

NRA-RES

NRA Thames 216



NRA

National Rivers Authority  
Thames Region

# THE RESTORATION OF THE RIVER VER



NRA Thames 216



ENVIRONMENT AGENCY

Information Services Unit

Please return or renew this item by the due date

Due Date

27-06-06

*The success story of a collaborative project between  
the National Rivers Authority, Three Valleys Water  
and the Ver Valley Society.*

ENVIRONMENT AGENCY



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The National Rivers Authority (NRA) has the duty to conserve, redistribute, augment and secure the proper use of water resources in England and Wales, whilst at the same time conserving and enhancing the environment. The key aim is to manage water resources to achieve a balance between the needs of the environment and those of abstractors.

## BACKGROUND

The River Ver flows through the Chiltern Hills close to the Bedfordshire/ Hertfordshire border, skirts the village of Redbourn, and continues through St Albans before joining the River Colne at Bricket Wood.

Being a typical chalk stream the Ver is fed from springs and seepages discharging from the natural underground reservoir, the aquifer, that lies in the chalk beneath the river. The amount of flow in the river is dependant upon the water table which is the level of water in the aquifer.

The amount of water pumped out (abstracted) from the aquifer for public supply and industrial use began rising sharply in the 1950's to such an extent that by the early 1980's nearly 70 percent of the water available to the river under average rainfall conditions was being abstracted. As a result the upper 10 kilometres of the river dried up most of the time while the lower stretches often became shallow and sluggish leading to environmental damage.



Front cover picture River Ver at Kingsmill

## FINDING A SOLUTION

Upon formation of the NRA, in September 1989, the search for a solution to the problem was given fresh impetus when the Board of the NRA directed urgent investigations into rivers worst affected by abstraction. Nationally, it was considered that some 40 rivers, including the Ver, fell into this category.

A re-assessment of studies previously undertaken by consultants commissioned by Thames Water, who held responsibility for water resources prior to the formation of the NRA, was undertaken. At this time the Ver Valley Society proposed further ideas based on utilising sources outside the Ver catchment, to allow reduction of abstraction at Friars Wash, the major cause of reduced flows in the upper catchment.

## THE RECOMMENDED SCHEME

Building on the ideas of the Ver Valley Society and responding to the NRA's firm intent to improve flows in the River Ver, Lee Valley Water, now part of Three Valleys Water, proposed a new scheme. This was submitted to the Department of the Environment by the NRA and received approval in September 1991. Under the approved scheme the water distribution system in Luton would be changed so that additional supplies from Grafham Water reservoir in Cambridgeshire could be used instead of Friars Wash. Following the implementation of the scheme the Friars Wash source would only be used in times of emergency or to meet large peaks in demand for water.

## IMPLEMENTING THE SCHEME

The implementation of the scheme was a major engineering project costing £2.5 million. The major elements of work were the laying of some 8 kilometres of mains up to 600 millimetres in diameter to the east and west of Luton, and the construction of new pumping stations. It was a complex operation, particularly where trenches up to 2.5 deep were required in the busy roads of Luton.

The new engineering works were paid for by the NRA but the substantially increased costs of bringing water from Grafham instead of using Friars Wash will now be shared by the NRA and Three Valleys Water from 1995.



*Sir John Page and Lord Crickhowell at the closing down ceremony.*

The engineering works were completed early in 1993 and the pumps at Friars Wash were switched off on 26th May 1993. Lord Crickhowell, Chairman of the NRA, Sir John Page, Chairman of Three Valleys Water and Richard Thrale, Chairman of the Ver Valley Society were joined by The Rt Hon Peter Lilley MP, (MP for St Albans) at the closing down ceremony.

## THE RECOVERY OF THE RIVER

Following the cessation of abstraction at Friars Wash a rise in groundwater levels in the upper Ver catchment soon became apparent. This, combined with substantial amounts of autumn and winter rainfall resulted in flows returning to the river as far upstream as Markyate. Throughout the summer of 1994 the source of the river remained above Flamstead - some 8 kilometres further upstream than in the last 10 years or more.

## CONTINUING WORK

The switching off of Friars Wash pumping station does not mark the end of the NRA's commitment to restoring the River Ver. Specialists in conservation, biology, fisheries and land drainage are implementing plans to draw wildlife back to stretches of the river which have been dry, or suffering from reduced flow, for many years. Silt will be cleared from selected stretches where the underlying gravel should provide ideal spawning grounds for brown trout and also attract other fish species like minnows, sticklebacks and bullheads. Aquatic plants like water crowfoot, starwort and water mint should reappear as the increased flows are sustained. In certain reaches this natural process of re-colonisation may be aided by a careful programme of transplanting from existing stocks further down the river.

A programme of environmental monitoring has been initiated which will monitor the return of plant, invertebrate, fish and bird life. The programme will continue for at least three years and will provide valuable information on the recovery of the river.



*River Ver before (top) and after*

### NATIONAL RIVERS AUTHORITY

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