

The River Ver and Abstraction by Andy Webb, August 2024

Chapter 5: Confluence

"Climb every mountain,
Ford every stream,
Follow every rainbow,
'Til you find your dream"

Rodgers & Hammerstein, "The Sound of Music"

Take a breath ... because the hoped-for recovery in the level of groundwater did not materialise, and hence neither did the health of the Ver. Still around 50% of surface rainfall percolating into the chalk aquifer continued to be abstracted by all the remaining Pumping Stations in the valley, particularly in and around St Albans. Plus, a series of droughts exacerbated the problem. 1997/8 and 2005/6 were particularly serious.



Friars Wash Pumping Station, River Ver, August 1994

In April 1997 compensation water into the Ver was necessary once again for Verulamium Park, as the flow in the river was woeful. It remained so all that summer and autumn. In January 1999 Friars

Wash PS was brought back online, as the supply from Grafham had failed. It remained so for three months, highlighting the fact that more needed to be done to protect the River Ver.

Doggedly, stubbornly, the Ver Valley Society in particular continued raising its concerns about the continuing poor state of the river. Local professional environmental organisations like the Herts & Middlesex Wildlife Trust and Chilterns AONB aligned some of their own activities to campaign on behalf of our local rivers in general (River and Water Vole Project Officers for the former, and the Chilterns Chalk Streams Project for the latter). But after the successful Friars Wash campaign the powers-that-be stated that the Ver had "had its turn".

Increasing affluence in the 20th century was most marked in Britain in the south-east of England around the capital, and particularly in Hertfordshire. An increase in population was accompanied by more and more properties (domestic and business). Allied to the increasing affluence, this meant higher per capita water usage, putting more pressure on supply. For example, between 1996 and 2003 usage rose from 161 litres per day (l/d) per person to 180 l/d per person. And by January 2005 the figure had risen to 191 l/d per person! Washing machines, dishwashers, fancy gardens and pools needing irrigation in the summer, more bathrooms and toilets (which use the most water in our homes), car washing, patio cleaning – all meant that Three Valleys/Veolia/Affinity Water was having to supply more and more potable water around their system without any new sources. This meant, ultimately, that aquifers and thus rivers were depleted just the same (indeed more so at times of zero recharge, i.e. April/May to November/December). Average daily supply of the water company's zone rose from a total of approximately 800 million litres per day to 1200 million in the height of summer.

However, one way or another, there was no doubt that there was an increasing interest, concern and understanding of the plight of the River Ver and other chalk streams, be it via enhanced regulatory emphasis by central government and its agencies, or by local and national lobby groups.

At that time the UK was still a member of the European Union and, as such, was obliged to carry out any rules and directives that emanated from Brussels HQ, for the good of all. This included the European "Water Framework Directive", which laid down rules and regulations that each country should follow to safeguard and manage water supplies in a sustainable way, and at the same time to protect and enhance the water environment into the future. For example, whole "Catchment Abstraction Management Strategies" (CAMS) were introduced in 1999 by regulators, plus in the same year individual river "Restoring Sustainable Abstractions" (RSA) were launched.

It seemed that, for a time at least, acronyms were doing better than aquifers. However, by 2005 the Colne CAMS and, crucially, the River Ver RSA were instigated.

A new (or rather updated) Water Act (2003) gave enhanced powers of regulation to both OFWAT and the Environment Agency, together with stringent goals set for the various water companies in terms of investment in infrastructure, supply resilience and environmental protection measures in each region. Water meters in each household became compulsory to avoid profligate use of a finite resource; tap-water had always been the cheapest of the basic public utilities, and as such had been

largely taken for granted. Paying for every drop might mean that less was wasted. Business and supply plans, and charges to customers, were regulated by OFWAT, whilst the EA now possessed the ability to time-limit abstraction licences and even negotiate long-term mitigations for over-abstracted catchments such as the Ver.

At the end of 2006 the EA formally stated that flow in the River Ver remained unacceptably low, and that more work needed to be done to build on the closure of Friars Wash PS in 1993. Detailed hydrological and geomorphological studies were instigated to find solutions for the problem. It came as no surprise when the EA and Veolia Water concluded that Bow Bridge PS, plus Holywell PS and its satellite Mud Lane PS, were causing severe strain on groundwater in the middle part of the valley around St Albans!

Meanwhile, in the first of the water company's 5-year-plans, between 2005-10, Veolia had invested heavily in a major relief water-supply pipeline from its western area in Middlesex (namely the Thames reservoirs in Thames Water supply area) and eastern Hertfordshire and Harlow in Essex, on the periphery of its supply zone there, where its resources were under the most stress, and where no new sources of water were available and similar environmental issues existed. This huge piece of infrastructure was laid between 2008-10. It begins in the west at the Thames reservoirs and connects existing pumping stations and other facilities, snaking through open country under bridleways, footpaths, lanes and across open fields. Note here that it bisects the Ver valley on its underground route south of Flamstead and heads eastwards down the Trowley Bottom side-valley to Friars Wash PS to link with the trunk-mains there, and so on to Luton, and to Bishops Stortford and Harlow in the east.

At the beginning of 2012 the Government issued a White Paper, precursor to an Act of Parliament. According to Richard Benyon, Under-Secretary of State at DEFRA, during a debate in the Commons in February 2013 on the plight of England's chalk streams, this would set out a clear vision for water supply and environment for decades to come:

"We want water companies to begin to prepare new water resources management plans for consultation in Spring next year. We want them to include in these plans actions to address sustainable reductions where investigations have shown that these are needed or likely to be needed. Last year we published guiding principles that can be used by the Environment Agency to assess whether abstractors are causing serious damage to water bodies. This will enable the Agency to use powers to modify the most damaging abstraction licences without the need to pay compensation. This is a major change and a major step forward.

"We are also developing better tools and incentives to help water companies to manage their abstractions sustainably . . . this offers us a real opportunity for a way forward."

In December 2013 DEFRA announced its consultation "Making the Most of Every Drop" for the forthcoming Bill, the deadline for which was the end of March 2014. The Water Act (2014) came into force designed to reform the water-abstraction regime, and ensure resilience of domestic supply. It was the first major reform of managing our water supplies on a national basis since the Water Act of 1963.

In the first part of 2014 the EA and Affinity Water reached agreement that the company would reduce abstraction across its supply area by 42 million l/d by 2020. In the Ver catchment it would be reduced by 14.66 million l/d (3.2 million gallons). And by 2025 it would be reduced regionally by 70 million l/d.

This was all part of Affinity Water's "Water Resource Management Plan" (WRMP). The reduction in overall abstraction was to be achieved by: "reducing leakage by 14%; more ambitious water-saving plans; better education of customers to reduce unnecessary water usage; to provide additional water resources from surface water; and transfers from neighbouring water companies."

A major explosion and fire at Buncefield Oil Depot on the western cusp of the Ver valley near Hemel Hempstead in December 2005 resulted in the standing-down of Bow Bridge PS for 3 years because of fears that foam chemicals needed for quelling the fire might enter the surrounding aquifer. This clearly demonstrated that a recovery in the chalk aquifer would result.

With completion of the new pipeline to eastern Hertfordshire, Affinity Water was able to announce the permanent standing-down of Bow Bridge in April 2016.

In the next round of 5-year-plans (2020-25), in 2022 and 2023 another new mains supply pipe was installed by Affinity to bring more water from neighbouring sources. It was connected to the aforementioned ring-main across to eastern Hertfordshire near Gaddesden Row, west of Flamstead, across open fields towards Redbourn, under the M1 motorway and Redbourn bypass to Bow Bridge, and then onward pumping under the Ver, along Redbourn Road, east along Batchwood Drive, then south up the Harpenden Road to the middle of St Albans and Stonecross PS at the top of town. This supplementary source for the town is due to come onstream at the end of 2024.

The Ver Valley Society harbours the hope that focus might, in the long-term, shift northwards to the source of the river at Kensworth Lynch (lynch = Old English *hlinc*, "a ridge or escarpment"), and Kensworth PS. The 6 million l/d abstracted here to supply the villages to the west of Luton and Dunstable makes a huge impact on the "winterbourne" section of the river. More regular than occasional flow here would return the Ver to its top two or three miles, but the channel in the section has been highly modified through the last 100 years, so could the channel sustain more flow? This is all for the future.

"The mole was bewitched, entranced, fascinated. By the side of the river he trotted as one trots, when very small, by the side of a man who holds one spellbound by exciting stories; and when tired at last, he sat on the one bank, while the river still chattered on to him, a babbling procession of the best stories in the world, sent from the heart of the earth to be told at last to the insatiable sea."

At the beginning of February 2024 OFWAT and the water companies announced that bills would rise by an average of 6% nationally. *The Sun* newspaper stated on the 2nd February that "the rise comes amid public fury at sewage overflows and concerns over dividends paid out to shareholders". However, the industry has promised £14.4 billion to make upgrades. Water UK chief David Henderson said: "Next year will see record levels of investment to secure the security of our water and reduce sewage in rivers and seas".

For References, Source Material and Acknowledgements: see Section 6 on the website.



Former offices/HQ of St Albans Waterworks Co, Holywell Hill (built 1908), now a Nursery School



The Old Pumthouse, Stonecross



Dried-up river, Shafford Mill, late 1980s



Top/Settling Lake, Verulamium Park, drained and desilted, dry Summer/Autumn (2nd October 2005)



New water pipes at The Cricketers, junction of Stonecross, Harpenden Road, Avenue Road, St Peter's Street, Summer 2022



Sinking of a modern borehole/well in the 21st century, near St Albans



Friars Wash Pumping Station, River Ver, August 1994