular economic growth between 1770 and 1840 based on cotton.

This rapid development was initiated by a series of inventions by local men – such as Hargreaves, Arkwright, Crompton and Cartwright – to mechanise spinning and weaving previously carried out by hand on a rural 'cottage industry' basis. Until the invention of the steam engine the new machines were powered by water wheels in mills established on the banks of suitable rivers. Waterside locations continued to be necessary to provide water for the steam engines, for processing, for disposal of sewage and trade effluent, to bring coal and cotton to the mills and to transport the finished product.

Mechanisation made hand-processing uncompetitive and caused a massive influx of people into the rapidly expanding villages, towns and cities where the new 'manufactories' were established.

Between 1801 and 1861 the population of the Mersey Basin increased roughly four-fold from 630,000 to nearly 2,400,000. By 1868 no fewer than 10,500 factories and works of all kinds existed in the catchment of the Irwell alone.

Discharging raw domestic sewage and untreated trade effluents into the rivers was common practice. In 1868 a Royal Commission was established to consider the serious problem of river pollution in the basin. The Commission's recommendations were to prove influential – but many watercourses had already virtually died, overwhelmed by the onslaught.

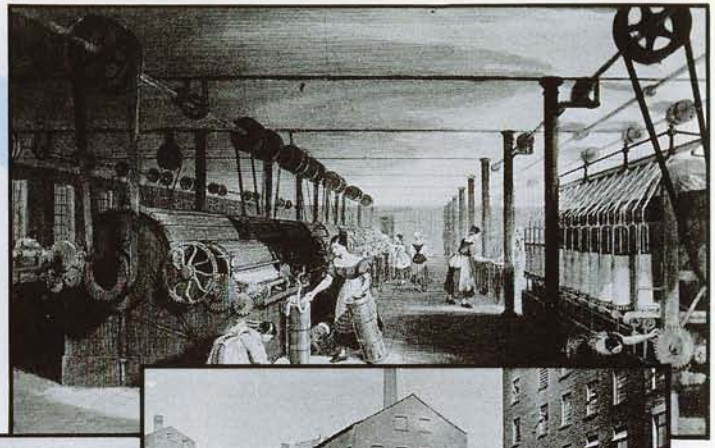
Illustrations by courtesy of Chris Makepeace, local historian.

While the effect on the rivers was most marked in the manufacturing areas around Manchester, the heavily polluted waters arriving in the Mersey estuary were further contaminated by sewage from the populous port of Liverpool and effluents from the expanding chemical industry at Widnes.

The reaction of the people living in the towns through which the grossly polluted rivers flowed was to turn their backs on them – and, indeed, access to the rivers was largely denied by the presence of mills, warehouses and docks.

Considerable areas of despoiled land now line the banks, forming not only a formidable obstacle to riverside development but also a grimly depressing image of industrial dereliction.

A cotton mill card room in the 1830's.



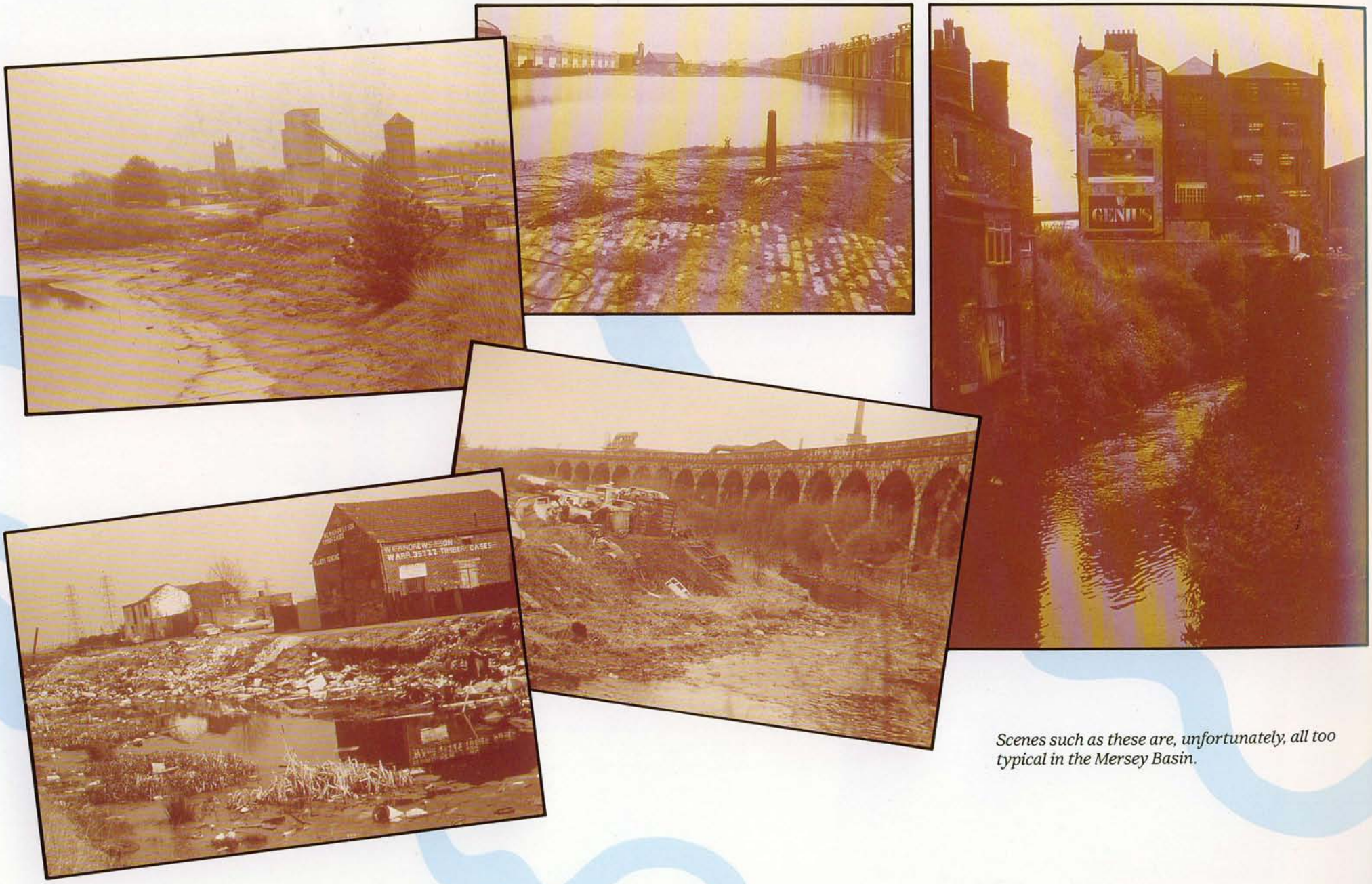
Mills and workers' houses in the Ancoats district of Manchester in 1815.

The river Irk in 1865

Manchester in 1728.

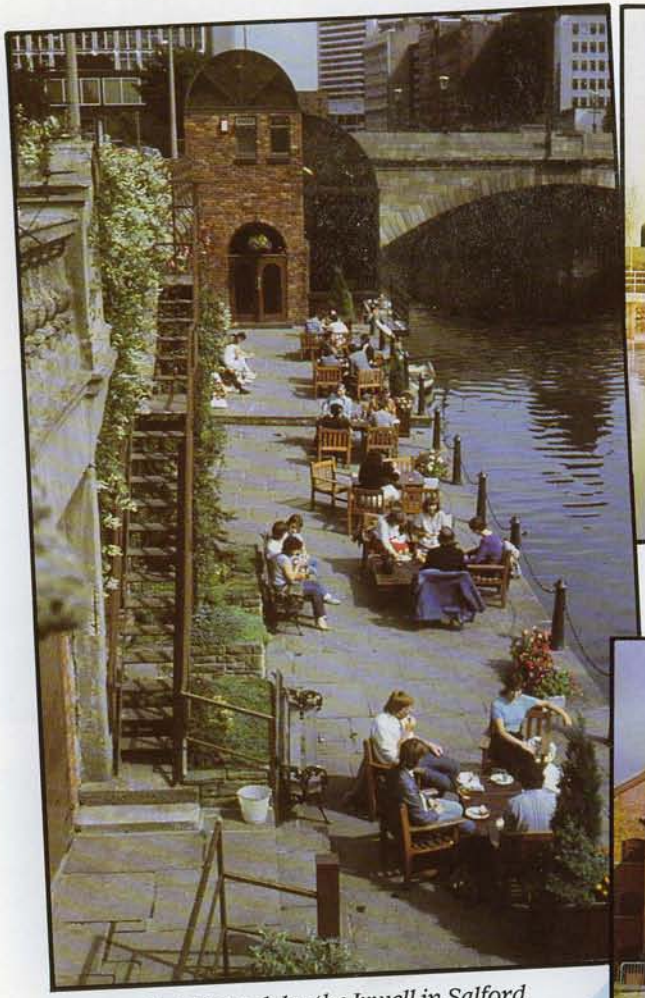
The Royal Exchange, Manchester, centre of the cotton trade, rebuilt in grandiose style in 1874.

..illuminates present problems...



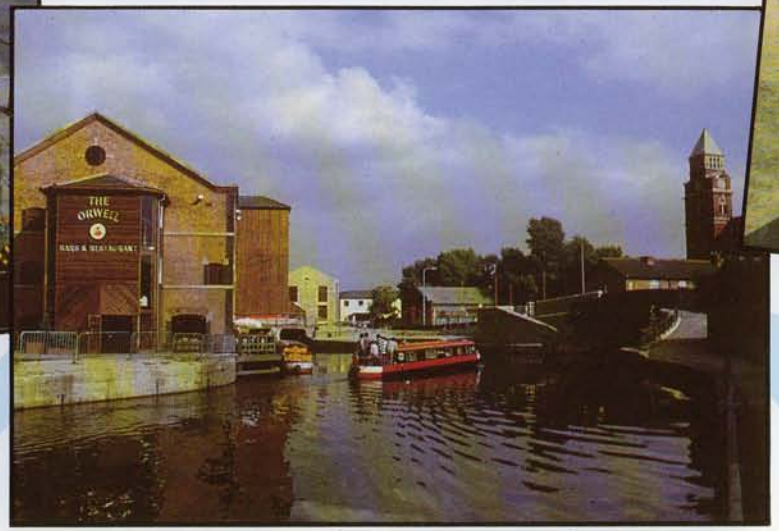
Scenes such as these are, unfortunately, all too typical in the Mersey Basin.

..but problems provide opportunities for imaginative solutions...

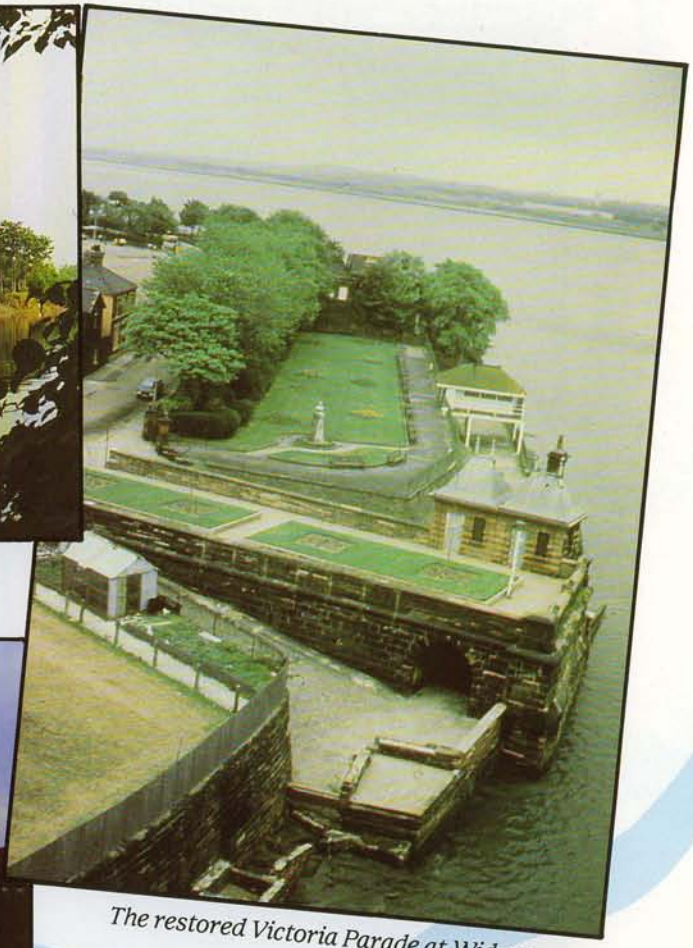


The 'Mark Addy' pub by the Irwell in Salford.

One of several advance factory units at Howley in Warrington.

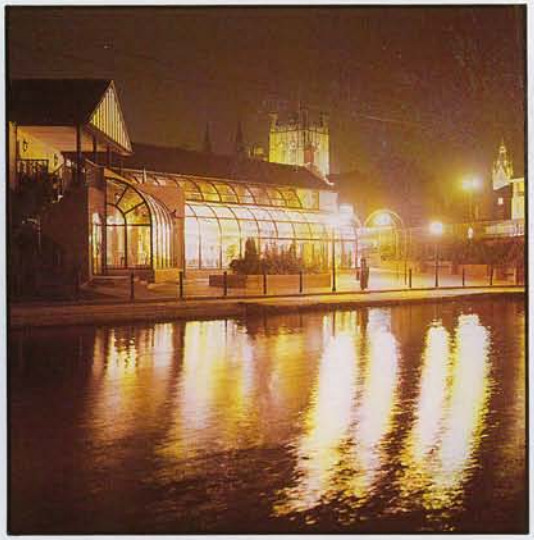


The 'Orwell' pub, part of the new Wigan Pier development.

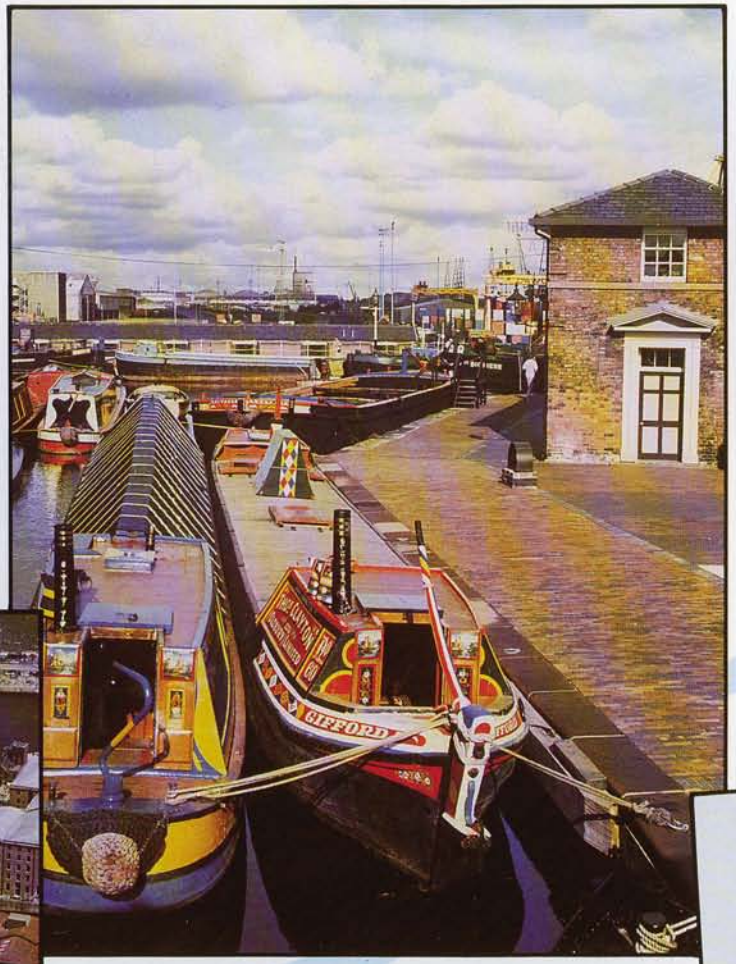


The restored Victoria Parade at Widnes.

..with attractive waterside developments.

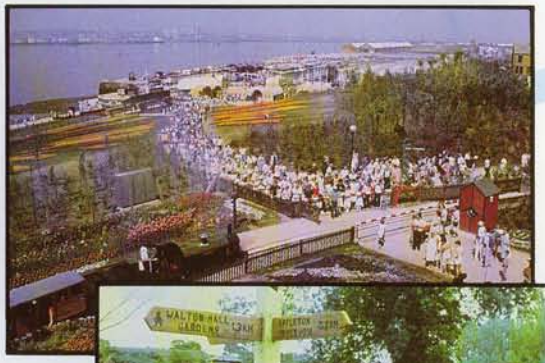


The new 'Evergreens' pub in Chester.

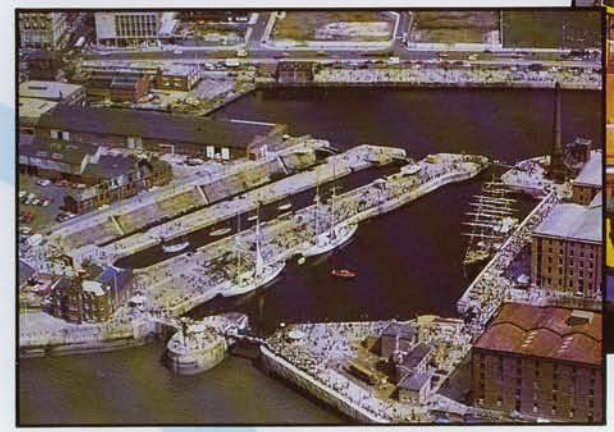


The National Inland Waterways Museum at Ellesmere Port.

The 1984 International Garden Festival, now the permanent Festival Gardens site in Liverpool.



Marking the Mersey Way footpath.



The Albert Dock development in Liverpool carried out, like the Garden Festival, by the Merseyside Development Corporation.

Moorings at Spike Island, Widnes with the proposed National Chemical Museum building in the background.

Exciting new ideas are showing the way ahead

The proposed development for Salford Docks

Encouraged by the interest shown in the redevelopment of Dock 6, Salford City Council commissioned Shepheard, Epstein and Hunter, Architects and Town Planners, to prepare a scheme for the whole of the former docks. The result is a bold, exciting and imaginative plan to transform this historic part of the city and bring it back to life once more.

At the heart of the scheme is the conversion of the old docks into new basins by:

- Constructing a series of new quays separating the docks from the Ship Canal.
- Installing an aeration system to purify the water and make it safe for recreation.
- Excavating two new canals to connect the dock basins and constructing a new lock to allow pleasure craft to enter from the Canal.

The wharves and piers will be made more accessible by the construction of two new roads looping round docks 7 and 9 and linking the area to Trafford Road and Broadway. Finally, the whole area will be transformed by the creation of quayside promenades, the planting of trees and shrubs, and the provision of a new park at Mode Wheel. The result will be the creation of a unique waterside environment ready to accept development of the highest quality. The Canal Company has encouraged this new approach to the docklands.

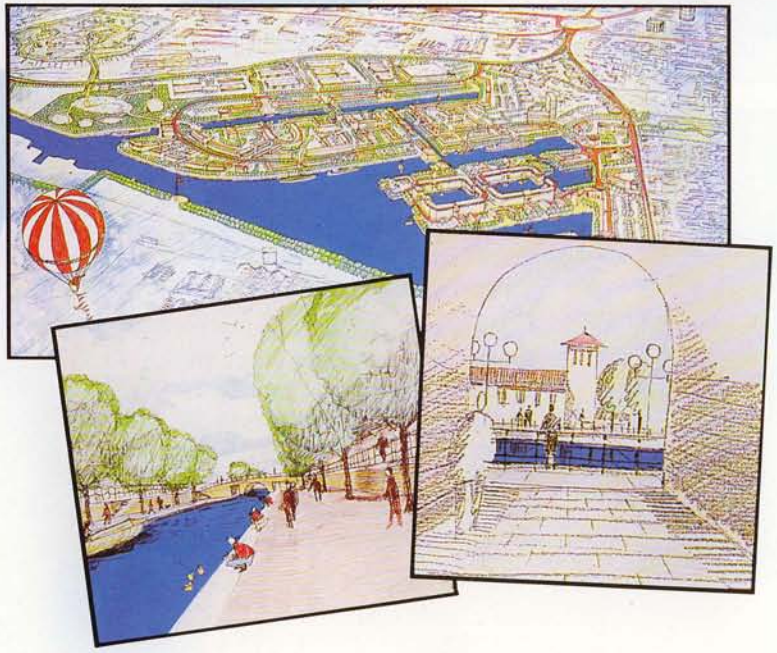
Considerable progress has already been made in implementing these proposals. With the aid of Government grants, the old warehouses have been demolished, construction of the new quays has commenced and sites have been cleared and serviced for new development. A landscaped business park, an attractive housing development and a top quality hotel are under construction and work has commenced on an exciting leisure complex incorporating a new multiplex cinema.

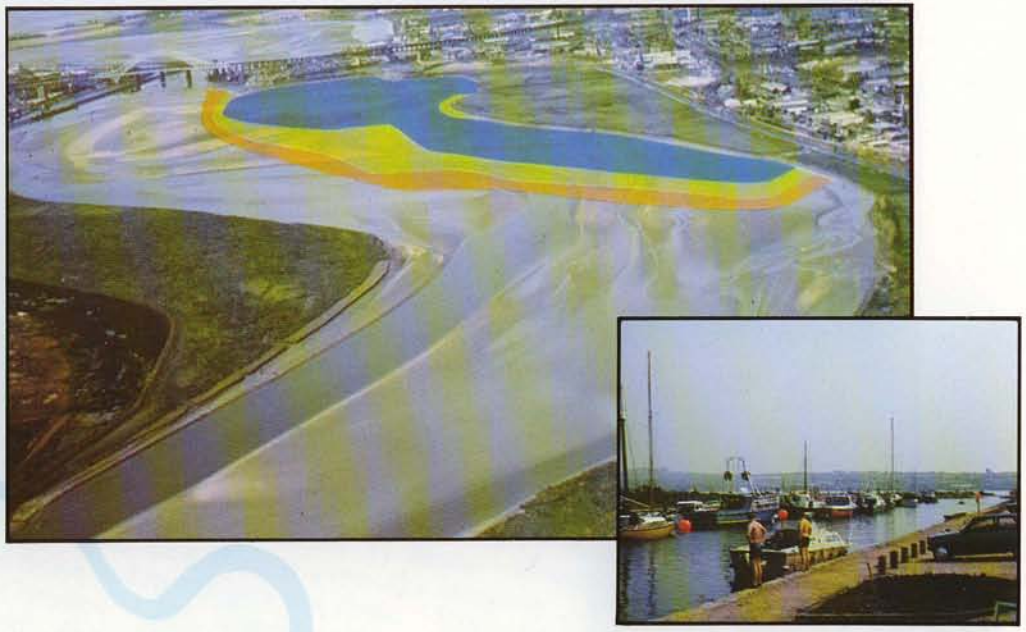
The 'Halton Water' concept at Widnes

With grant aid from DOE's Merseyside Task Force, Halton Borough Council has commissioned a study by consulting engineers Ward, Ashcroft and Parkman of Liverpool, in conjunction with Anderson Semens Houston, to examine the feasibility and economics of creating a lagoon for a wide range of water sports at Widnes Warth in the upper Mersey estuary.

The proposed leisure lagoon will extend the existing recreational facilities at Spike Island which include the reclamation and landscaping of 55 acres of contaminated land and provision of moorings in the St Helens Canal (below).

The feasibility study for the lagoon is necessarily wide-ranging and will include not only the engineering requirements for constructing a barrage with promenade and adjoining beach but also the hydraulic aspects and ecological effects.





How the campaign is organised

While statutory responsibility for water quality and pollution control rests with NWWA, there is an obvious need for liaison and cross-fertilisation of ideas between the Water Authority and the multiplicity of agencies involved in landward developments – and between the agencies themselves. The organisation for this was established in 1984; and its first Chairman, John Tavaré, CBE, was appointed by the Secretary of State for the Environment in March 1985 to perform a co-ordinating and managing function with the assistance of a unit in the Department of the Environment's regional office in Manchester.

From time to time a representative Mersey Basin Conference is held to review overall progress and to seek new ideas for developing the campaign. For day to day business, as the chart shows, there is a combination of central and territorial parts of the organisation.

At the centre of the campaign is the *Co-ordinating Committee,* which is the Chairman's own group. Headed by John Tavaré it includes the Chairman of NWWA, the local authority chairmen of the 3 Project Groups, a representative of the European Commission and the Chairman of the Board of Officers.

The *Board of Officers* is chaired by DOE's North West Regional Director and includes professional officers with an advisory role from:

NWWA, Confederation of British Industry, Manchester Ship Canal Company, British Waterways Board, Countryside Commission, Nature Conservancy Council, Sports Council, North West Civic Trust, Greater Manchester and Merseyside councils for voluntary service, and the 3 Project Groups.

The Board of Officers.

The local authority-led *Project Groups* make up the territorial part of the organisation. They represent the interests of the 3 main areas of the Mersey Basin: the upper catchment, the mid-Mersey and southern catchment, and the estuary. These groups include both elected members and officers; and, between them, cover 27 borough and district councils, the county councils concerned, two development corporations, and the Peak Park Planning Board. They also have representatives from the many and diverse private and voluntary sector interests involved.

Campaign Chairman

- CONFERENCE
- CHAIRMAN'S CO-ORDINATING COMMITTEE
- BOARD OF OFFICERS
- PROJECT GROUPS
  - UPPER CATCHMENT
  - MID-MERSEY AND SOUTHERN CATCHMENT
  - ESTUARY

Supported by DOE Unit

A note on names

The term 'River Mersey Initiative', reflecting the origins of the campaign, is now giving way to *Mersey Basin Campaign,* the all-embracing name that includes the wider private and voluntary sector activity which will go beyond the confines of the organisation as the work gathers momentum. The name also emphasizes the full geographical extent of this shared campaign.

'Mersey Basin Programme' is the special term used for the programme of grant-aid agreed by the European Commission under the European Regional Development Fund, to help support projects on both the water quality and landward sides of the campaign. The Co-ordinating Committee, which includes a representative from the EC, will oversee this aspect of the work.

Series A, B, C, D, Trades and Manufactures.—Mersey Basin—(River Irwell)—*continued.*

Name of Witness or of Firm, and Trade or Manufacture carried on.	Residence of Witness or Situation of Works.	Answers to Queries on Page 123.
Longworthy, Brothers, & Company, Cotton Manufacturers, Spinners, Printers, and Dyers—*cont.*	Greengate Mills, Salford.	Our works are situated on the *Irwell*. Employ about 900 hands. Rateable value of works, 1,845*l*. The bed of the river has (within our knowledge) silted up between three and four feet, and in some places six feet during the last 12 years, caused in a great measure by the throwing in of ashes and other rubbish beyond the boundary of the borough. Our works are affected by floods. The river is now greatly polluted; 30 years ago it was much clearer, and floods passed off more rapidly. We obtain our supply of water from the river, 76,000,000 gallons, from wells and springs 75,000,000, and waterworks 2,500,000. If the river were rendered clear and colourless, so that we could obtain the whole of our supply from thence, it would be worth to us 200*l*. per annum. We produce liquid refuse from washing 20,000,000, bleaching 10,000,000, printing 10,000,000, dyeing 10,000,000, and soapsuds 1,000,000 gallons annually, which flows unfiltered into river. We use as dye-wares, logwood 60,000 lbs., sumach 5,000. The spent dye-stuffs and solid refuse from dyeing and bleaching, mixed with the ashes and carted away. We use as bleaching materials, soda-ash 45,000 lbs., liquid chlorine 50,000 lbs.; also soap 5,000, but do not treat the soap-suds for the recovery of grease. Use steam, 276 nominal horse-power. Consume 7,800 tons of coal. Make 936 tons of ashes, the whole of which latter we cart away. The excrements of workpeople are conveyed by sewers into the river. We are of opinion that cinders, solid matter, and refuse are to a very great extent (beyond the jurisdiction of this borough) thrown into the river and streams, and we suggest, as the best means of avoiding pollution in future, that this practice be strictly prohibited.
Walker Norris, Dyer and Finisher.	Adelphi, Salford.	My works are situated on the *Irwell*. Employ 50 hands. Rateable value of works 260*l*. Not affected by floods. Obtain supply of water jointly from river and from waterworks company. The waste liquid produced flows unfiltered into the river. Use steam, 60 nominal horse-power. Consume 1,200 tons of coal. Make about 400 [illegible] These, with the spent dye-stuffs, are [illegible] workpeople removed fr[illegible] No sug[illegible]
Thomas W[illegible]		

A vital task for our generation

Department of the Environment, NW Regional Office, Sunley Tower, Piccadilly Plaza, Manchester M1 4BE.