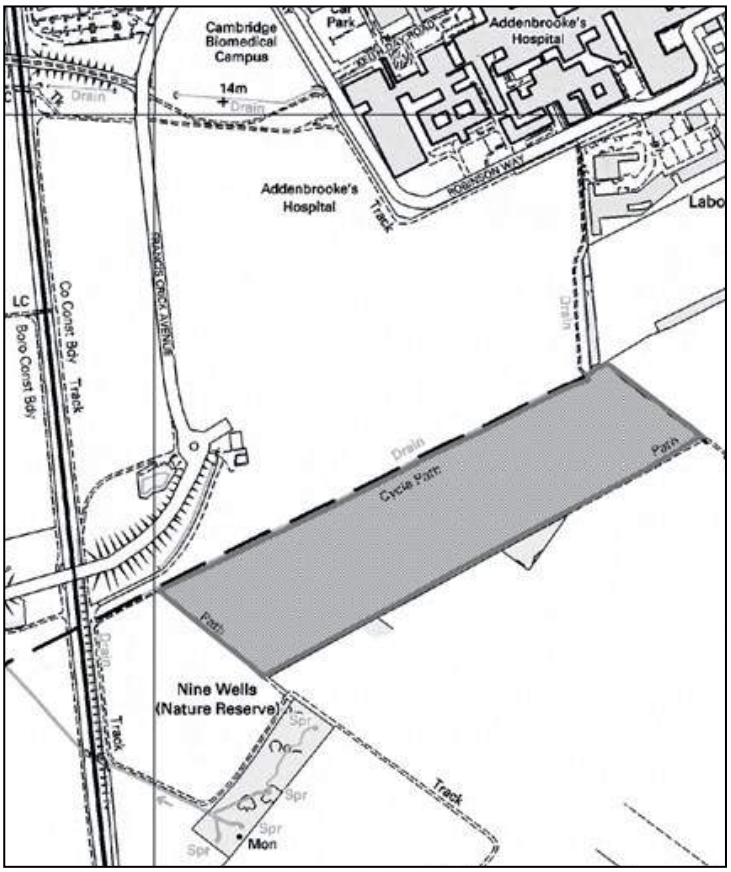
CAM VALLEY MATTERS No. 27 17 January 2016
The Occasional Newsletter of the Cam Valley Forum
http://www.colc.co.uk/cambridge/cam.valley.forum/
Chair: Jean Perraton Editor: David Brooks

Please email davidbrooks@btinternet.com with any items for him to consider for the next newsletter or, if you wish, to request that your address be taken off (or added to) the emailing list. Do forward this newsletter to anyone you think may be interested.



Threat to the Nine Wells Nature Reserve. Like the clouds and the rectangular, striped Addenbrooke's multi-storey car park, the cranes of the Biomedical Campus already loom threateningly over the narrow strip of Green Belt between the hospital and the Nature Reserve (trees in foreground on the right).

Though the map does not portray the most recent developments (roads, buildings, and heliport) it shows the genome cycle path which runs along the long north side of the grey rectangle, before turning south beside the railway. Water flowing from the Nine Wells springs leaves the rectangular-shaped reserve near its western corner flowing beside the Reserve's access track (from right to left in the photograph along the discontinuous line of shrubs) approx. north westwards (see map) to the cycle path and under the railway as the Hobson Conduit.

http://scambs.jdi-consult.net/localplan/readdoc.php?docid=239&chapter=7&docelemid=d40995#d40995 is the link to the document which explains that there is a proposal to add 'new Policy E/1B' to the Local Plan. This could mean that the Biomedical Campus would be extended further south into the Green Belt covering, on the map, the grey-shaded area which is frighteningly close to the Nature Reserve. The proposal also threatens the public footpath, which follows the long southeast-facing side of the grey area itself. It lies within a delightful and varied double hedge, a valuable feature in this generally hedge-less countryside.

Policy E/1B **itself** recognises that the Reserve is an *'historically important'* site. *'Previously a SSSI (Site of Special Scientific Interest) Nine Wells once contained some rare freshwater invertebrates, however following the drought of 1976 these were lost. Today the chalk watercourses are being managed with the aim of re-creating the conditions favourable for a possible re-introduction of these rare species. It is important that the chalk springs not be compromised in terms of their volume, pattern of flow or water quality.'* It is also conceded that it would be necessary to *'provide a setting'* for the Reserve. Surely a substantial buffer zone is essential?

Details of how to register your views can be found by scrolling the above link back to the start where the online consultation system is explained. **Opinions have to be submitted before 25 January 2016.**

The Liberal Democrats of South Cambs and Cambridge have set up a petition at sclibdems.org.uk/ninewellspetition which you may also like to sign. Their sclibdems.org.uk/ninewells provides links to two very recent articles by John Meed about birds in grid square TL 4654. One is about grey partridges and the other farmland birds in general.

CAM VALLEY MATTERS No. 28 6 March 2016
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Turbidity and the Rhee. Alan Coulson's photograph shows the turbid River Rhee (flowing in from the right) joining the much clearer Granta (flowing straight towards the camera), just upstream from Grantchester. There has been inconclusive discussion of the reason for this contrast which seems to vary with time and presumably the state of flow. The photograph was taken in October 2015. By December, two months later, any contrast in turbidity could not be discerned with the naked eye. Are such short-term changes typical? A 'Cambridge Past Present and Future' document includes the following observation: *Many reaches [of the Rhee] have been significantly deepened and it is suspected that historic dredging has exposed the chalk marl bed resulting in a very limited supply of coarse substrate, and a great entrainment of fines as clay particles are mobilised. It is R Mungovan's view that the Rhee has generally become more turbid since the early 1990s.* Do any of our readers have any thoughts or insights into the matter?

Floating Pennywort at Byron's Pool. These two photographs, taken by Mike Foley, show the recent astonishing achievement of the Cam Conservators under the leadership of Jed Ramsay. The small early winter photograph appeared in 'Cam Valley Matters' No. 25, December 2015 and was located some 50m north of the weir at Byron's Pool, showing the channel completely clogged. The larger recent image shows a neighbouring stretch after removal using a small weed-cutting boat. A boom was placed downstream to collect any fragments which may otherwise grow again. The work is to be followed up with appropriate chemical spraying. The removal by hand of small areas of pennywort, left behind by the boat in the upper reaches, is being undertaken, and may actually eradicate it there. The Pemberton Estate has been working with the Environment Agency who are responsible for the severe pruning back on the west bank.

Cam Valley Forum AGM, 7pm, Wednesday 23 March 2016. This will take place in **St. John's Church Hall** in **Hills Road**. At 8pm **Lou Mayer of the Environment Agency** will talk about the extreme pressures on the Cam and its tributaries, what has already been done about them, and what needs to be done if the whole system is to comply with the objectives of the EU's Water Framework Directive. There is no-one better placed than Lou Mayer to tell us about this, as her job at the EA is directly concerned with planning and action to bring the Cam up to standard.
Anyone who is interested is more than welcome to attend.

CAM VALLEY MATTERS No. 29 31 March 2016
The Occasional Newsletter of the Cam Valley Forum
http://www.colc.co.uk/cambridge/cam.valley.forum/

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The development, as a housing estate, of the **former chemical works site beside the A10 at Hauxton** continues apace. The site was once described as one of the most toxic in the UK [See Newsletter No. 10, 12 April 2014]. On behalf of the developer, Redrow, a specialist contractor is now dredging the adjoining **Hauxton Mill Race** using the equipment in the photograph (below, left). The silt raised is held in the large tough permeable bags seen clearly in the right-hand half of the above photograph, which covers part of the site of the former works. From these bags the water seeps into the bunded area (the ring of dark grey plastic) whence still-turbid water is piped back into the Cam. The dried silt residue is then available for other uses, after 6-12 months. The whole process was approved by the EA. Extensive tree works (photograph, right), from the Mill up to beyond the weir, were instigated by Rob Mungovan the Ecology Consultancy Officer for South Cambs.

Dredging has also been taking place along the **Cherry Hinton Brook**, between the car parks at **Sainsburys**, and (as seen in the photograph on the left) at the downstream end of Burnside where the very low **Tins cycle bridge** and the almost-adjacent, even lower concrete bridge, immediately the other side of the visible bridge, create a potential flood hazard. Some 50 tonnes of silt were removed from the channel bed over distances of 10 or 15 metres upstream and downstream from the bridges in order to lower the bed and narrow it at depth to create ecological benefits. The project was overseen by Simon Bunn, City Drainage Engineer, and Guy Belcher, City Biodiversity Officer.

In contrast to the Hauxton method, water and silt were pumped into the lorry in the background. From here it was passed through two further vessels, one applying a chemical process, involving polymers, which were sensitive to the ecology. Water was then piped back into the Brook leaving a very hard residue.

CVF AGM 23 March 2016. The talk (on the pressures faced by the Cam) was delivered by **Lou Mayer the Environment Agency's Catchment Co-ordinator for the EU Water Framework Directive in the Cam and Ouse.** So much to do - where do you start? What is the best that can be achieved in historically much-altered channels? A top priority is to ensure that there is no further deterioration. Lou faced some tough questions and gave some possible radical solutions to the problem of over-abstraction. After her talk (on the right in the photograph) she got down to some nitty gritty.

CAM VALLEY MATTERS No. 30 6 May 2016
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Spring augmentation at Nine Wells. The photograph shows one of the spring hollows in the Nine Wells Nature Reserve, the main source of water for Hobson's Conduit, close to the Addenbrooke's Biomedical Campus. The flows of several of the Cam's tributaries are already 'augmented' by pumping water from the Chalk aquifer and piping it to points in the tributaries' channels, just downstream from their natural spring sources. The Environment Agency is to manage a significantly different scheme for Hobson's Conduit. Water will be pumped from the aquifer and piped underground towards Nine Wells where the water will be returned to the aquifer (close to Nine Wells) in the expectation that flow, out through the 'nine' springs, will increase (without significant change in water temperature, for the benefit of wildlife). ***However, all augmentation methods have one feature in common: in the long term they accelerate the lowering of the water table thus inexorably reducing the amount of water stored in the aquifer, and, thus, future availability for water supply and for natural stream flow.***

Monitoring the Cam at Trumpington. In 2009, a stretch of the River Cam at Trumpington Meadows country park/nature reserve was part of a major habitat enhancement project led by Rob Mungovan, Ecology Consultancy Officer for South Cambs. The work aimed to return a section of the 'channelised', fairly uniform river to a more 'natural' form. This included laying gravel to create shoals/shallows, digging backwater ditches, creating flow deflectors, and re-profiling areas of riverbank.

The Wildlife Trust has been monitoring the effects of the enhancement which were published on 7 April 2016 in its online report 'Restoring the River Cam at Trumpington' by Sian Williams. This compared invertebrate communities in a natural riffle with invertebrate communities in the man-made shoal or riffle shown in the photograph above, and observed changes over time. Early results showed that the natural riffle appeared to be more diverse and contain a few more species indicative of good water quality which did not occur in the new site; however, overall the two sites are becoming more similar over time. Diversity and abundance at the man-made site both showed an increase over the first few years, and have remained fairly stable since. Water quality has been improving slightly at both sites over time.

The Hoffer Brook. Some finishing touches have been added near where the brook is crossed by the public footpath which runs between Foxton and Newton (see Newsletter No. 24). Rob Mungovan's photographs show some of the workers posing on the footbridge, and planting lesser pond sedge, brooklime, water mint, marsh marigold, yellow flag iris, reed canary grass, purple loosetrife along a stretch earlier cleared of trees and undergrowth to allow in light and to encourage diversity.

CAM VALLEY MATTERS No. 31 27 May 2016
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CVF Summer Walk 24 May 2016 - The Bourn Brook It is a truth universally acknowledged that the Cam and all its tributaries have been extensively 'channelised': widened, deepened, and straightened, usually with the result of pushing the problem of flooding further downstream. The direct evidence for this cannot usually be seen where stream banks are sandy or gravelly, or covered in vegetation, but in the photo, above right, the ruler-straight heavy clay bank of the Bourn bears the unmistakeable curved imprints of the scooping actions of a JCB stationed on the opposite bank, more than 30 years ago. Many of these newsletters have illustrated projects designed in the last 10 years or so to try to return channel shape and stream flow to their natural states (not least in the Cam itself, No. 30).

The photo, above left, shows **Vince Lea of the Countryside Restoration Trust (CRT)** mustering the troops at the CRT HQ at Bird's Farm, Barton. The much appreciated walk took in some 2kms of the brook, and neighbouring farms. Bird's Farm is one of eleven CRT holdings in England where wild-life-friendly farming is demonstrated.

Vince drew on his inexhaustible knowledge of wildlife to give fascinating insights into the interrelationships between ecology, farming practice, and the stream channel, all in his inimitably warm and interesting manner. In the last two decades the CRT has buffered the brook against pesticides and fertiliser by returning arable on the floodplain back to permanent wildflower hay meadows (see the pink campion making its vivid contribution amidst other less welcome visitors, in the photo above), and by planting willows harvested every two years for hedge laying and willow products. Topics ranged from mink control, crayfish and Himalayan balsam, to the thriving water voles, restoration of veteran willow pollards (photo above right), a planted hedgerow, and local improvement to the dredged stream channel by infilling with cobbles to raise the stream bed and oxygenate the water. It was not practicable to reinstate an artificially cut-off meander because the dredged, straightened channel was now too low. One of the main polluters is the sewage works at Bourn. Though the eager group was treated to a profusion of bird life, the resident barn owl decided not to appear. As refreshments were being served at dusk, bats began their darting and swooping overhead. Two days later one of the local elusive otters was spotted. Small parts of the Cam Valley are in good health; and in good hands.

Pennywort again. The management team at **Scotsdales Garden Centre** has donated to the Cam Valley Forum an extendable rake which might well have been designed expressly for manually extracting floating pennywort from the Cam. Over recent weeks, Mike Foley, a CVF committee member, has been personally attacking many small outbreaks in the vicinity of Byron's Pool, the Mill Race, and the confluence of the Cam and the Bourn Brook, which escaped the highly successful onslaught over the winter by the Cam Conservators, reported in Newsletter No. 28.

CAM VALLEY MATTERS No. 32 13 July 2016
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Tim Leech of the **Cambridge Trout Club** reports that much progress has been made during this first year of improvements to the **flow and ecology** of the **Cam** (or Granta) **between Ickleton and Whittlesford**. His photographs above show how the channel has been made narrower, speeding water flow, flushing out silt, improving fly life and water plants, and therefore, also, the habitat for fish. The banks of the channel are no longer sprayed, thus encouraging plant diversity. Advice has been provided by the Wild Trout Trust, the Wildlife Trust and the EA. Like so much of the Cam and its tributaries most of the banks are inaccessible to the public. The river along this stretch is crossed by the A505 and one or two minor roads. The photo on the right shows the footbridge connecting the Wellcome Trust campus in Hinxton with its wetland area. Work parties of up to 10 or 12 included Club members and workers from the campus.

At the end of June, the work party gathered by **Mike Foley** of the **Cam Valley Forum**, at the **Grantchester Mill Pond**, were joined at lunch time by the **Wildlife Trust Tuesday Group**, led by **Iain Webb**, which arrived from Cambridge in three punts, for a combined assault on **floating pennywort** and **Himalayan balsam**. Grantchester Parish Councillors Peter Scrace and Katie Hauxwell and two Cam Conservators also provided some much-needed labour. The laborious removal of offending pennywort fragments embedded in heavy slippery silt caused some temporary desecration of the manicured grass on the bank and public space beside the pond.

However, pennywort is becoming, potentially, such a serious problem that it is beyond the scope of a few bands of volunteers. In February 2015, Newsletter 17 reported that the EA removed 1000 tonnes of pennywort from the Cam and Ely Ouse. Newsletter 28 recorded the sterling work of the Cam Conservators on the Cam, with photographs showing that if nothing were done the surface of the Cam would rather quickly be entirely covered with a thick dense mat of the invasive plant. So it is that the news from the Cam Conservators' River Manager, Jed Ramsay, that the EA has secured the necessary funds for this next year, comes as a relief.

CAM VALLEY MATTERS No. 33 8 November 2016
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Nine Wells Nature Reserve: What's all the fuss about? Worms in a ditch? As members and supporters of the CVF were promised, the visit to Nine Wells on 5 November, organised by the Cambridgeshire Geological Society and led by Dr. Steve Boreham of Cambridge University's Department of Geography, was an exceptional opportunity. The **unique blend of geology, geomorphology, ecology, history, archaeology, conservation, and management** was delivered (photograph below) with an incomparable passion and all-encompassing expertise.

The threat of those cranes in the top photograph (the trees on the right mark the edge of the tiny Reserve) is becoming ever more real, by the day. The **spread of the Biomedical Campus, to within 30 metres** of the northern corner of the reserve seems more than likely to go ahead. It is a pity that movers and shakers representing organisations which stand to gain from this development did not benefit from such an enthusiastic presentation of the case for the well-being of this tiny corner of Planet Earth. Meanwhile this newsletter preaches to the converted, at least.

As is widely known, the Reserve lost its SSSI status after the summer drought of 1976 when the springheads dried up and *Crenobia alpina* (a flatworm) and *Agapetus fuscipes* (a cased-caddisfly) failed to survive. The temperature of the spring water is 10.4°C - cool enough for the flatworm to survive and warm enough for the caddisfly. Preliminary work is going ahead, **to compensate for the profoundly adverse effect on spring flow at Nine Wells by abstraction from the Chalk aquifer at Babraham**. Water will be piped underground (to help maintain the temperature acquired at depth) from Babraham pumping station and discharged underground into the Totternhoe Stone through injection boreholes on the strip of field flanking the Reserve on its south-east-facing side. This water should then emerge a few metres away through the springs. **Thus, the fuss** about 'worms in a ditch' (and much more).

Very recent archaeological discoveries in the immediate environs of the Reserve greatly enhance the importance of the site. The Cambridgeshire Geological Society has applied for the reserve to be recognised as a Cambridgeshire (including Peterborough) **Local Geological Site (LGS),** and is most likely to be successful.

One **crumb of comfort** is that the closest corner of built-up Biomedical development may be kept a few metres at bay by the positioning of a drainage balancing pond. But more is needed. **Think of a fried egg.** The yoke (Nine Wells) is the gem in the centre. The surrounding 'egg white' should be a country park buffer zone including a potential Chalk grassland on the slope up to White Hill.

CAM VALLEY MATTERS No. 34 10 December 2016
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River restoration on Sheep's Green LNR
Cambridge City Council is consulting on a proposal to enhance 'The Rush', the meandering watercourse that flows (northwards, up the page) from the Upper River through Sheep's Green Local Nature Reserve (LNR), from just below the canoe club to the Newnham Mill pond (near the top left corner of the vertical photograph on the left). The stream is highlighted in bright blue. The Fen Causeway cuts across the central part of the photograph.

The project was initially conceived by the CVF and seeks to increase year round flow to reduce silt in the watercourse, expose gravels for spawning fish and allow fish passage past the two mill pools, upstream (southwards, down the page) to Byron's Pool LNR fish pass and beyond.

An existing inoperable sluice is located on the west bank of the Cam (bottom left photograph) at the south end of the bright blue highlighted channel, very near the locations of the remaining photographs on the page. This penstock sluice will be replaced with an automated structure, that will permit fish passage and allow control of the increased flow. The change in level between the Upper River and the mill pool will be gradually lost in a series of new natural ramps and pools that will allow fish to navigate upstream.

The CVF committee is grateful that these plans have been so ably developed by the City Council and the Environment Agency, and will continue to liaise with the council on the details of the treatment of the water courses.

This newsletter is based on the City Council website https://www.cambridge.gov.uk/consultations/have-your-say-about-proposed-enhancements-to-the-sheeps-green-watercourse **Do let the Council know what you think about this scheme before 9 January 2017.** If approved by them, then work could begin in February or March 2017. Funding will be from allocated S106 developer contributions for informal public open space and a grant from the EA.