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The year 2022 was busy; 2023 will be no less so. Above all, the Forum has played its part in helping to turn the tide of institutional and political opinion against indiscriminate abstraction of water from the Chalk.

**Leading City and South Cambs councillors** are now of the view that the new Greater Cambridge Local Plan should only be put into effect if water supplies for anticipated new housing can be guaranteed without causing unacceptable environmental damage. Cambridge Water have not yet issued their latest Water Resources Management Plan as the Environment Agency seemingly considers that the company has not yet shown sufficient regard to stream flow and ground water levels when meeting future demand.

Further to Newsletter 81, we are pleased that **Anglian Water** is now supplying us with their own faecal **pollution measurements** in response to **Mike Foley's project** which was the subject of that newsletter. Also, Anglian Water has asked the CVF to help bring together parties to develop wetland infiltration systems to improve the quality of water discharged from sewage works, with mutual benefits to landowners and the river.

Now Mike has finished a characteristically thorough study of **stream turbidity in the Cam Valley**. Second to amount of flow (discharge), turbidity is the most obvious visual feature of streams. The murkiness of the Cam in Cambridge is apparent for most of the year. The **photograph** (above right) shows the junction of the clear Vicar's Brook and the turbid Cam at Hodson's Folly.

**Macro-invertebrate monitoring** on the **Bourn Brook** is under way. Various other monitoring projects are under discussion. The **proposal to modify the weir** just upstream from **Hauxton Mill** seems likely to have unforeseen consequences and is being investigated. Even the removal of the weir at Byron's Pool has been mooted. The committee is delighted to have awarded grants to four local river groups under our **small grants scheme**.

Our response to the **Fenland Reservoir** is a guarded approval. It was originally intended that the reservoir would reduce over-abstraction in response to the urgency expressed by EA and Natural England. However, the water companies seem to consider no future 'deterioration in



Mike Foley

flows' a gesture of merit. We refute this as an ambition. In other words the increased capacity for supply that it will bring (which is insufficient for actual requirement anyway) must not merely supply future increases in demand.

An article in **The Times Magazine** dated 24 December 2022 described **Feargal Sharkey's** longstanding passion for fishing and his lifelong passion for confronting injustice first acquired at the feet of his parents, in Derry. The profiteering of water companies has only been his most recent target. With reference to their over-abstraction from aquifers and their pollution of rivers and coastlines **The Times** quoted him as saying:

*"These problems could be solved with nothing more than the stroke of a ministerial pen [because the 1991 Water Industry Act gives the environment secretary huge leeway to issue binding enforcement orders on the privatised companies]."*

*[An order] could be: you will not pay another penny of interest on that dodgy tax scheme you've got going and you certainly won't pay any of your chief executives those multi-million-pound bonuses nor are you going to pay any dividends. And you will invest X amount of money over Y amount of time until I'm happy you're doing the job I think you need to be doing.*

*And if they don't comply with that order the secretary of state can fine them 10% of their annual turnover. The power exists and it has always existed; it just needs politicians with the balls and the determination to do it."*



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The **2023 CVF AGM** on 20 March was a vibrant affair with a large, expectant, and responsive assembly.

The achievements of an organisation like the CVF reflect the enthusiasms and enjoyments of its volunteers, not to mention the leadership in which they bask. Five years after **Stephen Tomkins** (on right, above) cautiously agreed to steer the Forum, as Chair, for just a year, he **feels that he must relinquish that committee role**. His manifest qualities in the committee room, the seminar, the lecture theatre, media interviews, wide-ranging official discussions, and on the telephone have been exemplary. This is to overlook his underlying passion for the Forum's mission and the thoroughness of his preparation for all contingencies. His consultation responses and correspondence have been formidable, and models of their kind. His revelatory annual report can be read [here](#). The only criticism one can level at Stephen is that he has created a void so difficult to fill.

Another giant gap to plug has been generated by **Dr. Mike Foley who has also retired**. Assimilators of these newsletters will know the organisational extent and depth of his quantification of the pollution in the Cam system, his encyclopaedic knowledge of the system's defiled nooks and crannies, and, incidentally, his role in masterminding the virtual eradication of floating pennywort in the upper Cam. Anglian Water's latest water quality measurements based on the sampling pattern established by Mike can be seen [here](#).

Following lively discussion, the main business of the AGM was the unanimous passing of the following Motion: *"In the face of drought, as is still declared by the Environment Agency, and to protect the aquifer sources of our ailing Chalk streams the Annual General Meeting of the Cam Valley Forum calls on the Cambridge Water Company to act responsibly by instigating Temporary Use Bans from 1st July."* ('Hosepipe bans' are officially known as 'TUBS'.)

Cambridge Water, South Staffs Water, and the Press had already been alerted. The reason why, **in an average year**, winter rainfall takes until February or March to begin to recharge the Chalk aquifer is explained in the graph in [Newsletter 80](#).

The enriching **Annual Lecture** given by **David Aldridge, Dawson Professor of Zoology** in the University of Cambridge (on left in photo above), was a *tour de force*, focusing on freshwater mussels, giving them, as well as many invasive taxa, a global and European perspective before honing in on the vulnerability of the Cam and the commercial applications of his own research.

Shocking news for his audience was the absence of mussels downstream, for 2 or 3 miles, from the discharge point of the Milton sewage works (seen in the satellite photo above) where the plume of clear water enters the turbid Cam just upstream from the A14. This plant is generally regarded as highly efficient. So, why?



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Rob Mungovan

Surely this winter's rain means that everything is hunky-dory? Well, no, it doesn't. See this [graph](#) in Newsletter 80 as a reminder of why there is such **limited opportunity for the Chalk aquifer to recharge**. The above photo dated 15 April 2023 shows some unaugmented, natural flow in the Little Wilbraham River, just downstream from Temple Springs, but notice the feeble dribble crossing the threshold of the stream gauging station. It is no surprise that the Environment Agency (EA) [reported](#) on **17 April 2023** that the **Cam and its tributaries still has drought status**.

Cambridge Water (South Staffs) has responded to the **CVF motion** (seen [here](#) in Newsletter 83) **passed at our 20 March 2023 AGM** saying that it "would only introduce a TUB (temporary use or 'hose-pipe' ban) on 1 July 2023 if the trigger to do so is reached". The CVF would like to hear that a TUB will be introduced as soon as the trigger is reached. There is a chasm between these two attitudes. Cambridge Water's published (2021) 'level of service' is to introduce a TUB 'on average not more than once in 20 years'. This is another expression of the same chasm. Cambridge Water's triggers relate to 'certainty of supply' whereas they should surely relate to 'risk of environmental harm'. There's that chasm again.

The 'trigger points' have been agreed with statutory consultees, DEFRA and the EA, in the water company's 2022 [Drought Plan](#). In an on-line meeting on 12 April 2023 the water company's view was that it cannot deviate from the Plan. When challenged by the CVF it was conceded that there was no mechanism for policing (by DEFRA or EA) if a trigger point were unilaterally modified (by Cambridge Water) in favour of an attempt to reduce water consumption and, therefore, abstraction from the

aquifer. In this event we are asking the organisations concerned to urgently take steps to reach all necessary agreements for 'deviation' to happen as appropriate.

**The Chalk aquifer** itself is, of course, also **vulnerable to pollution**. A case in point is the infiltration of perfluorooctane sulphonate (PFOS) from Duxford airfield which caused **contamination of the water supplied by Cambridge Water to its customers** living in the 'Cambridge rural zone' which included the villages of Great Shelford, Hinxton, and Stapleford. This irregularity was first publicised by the Guardian Newspaper on 8 February 2022, the same day that Cambridge Water notified the Drinking Water Inspectorate (DWI). PFOS was commonly used in firefighting foam for aircraft so presumably during training exercises.

Cambridge Water's version of events can be found [here](#). The relevant report of the DWI can be found [here](#). Cambridge Water does not provide a link to the DWI report which found that the water company fell "far short of the minimum expectations of a water supplier because of incorrect assumptions, errors, delays, and incorrect information which allowed the inadequate blending arrangement to continue to June 2021. Furthermore, the confidence of consumers in their supplier was brought into question". The 'blending' referred to was the dilution of contaminated water from the Duxford borehole with uncontaminated water from Abington Park/Hinxton Grange.

The DWI reprimanded Cambridge Water but a prosecution was not recommended because there was "insufficient evidence to confirm that an offence has been committed". Use of water from the Duxford borehole ceased in June 2021.



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Like that of a serene swan, the CVF's paddling is unwavering and unseen. Yet we try to create waves. See our [response](#), for example, to **Cambridge Water's** current **Draft Water Resources Management Plan**. This updates the Forum's overall view of water in the Cam Valley. The number of consultations, meetings, conferences, projects, experiments, and enquiries, not to mention emails, is a constant challenge for a small voluntary organisation. Committee meeting agendas are as long as your arm.

Now, **Bathing Water Designation** at Sheep's Green (map below right) has returned to the agenda. The old, overloaded **Haslingfield sewage works** (satellite photo, right) remains one of the suspected upstream [sources of faecal pollution](#), though the rate at which the graphs tail off downstream in [Newsletter 81](#) should be noted.

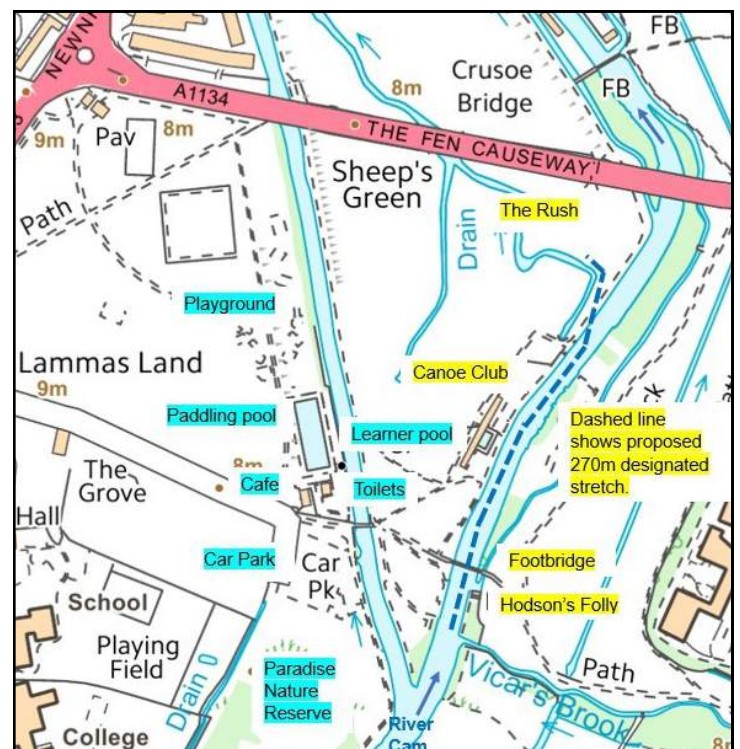
One of the three large circular trickling filters shown in the satellite photograph can be seen in the background of the top photograph in [Newsletter 73](#). During heavy rain the two small conspicuous circular tanks in the south east corner of the site collect a mixture of rainwater and untreated sewage which will have exceeded the capacity of the works. When they spill over the Cam receives its 'storm overflows'.

Although there is opposition, the CVF is keen that the 270m of riverbank shown in the map should be [officially Designated as Bathing Water](#). To this end a CVF steering group has been formed.

The main argument [in favour](#) is that it shines an official spotlight on water quality at a specific site, and if the water quality is deemed "poor" (as we expect) it imposes a legal obligation on, for example, Anglian Water to clean up, whilst also attracting EA monitoring and Ofwat funding to make the improvements happen quickly. A sign that "bathing is not advised" would warn river users.

Some are concerned that too many people would be attracted to a sensitive area near the centre of Cambridge. However, the [successful](#) River Wharfe [designation](#) at Ilkley did not result in increased numbers and is proving to be a powerful weapon for achieving cleaner water.

For Bathing Water Designation to be successful the City Council, as landowner, has to support it and we, as the applicant, must show evidence that the site has a large number of bathers, and submit the results of a local consultation as well as a list the facilities available. This [whole application](#) has to go to DEFRA for approval.



In South Cambs, Cllr Pippa Heylings was instrumental in proposing the motion passed by SCDC to investigate Bathing Water Designation. They have appointed a consultant whose report is expected soon. In Cambridge City we hope the Council will pass a cross-party motion on 20 July demonstrating support for an application.

Having carried out an initial consultation during the pandemic in 2021 the CVF is preparing for official consultations and the counting of bather numbers in July/August. We expect to count large numbers at Sheep's Green on 8 July during the **Cambridge Slow Swim and Picnic**. Nationwide we are likely to be one of twenty organisations applying for designation this October.



Secretary/Treasurer: Bruce Huett Editor: David Brooks

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In June (from left to right) **Daniel Clark (Water Resources and Environmental Manager for the Cambridge Water Company, CWC)**, **Natalie Ackroyd (Director of Quality and Environment for the parental South Staffs Water Company)**, and **CVF committee members** Michael Goodhart, Richard Sewell, David Brooks, and Stephen Tomkins (Clara Todd took the photograph) gathered to discuss a wide range of issues ranging from TUBs (hosepipe bans) through CWC's engagement with customers, its Water Resources Management Plan for 2024 (WRMP), the Granta Catchment Resource Project (GCRP), the roles of the EA, Ofwat, and CamEO, to the 'teething problems' of stream augmentation at Nine Wells.

The cordial and constructive meeting was triggered by the matter of TUBs triggers. These were the subject of Newsletter 84 which spoke of 'chasms' between CWC and CVF. Whereas a hosepipe ban trigger depends on water 'availability' the CVF would like environmental impact to be a consideration, and the measure to be introduced sooner, as environmental circumstances demand. We were pleased that the triggers are being reviewed.

Discussion reflected the broad historical change since the very old days when domestic water was supplied silently, without heraldry, and probably without much thought for the future. Now is a time of critical and informed environmentalists. CWC is unique in that all its water is derived from groundwater (97% from the Chalk aquifer, with 3% from the Lower Greensand). So the company is deeply challenged. It lies between the devil and the deep blue sea. In the long term Cambridge Water will be obliged to cut its abstraction rate. It is responding, but very slowly.

A glimmer of light at the end of the tunnel takes the form of water to be piped from Grafham Water by 2030-2 and

from Anglian Water's Fens Reservoir by the late 2030s. These sources are to be supplied from surface river water. But it is a long tunnel, fraught with peril for Chalk streams.

However, we are delighted that the **Environment Agency** has publicly woken up to the idea that excessive housing development is an existential threat to the River Cam.

On the longest day of June, on Jesus Green, the **Friends of the River Cam** held their third annual reading of the Rights of the Cam. Some 200 attended to hear speeches, music, and the views of pressure groups. The Declaration itself was framed by music from the Rhythms of the River female choir.



The photograph above shows King's College as seen from The Backs. By all accounts the college's wild lawn project has been a great success. By contrast the **ditch bordering Queen's Road**, is in a very poor condition. Cam Valley Forum measurements on 28 June suggested that dissolved oxygen in the water was extremely low, the phosphate concentration high. A disagreeable smell and methane production from rotting organic matter in the mud were noted.

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We are making good progress with our plans to submit an application for **Bathing Water Designation** for the Cam at Sheep's Green, in order to help clean up the river.

To apply, Defra require us to show that a minimum of 100 people a day are "bathing" during a 4 hour period on the 2 busiest days of summer. We carried out two counting sessions in August, revealing an average of 210 people a day bathing at Sheep's Green over the 4 hour survey periods. This is well over Defra's requirement, but there were seldom more than around 5 people in the water at a time, so the river never felt crowded.

Our online consultation is going well. Do respond by 15 September. Our well-attended and lively consultation event in Newnham Sports and Social Club on 29 August was a great success (photographs above). Aply and fairly chaired by Jeremy Sallis (second from left, formerly of BBC Radio Cambridgeshire), the room was packed with 62 attendees. From the left, CVF speakers were Anne Miller, Michael Goodhart, and Simon Spooner.

A wide range of views was heard: Friends of the Cam leaflets were handed out and members spoke powerfully about their opposition to the principle of designation and their outrage at Anglian Water. Others spoke equally powerfully about the benefits of designation, particularly for the health of swimmers, Cambridge's young people, and their access to nature.

The main concerns related to increased visitor numbers and their impact on wildlife both inside and outside the Paradise Nature Reserve. In fact, designation would likely be a minor factor in increasing visitor numbers when compared with many other factors such as those relating to warming summers, personal well-being, and less long-distance travel for leisure. Furthermore, designation would result in health advice against swimming until

improvements in quality can be achieved. Many people in the audience had exactly the right response to this – that visitor numbers to all green spaces in Cambridge are increasing and likely to increase for multiple reasons and this is good, and obviously will in the long-term need managing – but this should not stop us cleaning up the river.

Significantly, a tweet from Haslingfield Parish Council about using haybales to stop sewage running down the street, revealed just how overloaded the ageing upstream sewerage systems are. Designation should significantly increase pressure on Anglian Water to upgrade.

Subject to receiving a formal letter of support from the City Council following the Environment and Community Scrutiny Committee meeting on 5 October, we plan to submit our application by the end of that month.

Our concern with **overabstraction from the Chalk aquifer** is longstanding and well-documented, so we welcome the Environment Agency's objections to new developments at St Neots, Impington and Cambridge North. They point out that groundwater abstraction was "already causing ecological damage to Water Framework Directive (WFD) designated waterbodies".

They added that their objection was backed up by paragraph 174(e) of the National Planning Policy Framework (NPPF), which says that the planning system should enhance the environment by preventing development from contributing to, or creating unacceptable risk of, water pollution.

Anne Miller



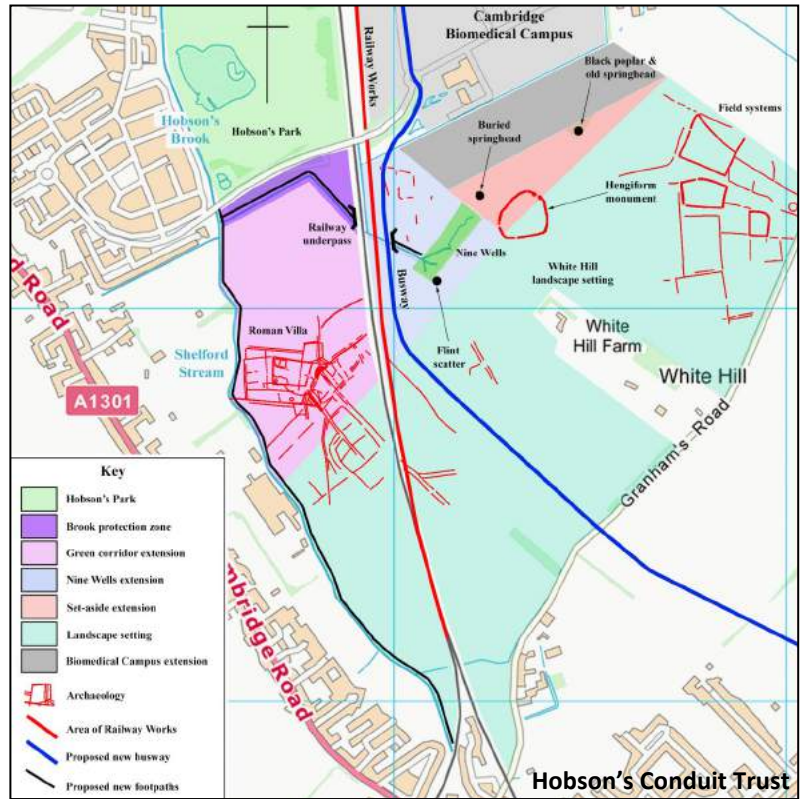
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The CVF has long regarded **Nine Wells** as an important site under threat from the inexorable growth of housing and the Biomedical Campus. See the menacing photograph in [Newsletter 27](#) for example (scroll if necessary). Nine Wells is a **Local Nature Reserve**, and the source of **Hobson's Brook**, as well as being protected as a **Local Geological Site** (see p.129 here for example).

In 2006, in an attempt to shield the reserve, Ellis Selway (Environment Agency) and [Dr. Steve Boreham](#) (scroll down to Newsletter 33) proposed, by means of the Hobson's Conduit Trust map on the right, that the pattern of land use around the site (the small green rectangle) should take on the configuration of a fried egg. The egg white would be a buffer zone (the Nine Wells and Set-aside 'extensions' on the map) surrounding the yolk, the reserve. Thus a Vision for Nine Wells was created. The map is worth enlarging in order to inspect. The Hobson's Conduit Trust attempted to influence the land owner and planners alike with their vision. By 2020 it was clear that neither planners nor land owner had taken it on board.

The idea for the Greater Cambridge Partnership (GCP)'s **busway** between the A11 'travel hub' at Babraham and the Biomedical Campus was first put forward in 2015. A [public consultation](#) for Cambridge South East Transport Phase 2 (CSET2) was held in 2019.

The future of the project is uncertain but if it does go ahead the Hobson's Trust in particular, vigorously opposes the [design of the busway](#) and its [massive intrusion](#) (page

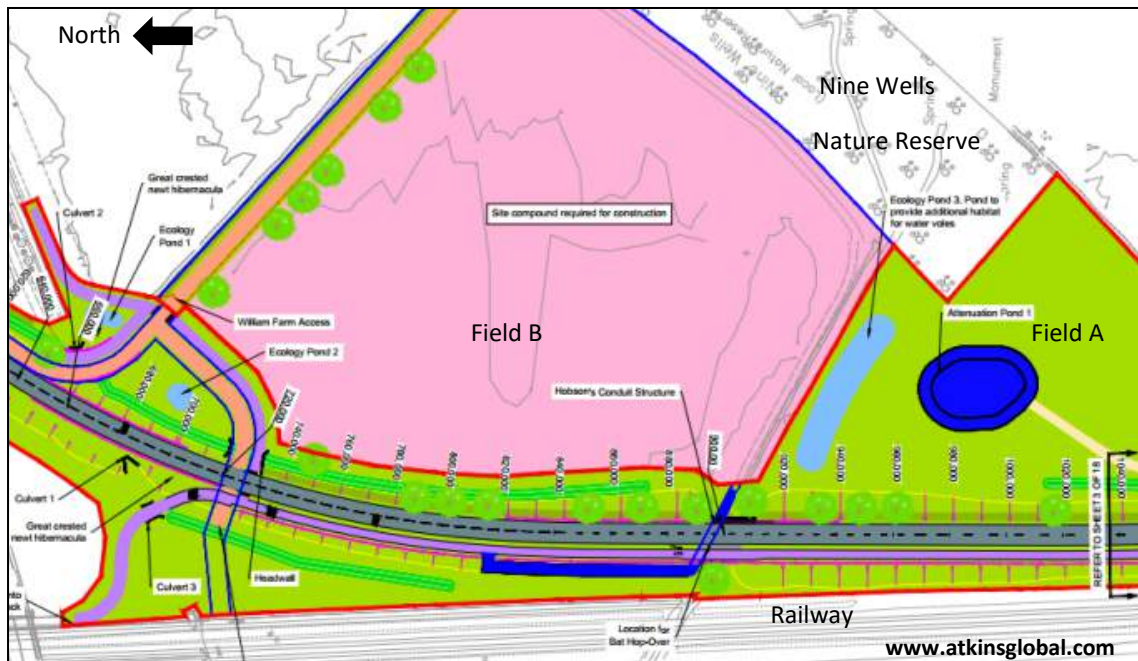


231 for example) into the landscape, not just in the limited section shown in the map below (by [Atkins Global](#)) where the busway is symbolised in grey. (See [here](#).)

The rectangular shape of Nine Wells and the location of the proposed busway between it and the railway can be made out in both maps (allowing for their difference in orientation). Land to be commandeered by the project would abut two sides of the reserve (map below). The compulsorily-purchased, landscaped Field A would be welcomed as 'egg white' which 'complements the habitat

in the reserve' but it is highly regrettable that Field B would be returned to agriculture after being temporarily requisitioned as a work compound. The land owner was reportedly able to resist compulsory purchase.

It was announced in September 2023 that [the GCP has "paused" the busway project](#) while alternative funding is sought. An alternative route for the busway, which [can be seen here](#), might yet find favour?





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Dr. Steve Boreham was in his element when leading our fourth **2023 'Summer' Walk** in September. He is seen, above right with purple gloves, illuminating the technicalities of the trickling filter at the **Saffron Walden sewage works**. Here the design is linear rather than circular which is more common and which is seen at Haslingfield in linked [Newsletter 73](#). Saffron Walden performs better than other water recycling centres (WRCs) in the Cam Valley because it uses iron dosing to reduce phosphate, tertiary treatment, and the 'polishing' of the effluent. Also, storm overflows are diverted onto its substantial grass-covered soil infiltration bed before draining into the Slade, tributary to the **Upper Cam**. If other WRCs were as efficient then conditions downstream might be significantly improved.

Along the Upper Cam between Little Chesterford and Wendens Ambo we visited four sites (see one above left), one upstream of the Slade and three downstream. Also in the vicinity are two other local sewage works and all these sites are downstream from the works at Newport, Debden and Quenden. The distribution of these sewage works is shown [here](#).

Steve presented us with graphs based on measurements of nine pollution-related parameters at each of the four sites, taken by his Cambridge University geography undergraduates (2015—2017) who were clearly privileged to be under his wing. Interesting water quality patterns were revealed, not all acceptable. Phosphate is still a serious problem in the Cam both upstream and downstream from the Slade confluence. At least macro-invertebrates showed remarkable recovery downstream.

Elsewhere, CVF's Michael Goodhart and Bruce Huett made a splash on behalf of **Chalk streams** during the **'sustainability week' organised by the staff of Gretton School** in Girton. With some 140 pupils the school is for autistic children of mixed abilities aged 7 to 19, some as boarders, some as day pupils. The visitors tapped into the

personal experiences and interests of the youngsters. No holds were barred.

Over-abstraction from the Chalk aquifer (how can we save water?) took its place with Ratty the water vole from Wind in the Willows. The threat of predators and the sucking of leeches were of equal interest. Otter spraints and sewage were not overlooked. Here a little technology (Hach test kit) did not go amiss. Blue signalled the presence of phosphate in the sample of River Mel water taken downstream from the sewage works. The 'designation' of bathing water at Sheep's Green, downstream from Haslingfield got a look in (see below). Older classes delved into the spirituality of water and its mythology. Bruce and Michael were kept on their toes.

We were delighted that Cambridge City Council decided to support our application to Defra for **Bathing Water Designation for the Cam at Sheep's Green**. This followed consideration by the City Council's Environment and Communities Scrutiny Committee ([see Item 6 here](#)) on 5 October when Councillors voted formally, by 7 to 1, to support us. Our application has now been submitted and we hope that Defra will approve in order to unlock at least £5 million in much needed investment by Anglian Water to help clean up the Cam.

**Tony Eva's film 'Pure Clean Water' has attracted acclaim.** In it, Cambridge Water admitted some culpability for the problems we (and Hobson's Conduit Trust) have identified. The water company acknowledges (in their management plan) that they will have to make big cuts in abstraction eventually, at the EA's insistence. Yet they are still obliged to supply what they cannot deliver sustainably. This is their bind. The company needs to BOTH *reduce water demand* (water saving/universal metering/massive leak reduction, etc.) AND *increase water supply* (new sources, new pipelines and reservoirs on tap, etc.). They now admit this publicly. We have a water crisis.  
PS Take a gander [here](#).



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This spectacular mural at the Coldham's Lane Sainsbury's was masterminded by Emmy Smart of the **Friends of Cherry Hinton Brook** to celebrate their Chalk stream, flowing just a stone's throw away. Under the guidance of Christopher Deane (left) the artwork was created by students at Rowan, the Cambridge art centre for adults with learning difficulties. The project was funded by the City Council with a donation from Sainsbury's. The City Mayor, on the extreme right, supported the event held in late November.

Meanwhile, at a meeting (photo below) in the village of **Toft**, perched on glacial till and the impermeable clays of the Gault Formation, downstream from the Bourn sewage works, the Cam Valley Forum is pleased to have helped advise on the formation of a new **river group to nurture the Bourn Brook**. The expertise of **Vince Lea** (Countryside Regeneration Trust) and **Ruth Hawksley** (Wildlife Trust), experts on the Bourn Valley, is also on hand.

The well-informed local enthusiasts explored their own backyard through the insights of the formidable **Dr. Mike Foley**, CVF Citizen Science personified, and no stranger to this page. Mike has retired from the CVF committee but still makes waves. **Dr. Richard Sewell** (photo above right), a CVF Citizen Scientist in his own right and fisherman *extraordinaire*, followed in his wake, outlining the potential

variety of opportunities ranging from water quality and wildlife monitoring, searching for nasty outfall pipes and invasive species to the

identification of water-related heritage features, with advice on how to set about at least some of them.

Joining the CVF committee in 2021 Richard now has his feet firmly under the table. Born a Geordie, when not fishing he attended school in Coventry and university at Oxford pursuing organic chemistry and patent law. His DPhil was directed towards a total synthesis of morphine. His retirement from a working-life, mainly in the pharmaceutical industry, was to the advantage of the CVF whilst not securing the safety of fish swimming peacefully within his range. In any event, always happiest by the waterside, Richard has now been able to turn his attention, also, to his quarry's habitat which he cares most about.

