River Team Catchment Partnership Minutes

9:30am, 29th November 22 - Virtual meeting on Teams

Attendees: Sarah Smith-Voysey Chair (Environment Agency), Zoe Lewin (DCC), Jimmy Young (Gateshead Council), Gayle Wilson (Gateshead Council), Jayne Calvert (Gateshead Council), Becka Bessant (Costain), Steven Mollon (EA), Rachel Penn (Woodland Trust), David Werner (Newcastle Uni), Carl Hodgson (Newcastle Council), Peter Shield (Gateshead Council), Brian Weatherall (DCC), Lee Edwards (NWL).

1. Welcome Sarah Smith-Voysey, Environment Agency

2. Nutrient Neutrality Zoe Lewin, Durham County Council

What is the problem? Nutrients entering water courses from new developments, waste water and agriculture then increase the nutrient load in rivers causing eutrophication and algal blooms. The algal bloom forms a sealed layer over the water course cutting off oxygen and killing everything underneath. This is negatively impacting the area of Tees Estuary SPA/Ramsar designated under International & Habitats regulations.

In March 2022 regulation 63 under the Habitat Regulations impacted all development proposals including overnight accommodation, student accommodation, tourist attractions and any planning applications in the catchment area that would impact river nutrient levels. Planning applications can't be approved until the mitigation is in place. The Tees catchment is large and includes parts of Cumbria, the south of County Durham and the whole of Darlington, Stockton, Redcar and Cleveland.

This has caused significant issues for County Durham. There are 2982 houses on 39 sites waiting for planning approval and the 5 year housing land supply has been affected. Durham County Council has many planning applications for small scale tourist and agricultural developments in Teesdale which are caught up with this issue. The disposal programme of DCC land as well its own new build housing is also caught up with the Nutrient Neutrality issue. There was very little advice and guidance at beginning. DCC's largest planning application for 1400 new homes in Newton Aycliffe with funding from Homes England has stalled and the funding may be lost.

Mitigation is worked out using the NE budget calculator: (1. Nutrients from wastewater – 2. Nutrient load from current land use + 3. Nutrient load from future land use) x buffer 1.2 = 4. Nutrients (kg per yr) to be mitigated. Mitigation can be delivered onsite or offsite and delivered either by the developer or a strategic mitigation scheme by organisations such as DCC, DWT or the Tees RT.

The figures coming out of the NE calculator are scary to say the least. Mitigation for the projects currently stuck in the DCC system is estimated to cover 700 football pitches.

In July, another letter announced a new legal duty on water companies to upgrade STW by 2030 which should reduce the burden on housing developers. Natural England also announced it was bringing forward a national mitigation scheme. They have been working with DCC to formalise more details and credits will be available to purchase by March 2023.

DEFRA and Levelling Up funds will provide money to buy land for credits and the money from the developers will enable more land to be bought for future projects. The government has also given

£100,000 for each catchment impacted, this has been given to Stockton BC which is the lead authority for the Tees Catchment.

Matters to consider:

DCC sought legal advice which was that their only option is to follow the advice from NE. All planning applications have stopped until it is clear what the mitigation is.

The estimated cost per house for the Section 106 contributions is £10,000 - £15,000. There is a limited amount of suitable council land available, should that be prioritised for DCC projects or for smaller projects where mitigation can't take place on site? The Council has had push-back for taking land out of food production for projects such as solar farms, it is likely to receive a similar reaction for the nutrient neutrality mitigation.

Ongoing work and next steps:

There are lots of assumptions in the NE calculator eg the scale of buffer, no of residents - population growth & household size. When NWL does work on the STW the mitigation may reduce. DCC and CPAL have worked together to ascertain that 110ha council-owned land could be suitable for mitigation. The majority of these holdings are currently farming business tenancies, one option would be to create tenancies for a different form of farming – nutrient neutrality mitigation.

DCC are also working with other partners eg NWL to work out mitigation solutions and NE on strategic national solutions. NE are working with landowners and LPAs- Planning Advisory Service Nutrient Neutrality Network to come up with best practise solutions. DCC are working up applications as far as possible to the Nutrient Neutrality stage in the hope that mitigation options will soon be available. NN is still an evolving issue, there is more information online -see links below.

https://www.local.gov.uk/pas/topics/environment/nutrient-neutrality-and-planning-system

http://publications.naturalengland.org.uk/publication/6248597523005440

https://naturalengland.blog.gov.uk/2022/07/22/nutrient-mitigation-scheme-can-help-provide-the-nature-and-housing-we-need/

Discussions followed on the NE calculator and the potential to challenge and collect evidence to create a better version of the calculator.

3. Update on A1 improvements (A1 Birtley to Coal House) Becka Bessant, Costain

Allerdene site - six thousand piles constructed, 91% complete. The new bridge over East Coast mainline is under construction, some piles require flared heads for load bearing. There are 4500 completed along with some piers and beams. These are being built at weekends and during night time closures. Some of this time has been affected by wind and railstrikes so these are behind, with 4 out of 8 centre spans lifted. Work will then commence on building platform and embankment.

Allerdene burn is being over-pumped at the moment, there is an overflow section in for pumping and the new culvert is in. There is also a new attenuation pond as part of SUDS, plus biodiversity feature now complete and gravel pit.

At the Kingsway roundabout (J67), partial demolition by hydro blasting of the flyover section is being carried out by Aquaforce. Silty water is being prevented from entering the river by envirowrap around the work area, the waste water is diverted off into a silt trap, cleaned and pumped into the foul sewer. Substantial monitoring has been undertaken given the location's environmental sensitivities and the process has been very secure. The contractor is currently putting in abutments and beam lifts are taking place now.

Hydrodemolition will take place at the Eighton Lodge (J66) site next year. There are no water courses next to this site so less environmental risk. Lots of earthworks also need to be created here, both temporary and permanent. There are power cables across the site too.

Northdene footbridge has been dismantled because the road will be widened. Afterwards a new bridge will be built. Mine treatment is ongoing in the central reservation and both verges but only during the day as residential housing is too close.

Work will start at Eighton Lodge after Christmas, there will be lots of reinforced concrete and lots of services are present in this location. On section 2 embankments will be reprofiled and hydro-seeded. The 2 watercourses in section 2 are subject to a sampling regime during the earth works.

The new attenuation tank for section 3 has been delivered.

At the Longbank underpass, an NWL sewer burst onto site putting work there on hold whilst this issue is sorted. At the 'teardrop section' (section 3 – J65) the new attenuation tank has been delivered and look like 'egg boxes'. This will be constructed by the contractor and then buried onsite. An extra compound for earth storage has been created. There are a lot of water issues onsite currently.

Discussions on the GIS & sharing of environmental data followed.

Action: For access to the water quality data send BB a request and she can supply them either in excel or pdf format.

4. Northumbria Groundwater Innovation Project Carl Hodgeson Newcastle City Council

Funded through the Flood and Coastal Resilience innovation programme, this project covers Team Valley and parts of Gateshead and Newcastle. Groundwater is a LLFA statutory duty but there is little understanding of groundwater due to a lack of awareness, knowledge and expertise. The majority of groundwater issues that occur are managed privately, not reported, often discharge back into sewer system and are mostly small incidents. The Derwenthaugh flooding incident occurred in April 2016: water began flowing out of the ground at a scrapyard near Ikea in Gateshead and it was found to be coming from an old mine adit and caused by the failure of a pump at Kibblesworth 5 miles away.

After this incident it was evident that a better understanding of groundwater and how mining has impacted it was needed and funding bids were made in 2021 to FCRI to start the process. Twenty-five projects bid for funding including Northumbrian Groundwater project. The programme aims include: testing innovative practical resilience measures; reducing costs of future damage; improving evidence on the costs and benefits of resilience actions; and informing future approaches.

The aim of the project is to monitor what is happening underground and develop flood risk mapping. The project will result in a report on the impact of industry, development, urbanisation and mine closure on groundwater. Groundwater flooding forecasts and warning systems will be created and the general public engaged including schools. The project will investigate resilience solutions including engineering measures and wider benefits e.g. water treatment and renewable energy systems.

Currently the outline business case has been approved, the full business case is due early next year. The project is led by Jimmy Young at Gateshead MBC, supported by Carl Hodgson from Newcastle City Council. Project management involves: EA, NWL, Newcastle University - Urban Observatory, Coal Authority, Gateshead Energy Company, National Highways, TRT, JBA and Hydrogeology Geoff Parkin.

First boreholes will be drilled next summer and engagement with landowners and other interested parties will begin later in 2023, with project delivery by Sept 2026.

5. Newcastle University Water Quality David Werner Newcastle University

Further work has been carried out since the last Team SCP by students on the Lamesley minewater treatment site. Students have also now looked at how well micropollutants such as caffeine, insecticide and antibiotics are removed, the results demonstrated very good removal of these, especially when weather is dry.

MSc students have also looked at water quality upstream at the Tanfield STW. Including discharge from the STW, an agricultural catchment and the Beamish area which has leisure-focused land use. Most of the flow in this part of the river is treated wastewater and the monitoring has shown that most of the nutrients in the river are from the sewage treatment works. Phosphorus flux 2kg/day from Tanfield STW.

Discussions followed on the lifespan of the Lamesley treatment works.

6. Team Valley FAS Steven Mollon Environment Agency

This is a £10.9m project to reduce fluvial flood risk protecting housing and commercial properties, and will provide £271m flood damage benefit as well as improvements to the environment and WFD. There are 8 or 9 sites and the projects extend along the full length of the Team 'main river'. Since the last update two NFM sites have been added, one at Low Urpeth farm and the other at Target woods.

Work has also been completed at Lady Park burn on the replacement trash screen, Arup is working on designs for all elements, and detailed designs for work at TVTE and Eslington Park have been progressed. An additional £150k of funding from NH has been agreed.

Eslington Park culvert & weir removal will reduce flood risk upstream and improve fish passage. The design includes 2 Network Rail bridges which presents many challenges. A precautionary approach has been adopted and the design includes 2 concrete U-trough under the bridges for support. This work has caused extra delays and costs to the scheme. Additional ground investigations underway: no groundwater encountered. The next step is to go back to Network Rail to get detailed design

approval. Two bridges will also need to be replaced: a cycleway and Norwood footbridge, full buy-in from Gateshead MBC is required as they will need to take on maintenance of the bridges.

The TVTE defence structure is built for a 1/50yr event. Use of existing buildings, some heightened kerbs and small embankments (max 500mm) need to be designed and highways approval is also required for these. One area of ancient woodland at 20 Pound Close requires a change to the proposed approach. Topographical survey and engagement with the adjacent business will be carried out.

The Kingsway culvert has a roof of mesh and many plant roots, the concrete base of the culvert is curved not flat and there is a small build-up of sediment. The design will need to improve both fish and eel passage with no increase in flood risk.

Initial designs included additional flood storage at Watergate park lake, this has proved unworkable and other options downstream are being investigated with National Highways. There are several constraints on the Lamesley site including a rising main and archaeological remains. Hedley Hall Woods – no further updates.

Multiple NFM interventions not feasible. Creating wetlands on Low Urpeth farm was investigated but the presence of services may make these proposals unfeasible. Hedgerow planting taking place at Target woods and on Low Urpeth Farm.

There are many challenges including: biodiversity net gain and getting landowner agreement, planning (triggers for EIA, losing permitted development rights), full business case (FBC) is meant to be submitted in March along with landowner agreements, however this could be challenging. There will be new guidance for FCERM appraisals from 1st April 2023; the Project board will be asked about approach to FBC.

7. AOB and date for next meeting

- Query from Ceri Gibson TRT relating to scoping work for proposed WINEP projects: are there any reedbed or wetland opportunities that might extend existing schemes at the Birtley STW. Suggested contacting Stuart Pudney at NWL.

- Date of next meeting: 16th May in person meeting at Costain site office Team Valley.