

**Meeting:** Ruswarp Hydro Meeting Notes (DRAFT)

**Venue:** The National Park Moors Centre, Danby

**Date:** Friday 16 January 2015, 10-1pm

**Attendance;**

Mark Reid, Pat O'Brien, Laura Hogg (EA); Richard Noble (HiFi); Mike Ford, Dr Stephen Larkin (Esk Energy); Angus Oughtread, Stephen Till, (YERT); Michael Graham (NYMNPA).

**Apologies;**

None

**Papers Circulated;**

Notes of last meeting on 22 May 2014

**Notes of Last Meeting;**

A small alteration to the notes at 3.1; Conclusion included in the Presentation were noted 3.1. At pt 1, delete 'significant'. At pts 1 & 2 add; 'although the difference was not statistically significant'.

**Action;** MG to recirculate the final notes

Laura Hogg was welcomed to her first meeting of the group and will take over from Mark Reid who will remain in the background to provide continuity.

**1. Update From Esk Energy on Operation of The Turbine and Other Issues**

- 1.1 MF reported the inlet screen discussed at the last meeting had been altered to be at an angle, rather than parallel to the inlet and that this has greatly reduced turbulence, and ensured a more even flow of water. Debris still collects on the screen and needs removing from time to time particularly twigs and branches which can become wedged.
- 1.2 A noise curtain (plastic slats) was fitted in May 14 in response to local complaints about noise. The curtain has prevented the splashing noise and no complaints have been received since.
- 1.3 There is still a problem with the penstock sticking and sometimes failing to close properly when shutting the turbine down. There is no risk to abstraction, but to restart the turbine requires the problem to be resolved each time. A faulty pressure regulator might be a part of the problem and will be fixed soon.
- 1.4 The turbine has generated more electricity this year than in 2013, mostly due to heavier water flows but also to some efficiency improvements and no equipment failure. In 2013 78MWH were exported and in 2014 124MWH. About 20MWH were lost in 2013 due to a brake failure. These totals are lower than the pre-construction projections but these were reduced to 105MWH during the build phase.

- 1.5 Generation efficiency could be improved further by removing approximately 300mm of sediment off the bar downstream in the side channel. This could be up to 8kW but needs analysis.

ST said there could be a way forward with this and was willing to discuss and also involve Esk Fisheries Association who claim to own the riverbed. MF replied it would be helpful if the EA were to shut the fish pass and turbine off, they could have a closer look at the gravels. RN suggested that a good time would be when HiFi came to remove the hydrophones, possibly in early February at a time of low tide and low flows.

AO felt it important to retain site consistency for monitoring.

PO'B said it was important to assess the feasibility of altering the channel from all points of view.

There was a general agreement that no work (subject to agreement and consenting) would be undertaken until the monitoring was completed.

**Action: RN to initiate dates for a site visit**

**2. Update from YERT**

- 2.1 AO reported that there had been a number of changes since May which are reported on the update website <http://www.yorkshireeskrivertrust.org/>.
- 2.2 A catchment based steering group, engaging with local communities and interested parties, has been formed and met in October 14 with a second meeting planned for February 15.
- 2.3 The Trust has taken on a part time Catchment Based Approach Officer (Alex Cripps who also works for the National Park) part time from October 2014. More information about the project can be found on the website.
- 2.4 Various events have been held including a river walk along the Murk Esk to see spawning which was attended by 15 people. Two training days on river fly fishing were held with 6 attending the refresher and 14 new people on the second. A young angler course will be held for the second year in 2015 and teenagers 13-18 are being shown how to fly fish. 7 completed the course in 2014.
- 2.5 YERT is to launch an 'adopt a stream' programme to encourage people to become the eyes and ears on a particular stretch of water.
- 2.6 Other things include;
- The Environment Agency is funding two demonstration days looking at habitat improvement. These will be led in March by the Wild Trout Trust on Glaisdale Beck.
  - This Exploited Land project is looking at barriers to fish passage as part of its biodiversity work.
  - HiFi and EA are looking at 18 sites for juvenile salmon in the catchment area.
  - The Trust is looking hard for suitable funding opportunities.

2.7 Rod catch data for 2014 is being collected now with early results in 2014 for salmon; 80 (2013 was 107) and sea trout; 424 (364 in 2013). PO'B asked if the Angling Log Book Scheme had improved, to which AO replied it had not been promoted.

### **3. Update from EA**

3.1 The chair of the EA (Lord Chris Smith) had retired in 2014 and been replaced by Phil Dilley. The CEO Paul Leinster is to retire in 2015.

3.2 PO'B explained the team structure adding that LH had joined the team from Fisheries and Biodiversity in Leeds and is one of the first female fisheries officers. Shaun McGinty remains on the team with LH/POB, Tom Padgett is Team Leader (temporary for 6 months) and Mark Scott remains the Area Manager for the whole of Yorkshire, with Martin Christmas having responsibility for North Yorkshire. Shaun is the only Warranted Fisheries Officer in North Yorkshire with powers of arrest though there are colleagues in Leeds and other parts of the business who are local. There were no known enforcement issues in the vicinity of the turbine

3.3 The trialled Voluntary Bailiff Scheme is being reviewed and could be widened in due course, though there are some reservations about it working in this area.

3.4 It was suggested that an invitation to attend the planned site visit (see 1.5) be extended to Dave Piercy who worked on the Flood Defence Consent.

### **4. Fish Pass Operation & Maintenance**

The discussion returned to the damaged penstock and the issue of no one party wanting to own the fish pass. MF estimates that improving the penstock would cost in the region of £2-3k. It was agreed to pick this issue up at the planned February site visit. MR suggested a company Profix and MF Rose Engineering. SL also raised the issue of the wooden footbridge over the fish pass not being safe to use and that this could be rectified at the same time. MR said that the EA would look to see if they could fund these improvements as a one off but stressed they were not accepting with ownership of, or liability for further problems with the fish pass.

**Action:** EA to arrange for companies to attend the planned site visit at 1.5.

**Action:** MF to liaise with Rose Engineering.

### **5. Presentation of draft monitoring report 2014/15 and discussion**

3.1 Richard Noble gave a presentation on the initial analysis of the 2014 monitoring data with initial conclusions as follows;

- The Attraction Efficiency (proportion of tagged sea trout entering the array) significantly higher in the post-monitoring dataset (69%) than in the baseline (35%).
- The overall Passage Efficiency (proportion of tagged sea trout successfully ascending the weir *by any route*) appears significantly higher in the post-monitoring dataset (53%) than in the baseline (35%).
- The Fish Pass Efficiency (proportion of tagged sea trout detected in the array that ascended the weir via the primary [Larinier or Pool/Traverse] fish pass) appears significantly lower in the post-monitoring dataset (69%) than in the baseline (100%).

- The final batch of 13 sea trout in 2014 had an unusually low passage success and exerts an influence over the statistical significance of the change in fish pass efficiency
- However, that batch had no overall influence on the statistical significance of increases in attraction efficiency and passage efficiency
- More analysis of tracks required to determine behaviour of fish, the timings of passage events and the conditions under which they occurred.

He added that there is still quite a bit of analysis to do to validate these data fully and to analyse what the behaviour of the individual fish tells us about their success or failure in attempting to use the pass.

**Action:** RN to circulate presentation to all.

3.2 MF noted dramatic changes in flows between 2013 and 2014. RN said there is a lot more detail to work through including the timing of fish movements, river flows, tides etc.

**Action:** MF to send RN data on turbine operation, river flows etc.

3.3 ST noted that when monitoring was planned, it was discussed about in terms of its national importance and asked how it was viewed now. MR replied that it was an important study and interesting due to the co-location of the fish pass and turbine. John Hatley (National Fisheries Officer) and others recognised its importance and were helpful in obtaining funding.

3.4 AO reminded the group that the focus always is on upward migration and downward is seldom noted. Through the data sounds positive for co-location, he still wondered about the possibility of damage or disorientation of fish that pass through the turbine - what happens to the fish a week later? MF replied that the water is in effect static and not turbulent therefore felt the risk of adverse disturbance minimal. Also that fish have the opportunity to go down the fish pass, the turbine, or over the weir if the flow was sufficient. ST added that an increased flow triggers downstream migration and fish also use the smolt pass.

## **6. Any Other Business**

6.1 MR said the team were doing their best to secure funding for 2015 monitoring

6.2 MF raised the fish counter and asked if the offer from the EA still applied. MR said the offer of the loan of a counter was still there but there were still issues around altering the fish pass which would be a change to consistency of monitoring conditions and the difficulty of finding the resources for data analysis. AO agreed that he didn't want to see structural alterations that could change the monitoring conditions at this stage but it could be done post monitoring. RN suggested that 10-15 years of data would be required to reach meaningful conclusions and therefore its value was questionable.

**Action:** none at this stage

6.3 EA offered to remove the fish counter equipment which was in the way if not needed.

**Action:** MF to check what needed removing at the February site visit and inform MR.

## **7. Date of Next Meeting Thursday 21 May 2015, 10-12 at The Moors National Park Centre Danby**