



NRA

*National Rivers Authority
Thames Region*

THE RESTORATION OF THE RIVER PANG



NRA

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

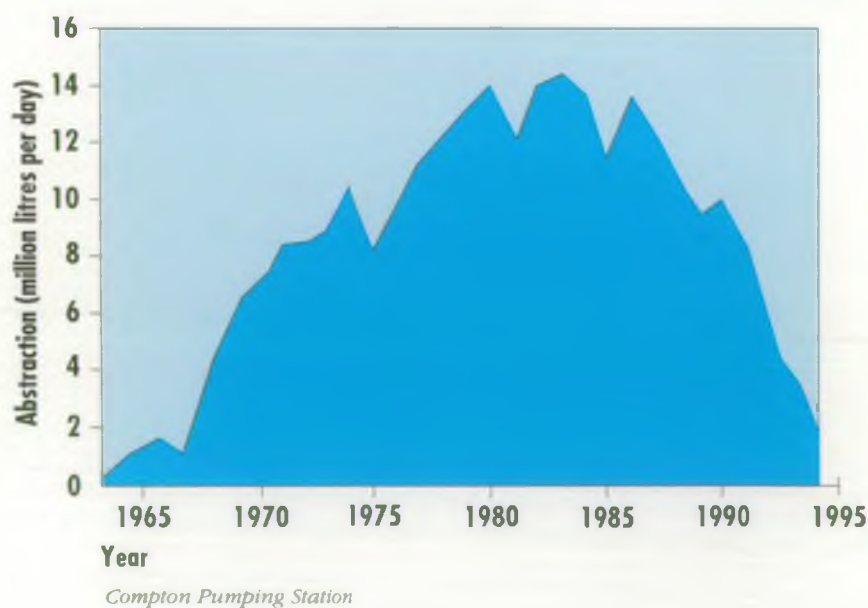
The River Pang flows through the Berkshire Downs to join the River Thames at Pangbourne.

It is mainly fed from the natural water table in the underlying chalk, with a little water from tributaries draining the cover of tertiary clay and sand in the lower catchment. The amount of flow in the river, therefore, depends mostly upon the level of the water table in the chalk.

The amount of water pumped out (abstracted) from the chalk for public supply began rising sharply in the middle 1960's to such an extent that by the early 1980's about 35 percent of the water available to the river under average rainfall conditions was being abstracted. Most of the abstraction was at a

major pumping station at Compton; the remainder from a smaller pumping station at Bradfield.

As a result of the pumping at Compton the upper reaches of the Pang dried up more frequently and for longer periods than otherwise would have been expected; the middle and lower reaches often became shallow and sluggish. The river, therefore, suffered environmental damage throughout most of its length.



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 Pang, 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. After considering the various options arising from the consultants study it was agreed with Thames Water that they would limit the abstraction from Compton Pumping Station. This major reduction from 13.5 to no more than 5.0 Megalitres per day commenced in April 1992. A new groundwater source alongside the Thames at Gatehampton near Goring makes up the resulting supply deficit to Didcot.

THE RECOVERY OF THE RIVER

Following the reduction in abstraction at Compton a rise in groundwater levels in the upper Pang catchment soon became apparent. This, combined with substantial amounts of rainfall resulted in flows returning to the river as far upstream as Compton. Throughout the summers of 1993 and 1994 the source of the river remained near Hampstead Norreys - some



6 kilometres further upstream than for most of the time in the previous 10 years or more.

To aid the recovery of the river NRA specialists in conservation, aquatic biology, fisheries and land drainage designed and implemented changes to the river channel to draw wildlife back to stretches of the river which had been dry, or suffering from reduced flow, for many years. This work included localised de-silting to expose gravels for spawning, the introduction of gravels in selected reaches between Frilsham and Stanford Dingley, the placement of groynes of block stone in selected areas and bank reshaping downstream of Bucklebury.



CONTINUING WORK

Levels and flows in the river will be monitored continuously by river flow gauging stations at Frilsham, Bucklebury and Pangbourne; groundwater levels will be monitored within the river valley by a network of groundwater observation boreholes.

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 a least three years and will provide valuable information on the recovery of the river.



River Pang at Bucklebury



NATIONAL RIVERS AUTHORITY

KINGS MEADOW HOUSE, KINGS MEADOW ROAD, READING, BERKSHIRE RG1 8DQ
TELEPHONE: 01734 535000

NRA Thames 215



ENVIRONMENT AGENCY

NATIONAL LIBRARY &
INFORMATION SERVICE

THAMES REGION

Kings Meadow House, Kings Meadow
Road, Reading RG1 8DQ

Head office
Bristol