

FCHCB response to GCCSP consultation on Cherry Hinton and Coldham's Brooks

We welcome the plans to improve the two proposed stretches of the Cherry Hinton/Coldhams Brook/East Cambridge Main Drain watercourses. We understand from the latest GCCSP newsletter that the purpose of the work is to

- Restore habitats by stabilising banks using planted coir rolls, cleansing gravels, and restoring more natural flow diversity.
- Develop 'urban interception systems' that will capture the first pollution flush at source, "using small surface-water wetlands, forebays, and vegetated filters to settle and treat runoff before it reaches the main drain, and maintain offline capacity within buffered reaches to protect high-quality chalk habitats".

We think the objective of "improving fish passage through the Barnwell Road culvert" may not be included in the consultation as there is no additional information on this. Also, although the consultation website states that "*Draft designs are available now, showing proposed feature locations and methods.*", we were unable to find these on line. We have obtained some designs from the City Council but these were at a scale that made it very difficult to see the specific activities proposed and locations involved.

Cherry Hinton Brook

We understand the restoration work on Cherry Hinton Brook will take place on the section of the brook between Burnside and Sainsbury's (we are not clear if the stretch of brook running across Sainsbury's car park is included), and will involve stabilising eroded banks, improving flow conditions, and restoring gravels to support a greater diversity of macrophytes, invertebrates, and fish.

How often do you use the Burnside to Sainsbury's path?

Overall, FCHB members (we have a mailing list of c. 100 members) probably use the path daily; individual members probably use it either daily, weekly (many), and some less often.

1. What issues have you noticed along Cherry Hinton Brook?

All the issues mentioned in the survey are present along this stretch of the brook:

- **Bank erosion** and **collapsing path** are significant issues, particularly in the section near Sainsbury's delivery vehicle bridge. People have slipped in one location (easily visible). The path is narrowing in places where the garden fences of some of the houses along Brook Rd are starting to tip over in the direction of the path, often aggravated by overgrowing ivy and other vegetation. (the locations would be best indicated by an on-site visit)
- **Litter** and also **fly-tipping** are major problems. Syringes are also often found, and some of the bushier areas are used occasionally by people sleeping overnight.
- **Pollution** – although we have not done water quality assessments ourselves, the ARU monitoring results indicate that there are issues in relation to nitrates and phosphates. There is an outfall from the TA car park area just before the delivery lorry bridge; it is not known if ARU is testing in this area. This part of the brook will also be affected by road run-off from Burnside: when the brook is high, water flows from the brook into the drains, but when it is low, the road run-off flows into the brook.

- **Silt build-up:** this is very visible in many areas. It is possible that some of it may have been caused by the tree and bank vegetation removal undertaken by contractors for the MOD in March 2023 for the purpose of installing a new fence: this caused significant disturbance of bank soil at the time (although it has had a subsequent beneficial impact in that the reduction in shading has led to an increase in aquatic plants – see next bullet point).
- **Lack of aquatic plants** – locations that are heavily shaded have essentially no aquatic growth – in these areas we have known for many years that trees and vegetation need to be cut back. Aquatic plants increased significantly in the stretch of brook where the MOD took trees down and removed bank vegetation; however the part of the brook nearest the Tins bridge is almost choked with reeds and other plants, with virtually no open water.

2. Drop a pin on the map where you see erosion, silt or pollution.

We realise that the aim of the consultation is to prioritise the specific locations for strengthening banks, improving flows, creating more resilient habitats, and making the location more accessible. However, the map provided is very small and we would like to request an on-site visit with the GCCSP team/consultants so that we can discuss the various issues and locations.

3. In your view, which outcomes should be prioritised?

We realise you want a prioritisation of the issues listed, but this is difficult, as all are very important and should be considered as part of the restoration work.

- **Bank stability** – essential in many areas
- **Cleaner gravels** – as mentioned, siltation is a major problem, and in order to achieve improved habitat and biodiversity gains, this will be essential. There are sections where the ‘gravel’ or stream bed is covered by some 12 inches of silt. This is very evident when we do litterpicks and have people in the stream, as it is the stretch where there is greatest risk of getting stuck
- **Improved habitat and biodiversity gains** – these two outcomes go together and are vitally important and require the cleaner gravel and reduced pollution outcomes.
- **Safer public access** – we presume this means access along the footpath. Parts of this stretch of the footpath are heavily used and a section nearer Sainsbury’s is eroding badly and has led to some near accidents. As mentioned, this requires improving bank stability but also clearing vegetation so that the path does not narrow. If there is a way of discouraging the use of this area by drug users and the homeless it would be welcome.
- **Biodiversity gains** – see above
- **Reduced pollution impacts** – see above

We agree that heavy siltation is a significant problem and recognise that the previous earlier flow deflectors that were put in are now heavily silted and no longer function as intended. The riffle at Sainsbury’s still looks good but we accept the GCCSP’s opinion that the gravel size is too large and too uniform for the local hydraulic regime and that this would benefit from replacement.

4. Other comments

There is a good population of water voles along the stretch of bank belonging to the MOD/TA, and we hope very much that the work being undertaken will take account of this and not have any adverse impacts on this key protected species.

We note from the July GCCSP newsletter that eDNA sampling has shown the presence of the signal (American) crayfish in the upper reaches of the brook. We hope that the evidence of crayfish presence will be carefully documented and monitored, in case this proves to be one of the causes of the siltation. There has only been one recorded sighting of the crayfish since about 2007, but the local anglers report that it used to be present.

Coldhams Brook

We understand the work here is designed to create a demonstration site that trials in-channel works while also testing pollution interception features.

We also understand that the East Cambridge Main Drain (ECMD) has been selected for the case study as it is considered to receive its baseflow from the chalk aquifer, via seepage from Coldham's Brook, (and also upstream at Cherry Hinton Hall, where the ECMD branches off the Cherry Hinton Brook watercourse). The geomorphological profile of the part of the ECMD proposed for restoration work is, according to the project, more consistent with a chalk stream system than Coldham's Brook, is more hydrologically diverse, and has faster flows and a gravel stream bed which supports vegetation more typical of chalk streams..

As noted in the consultation documentation, on this part of the Common (Abbey Pool and Stadium area), Coldhams Brook functions more like a slow-flowing backwater habitat with restricted flow, particularly in the northern section where the channel is deep, heavily sedimented, with vegetation dominated by nutrient-tolerant species and those that thrive in slow, silty water. FCHCB has strong evidence that this part of the Brook is actually a 'leat' and was constructed as a diversion from the Brook itself, in the late 1800s for use at the paper mill which was then on Newmarket Road (see FCHCB website¹). We agree that, with its very limited gradient and heavy siltation, Coldham's Brook in this location could not sustain the hydrological or sediment dynamics required of a chalk stream. The ECMD may well have greater hydrological potential and represent a stronger opportunity for designing long-term, sustainable mitigation that will demonstrate interconnected habitat mosaics from bank to channel; there are some indications that the original course of Coldhams Brook may have been along the general line of the ECMD (FCHCB website)

5. How often do you visit the Coldham's Common/Abbey Pool area?

This is difficult to estimate. Although many people cross Coldham's Common, and the area around Abbey Pool is extensively visited, including by many children, we think that fewer people currently walk along the edge of the section of the ECMD proposed for restoration work. Part of the stretch of the ECMD shown on the map is clearly used by people sleeping out at times and is not very pleasant to walk along; police have been encountered there looking for drug users (personal observation).

7. What benefits do you see from creating a demonstration chalk stream site here?

Creating a demonstration chalk stream site on Coldhams Brook could potentially have all the benefits suggested (i.e. Cleaner water; More fish and wildlife; Better access; Educational value; Climate resilience) but this will depend on what work is done, how the area is subsequently managed and how well the habitat recovers over time. At this stage, before the work has started, it is very difficult to predict what the results will be, particularly given the continued impact of over-abstraction and

¹ <https://friendsofcherryhintonbrook.org.uk/Water.html> - A Portrait of a Much-abused Suburban Chalk Stream by David Brooks

the frequently observed low water levels. We hope very much that the proposed work will result in all the suggested benefits.

8. Where you think habitat creation would be most beneficial.

We don't have sufficient knowledge of this watercourse to have an opinion on exactly where work should be undertaken and would hope that the consultants and ARU staff who have been studying the stream will have gathered the appropriate ecological information to make the necessary decisions.

9. Do you support the creation of pollution interception systems upstream of Coldham's Common to improve water quality for wildlife and people?

The idea of pollution interception systems seems good particularly since the ARU monitoring has already recorded high ammonia, phosphate, and bacterial counts, with concentrations that would be lethal to most chalk stream species. We are however unclear about exactly what the pollution interception schemes would involve or where they would be located. "Upstream of Coldham's Common" would imply that they might be located on the ECMD where it runs parallel to the field where Co-Farm is located. Most of the ECMD, from where it starts near Cherry Hinton Hall, runs underground until it surfaces and runs parallel to Barnwell Rd just after the railway bridge and Sainsbury's round-about. This creates a degree of uncertainty about the outcomes of the work, as potential sources of pollution into the ECMD (e.g. from broken sewage outfall pipes, road run-off etc) remain unknown. ARU's water quality monitoring has already shown that after heavy rainfall events, the ECMD receives a rapid mix of contaminated first flush water and later, cleaner stormwater.

10. Other

As with Cherry Hinton Brook, particular care will be needed in any locations where water voles are present. The July GCCSP newsletter stated that eDNA sampling had provided a negative result for signal crayfish, but hope that further work will be undertaken to determine if this species is present and if it could be contributing to siltation.

Whilst recognising that Coldhams Brook itself is not suitable for restoration, given its lack of flow and the fact that (as far as we understand) at some locations water is lost from the brook into the ECMD, we nevertheless have concerns about investing time and resources in restoration of the drain, without a good understanding of the pollution sources. We understand that monitoring has shown that the main stressors are not constant pollution, but sharp, short-lived pulses that occur during rainfall, and chemical changes that develop during drought. We also have concerns about the impact of the pollution coming from the surface water ditch draining the Newmarket Road retail park, which is considered by the project as a primary source of pollution and which has at least twelve individual outfall pipes. This flows into the lower reach of the ECMD, beyond the area proposed for restoration work, if we have understood correctly. Nevertheless, the various sources of pollution entering the ECMD mean that the overall ambition of this piece of work needs careful consideration, and long term water quality monitoring will be essential in assessing habitat changes seen in the future.

We therefore welcome the regular pollution monitoring work being undertaken by ARU and the plans for involving citizen scientists in this in the future. We hope that the results of this will be used to inform the plans for restoration activities, and that these will be adapted as necessary as water quality results are obtained over time.