**Ecology Group Meeting 26 September 2022**

Present: Kelvin Allen, Dennis Willis, Ezra Lucas, Tim Fisher, John Findley, Jeremy Haddaway, Graham Gamble, Roger Gibbons, Chris Bone.

Apologies: David Harper, Colin Howlett ,Tim Venes, Geoff Phillips, John Jones, Andy Beckett, Matt Jones.

The presentation used on the day is available here.

**Agenda**

1. Previous Actions and Minutes (See attached Action Plan from March 2022 attached)
2. Introducing the East Of England Catchments Planning Hub (Rivers Trust, Anglian Water)
3. Update on Water Quality Monitoring CS
4. Riverfly monitoring scheme
5. Update on Calum Ramage PhD
6. Measuring overall health of the river
7. Discussion and AOB

**Wensum Catchment Partnership Progress**

The WCP Steering Group has met twice this year and three working groups set up – Ecology, Morphology and Water Quality.

Citizen Science Water Quality testing pilot started July-December 2022. Data evidence shared with WCP members.

***2. East of England Catchment Planning Hub***

This new partnership project (Anglian Water and the Rivers Trust) has 3 main aims:

* Participate in shaping Anglian Water’s PR24 Business Plan and Water Industry National Environment Programme (WINEP), which will help identify the budget for the next 5-year plan;
* Identify potential partnership ideas and projects for catchment and nature-based solutions that could be developed as part of the East of England WINEP **(Planning Hub and dashboard);**
* Identify data gaps, partner priorities and wider opportunities.

**(See slides 2 &3 in Kelvin’s presentation)**

WCP members are invited to explore the new CaBA WINEP planning hub dashboard and input ideas and projects into the East of England portal to help build a case for including the project within the WINEP (2023-2028). Project ideas must be submitted onto the Planning Hub by November 2022 for consideration in the 5-year plan.

Other funding opps: The Norfolk Water Strategy Programme (Water Resources East, Norfolk County Council, Nature Conservancy) is modelling water security challenges in Norfolk and will provide funding for nature-based solutions under the Norfolk Water Fund.

Roger: Where does Wensum fit in as a priority amongst Norfolk rivers?

Ezra: Since the Wensum is a designated river (SSSI, SAC), it ranks highly in terms of restoration projects and has more stringent nutrient targets (Phosphate and nitrates) the non-SSSI rivers. (0.02 P level as opposed to 0.04 on other non-SSSI rivers)

**3. Update on Citizen Science Water Quality Monitoring on Tat and Wensum headwaters (Slides 5-8)**

This six-month (July-December 2022) pilot scheme will become one of 8 ‘demonstrator projects’ across England and Wales under the Catchment Systems Thinking Cooperative (CaSTCo); a collaborative national partnership between the Rivers Trust, United Utilities and other partners from the water, environmental NGO and academic sectors. The partnership seeks to revolutionise the way crucial water environment data in England and Wales is gathered and shared, and how this data evidence can be used to drive collective action and make decisions about the river catchment health. The project is funded for 2 years on the Wensum and the Lark.

Slides 6-8 show the maximum levels of 3 chemicals taken from each site over 10 weeks.

Currently there are 12 volunteers monitoring 17 sites on the headwaters each week. Water blitzes will be carried out between October and December on three tributaries/ditches. The EA and AW have supported training and data analysis.

**Discussion**

Roger: Who else is monitoring water quality on the Wensum and how can different approaches be compared? For example, the Angling Trust water quality testing, Smart Rivers under the Wildfish (was Salmon and Trout Trust) and others.

Sarah: Richard Cooper at UEA is pulling together water quality data from the past 20 years, and is open to including all WQ monitoring. This includes the Wensum farmers Group who monitor between Fakenham and Dereham. The Angling Trust are using similar equipment to the pilot scheme, but only monitor some aspects (nitrate, phosphate and electrical conductivity and temperature.)

Q: How can this data be compared and shared?

All citizen science data will need to be verified against laboratory testing to test the validity of the data and provide evidence for WCP members to respond to, as required. If any monitoring of stretches of river raise concerns, the Wensum catchment Partnership will try and follow up- although the EA is constrained by reduced funding and resources and can only monitor main rivers and identified water bodies. This excludes tributaries where some of the problems arise. High standard citizen science data is therefore essential in monitoring small water bodies and tribs. and identifying where resource is needed to address identified concerns.

Water quality data is currently stored in various agency sites. This results in a patchy picture of the whole catchment health. What is needed is a central place to upload and store CS data which the Wensum catchment Partnership can use to prioritise and target restoration work. Some approaches for data sharing are being explored by the WCP but slow progress so far.

**3. Riverfly**

Jeremy Haddaway has kindly offered to update and coordinate the RF volunteers. His plan is to start by taking an inventory of current Riverfly monitors on the Wensum, identify gaps where there are currently no riverfly monitors, and share this with the ecology group. The Ecology group will search for funding to cover training of new RF monitors. (See Action Plan)

**Discussion**

Q Should we upgrade to RF+ training?

Ans: General consensus that we need to consolidate our Riverfly scheme first before upgrading to RF+. David H is keen to upgrade to RF+- could he become a certified trainer? If we are planning another training in 2023, we could invite interested people to pair up with experienced RF to get some practice before training and certification.

John: Ian Hawkins is happy to do RF training days- possibly for next spring.

KA: Does Norfolk need its own trainer?

John: Definitely good idea to get more trainers, keen to support more people being trained. Potential for AW to fund RF training- KA to follow up.

Tim: Would like to link Youth groups with opportunities for RF training. Will contact Jeremy about potential opportunities for this.

David H report shows Upper Wensum- scores are pretty good on the whole. John confirmed this. But kick samples showed few snails and a number of dead molluscs. No clear conclusion as to cause of this (chemical incident, crayfish?)

John: The comments field in the RF form can be used to write any notes about species. If there are any alarming drops in species for regular RF sites please let him know. However, in some slow flow bodies with lots of silt you don’t get the ‘usual’ riverfly taxa because the waterbody is different to RF waterbodies. It is helpful at these sites to note down other species not in riverfly taxa lists as they can help indicate the health of the waterbody. (i.e. demoiselles damselflies)

Graham: Reports of weeds on Tiffey previously being covered in snails but now numbers have dramatically dropped- this will affect roach which reply on small snails. When was the last report for a BAP Mollusc?

Ezra: Last survey for Desmoulin's whorl snail was done in 2016.

Dennis: Are Wildfish (Salmon and Trout Trust) doing any consistent monitoring?

Action: Find out what other eco monitoring is being done on the Wensum and invite to Ecology group meetings.

Dennis- How often do Wildfish produce fish reports?

Kelvin: ¼ ly or on as and when basis.

**5. Research Work**

**PhD Calum Ramage (University of Nottingham)**

Histopathology studies of roach on 3 sites on River Wensum with WQ sampling of 31 different chemical elements and 61 pesticides. Uni. Edinburgh have analysed histology results. In October 2022, UCL will put tissues through spectrometer checking for 31 chemicals including 61 pesticides.

Hellesdon Mill has the worse results, with unhealthy, heavily parasitised fish with poor body condition, immature ovaries and poor gonadal differentiation.

Fish at Lyng and Swanton Morley seemed healthy, although mill barriers are preventing fish passage.

John Findlay- Have sent sample data to EA Brampton labs who are interested in Calum’s data. Will try to keep momentum going to ensure actions will be taken by lab technicians.

Graham: The sexual organ issues be related to hormones in sewage. The RF team should prioritise Hellesdon Mill to get a wider picture there.

**6. Measuring the overall health of the river**

Kelvin presented a spreadsheet he has been working on which could be used to assess the overall health of the river using a range of parameters (Slide 17). This includes Riverfly results, water chemistry monitoring, fish density, flow, fish passage from a range of sources. If this could be adopted by WCP as a dashboard and continually updated this would prove to be a useful tool for targeting interventions to specific stretches.

Ezra: NE have a list of measures from standard monitoring practice to assess SSSIs so could bring in new parameters to this table. Could also include non-native species and macrophytes.

Environment Agency may also have data from morphology surveys; sedimentation and silt deposition, as well as river habitat survey EA)

NE: Will be starting River Naturalness surveys. More detail on this will be from Ezra once he’s done his training.

**Action: Bring to WCP Steering Group meeting for feedback and adoption. Proposal that each working group be responsible to populate the spreadsheet on a quarterly basis or as and when.**

**7. River surveys to prepare shelf ready projects**

Time ran out before this item could be discussed.

**AOB**

Cormorant sampling: No licences are being granted due to the worst Avian flu outbreak so far.

**Fish relocations**

Dennis: What are the restrictions and rules on fish movements, for example supplementing river fish from fishing lakes. The Fisheries Action Plan (2010 identified this as a crucial issue. Tracking surveys at the time showed no detriment to the river.

**Action: Roger Gibbons will contact John F to discuss this further outside the meeting.**

**Bintree Mill:**

Morphology Group have worked to resolve the issue of the breach above Bintree and bank erosion near Lyng mill. Both are live actions in the morphology group with the potential to improve fish passage at the same time. The good news is that Bintree will be dealt with before mid-October.

Dennis: Why were we not allowed to deal with this by sandbagging some time ago.

There was a concern about health and safety having volunteers working in an unsafe area. This still stands for the upcoming works, so please be aware that the site will not be safe until the works are complete.

Sarah: A feedback loop to members of the public about responses to concerns would prevent people getting frustrated with lack of information.

**Action: Sarah to raise this issue at future WCP working group meetings.**

Ezra: The Policy is to improve natural function in the river where fish passage is possible through by-pass channels, mills are part of the river heritage- so not looking to remove structures but to improve passage for fish up and down the river, and improve management of existing structures.

EA New flood map does not have river Tud on it

There is a new Norwich based EA Technical Specialist Fisheries Officer: Arnie Warsop