

Written evidence from the Wiltshire Fishery Association

1. Executive Summary

- 1.1. We address the issues raised by the Audit Committee with reference to the experience of one Wiltshire fishing club in seeking to address the serious deterioration of one of its waters.
- 1.2. We approach this under the headings **A Case Study** and **Lessons to be Learned** below. The Lessons to be Learned which we trust will inform the Inquiry concern the following.
 - **Greater use of Invertebrate Monitoring**
 - **Inadequacy of the EA's own Ecological Monitoring**
 - **Inconsistent Planning Regulation and Procedures**
 - **The EA's lack of Ambition**
 - **Status of the EA as an Arm's Length Body and its capacity to deliver**
 - **Transparency and Adequacy of Monitoring by Water Undertakers**
 - **The Asset Management Programme and Investment in Infrastructure**
 - **Responsiveness to Consumer Wishes**
- 1.3. As an organisation concerned with a county through which many of the world's chalk streams flow, we add a specific point – **Chalk Streams – Raising their Ecological Status bar**. We consider that a post-Brexit opportunity arises to make a statement of re-invigorated environmental intent by the adoption of a higher target for water quality for these very special rivers that are mostly particular to England.
- 1.4. Finally, we express our complete willingness to assist this important Inquiry, not least by extending an open invitation to meet with us and visit one or more of our rivers to see the river fly monitoring we undertake.

2. About the Wiltshire Fishery Association

- 2.1. The Wiltshire Fishery Association (WFA) safeguards and promotes the fishery and conservation interests of rivers within the upper Hampshire Avon catchment. This includes the upper Avon, Wylye, Nadder, Ebble, Bourne and their tributaries. Good environmental water quality is core to this. The Association has been active for over 60 years. The Hampshire Avon catchment is a Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC).
- 2.2. The WFA works closely with DEFRA, the Environment Agency (EA), Natural England, the Wessex Rivers Trust and the Wiltshire Wildlife Trust to protect and maintain these rivers in favourable condition, thereby safeguarding both fishery and conservation interests.

- 2.3. Through regular river monitoring over the last 10 years, we have seen a gradual decrease in invertebrate numbers. They are not only an important part of the river food chain but are also particularly good indicators of water quality and overall health of the river. Several species such as the *blue winged olive* and the *iron blue dun*, which were common 20 years ago, no longer exist in large parts of the catchment area.
- 2.4. There have also been a number of significant pollution incidents resulting from discharges from sewage treatment works which have resulted in widespread loss of invertebrate life downstream. In this submission we propose to use a recent case study to support our evidence.

3. A Case Study

- 3.1. This submission and evidence have been greatly informed by the experience and lessons learned and expertise developed by the Salisbury and District Angling Club (SADAC; the Club) in its dealing with the EA in response to a catastrophic loss of fly life on the River Avon at Amesbury. The Club is one of the largest fly-fishing clubs in the country with around 2000 members.
- 3.2. The Club became aware of a dramatic decline in fly life through its own programme of invertebrate monitoring, known as Benchmarking.¹This revealed that in the period from 2015 to 2017 the mayfly (*Ephemera danica*) count had deteriorated from 1,903 in one sample to just 4, from one month to the next. There was severe eutrophication, most likely caused by a build-up of silt and orthophosphates. The EA's own data indicated that in the period from 2011 to 2017, there had been an increase of 187% in phosphate loading from the three Sewage Treatment Plants (SWTs) upstream of Amesbury. Housing developments at Amesbury (c500new homes) and the Army rebasing programme to move some 6,000 service personnel and their families to Larkhill and other army bases nearby will put further pressure on these STWs and exacerbate the problem downstream.
- 3.3. Alarmed by the dramatic loss of fly life the Club issued a Request for Action to the Environment Agency under *Regulation 29 of The Environmental Damage (Prevention and Remediation) (England) Regulations 2015* on the ground that there was an imminent threat of deterioration of the ecological status of the river from 'Good' to 'Moderate' (under the *Water Framework Directive (WFD) (Standards and Classification) Regulations 2015*).
- 3.4. At the first meeting of the Club with the EA to discuss this in April 2018, the EA representative told the Club that he was unaware of the Army rebasing programme. The Club was quite surprised by this; not least because Natural England, who were fully aware of it, had commented at length on it, noting among other things, that the rebasing would lead to a proportionate 55% increase in phosphate loading on the river.
- 3.5. In response to the Request for Action the EA concluded that it could see no imminent threat of deterioration. Meanwhile, its own phosphate monitoring data revealed that levels of phosphate had increased to the extent that the river was on the cusp of deteriorating from 'Good' to 'Moderate' status. The Request for Action remains extant. The Club holds the continuing view that there is an imminent risk of deterioration as the Army rebasing completes. The EA has said that it will not hesitate to act if deterioration is shown.

¹ *Benchmarking* is a recognised and authoritative standard method for measuring water quality.

- 3.6. It is clear to both the Club and the WFA that major investment by the water undertaker, Wessex Water, is needed to upgrade these STWs. The current programme of housebuilding will increase the volume of sewage to be treated and, unless upgrades are made, the discharge of harmful elements in sewage effluent to the river.

4. Lessons to be Learned

- 4.1. The case study, combined with WFA's own research and specialist expertise of members, concerned with the declining quality of chalk streams in Wiltshire, provide 'hands-on' insights that may assist the Committee. We set out some of these below: -

4.2. Greater use of Invertebrate Monitoring

4.2.1. Benchmarking alerted the Club to the problem at Amesbury, which the EA's own biometric and chemical monitoring failed to spot. The Club understands that the EA had not undertaken any invertebrate sampling of its own since 2014. Invertebrate monitoring can provide instant and vital information as to the health of a river that chemical monitoring cannot. Even the chemical monitoring that is undertaken has been limited. None has been undertaken in 2020.

4.2.2. The EA should make use of this invaluable Benchmarking and AMI Riverfly monitoring. The process and methodology is robust, proven and used internationally. It should take advantage of the growing number of volunteers through fishing clubs and others undertaking monitoring, encouraging, and assisting them. It should inform itself of and collect and publish the invertebrate data obtained.

4.3. Inadequacy of the EA's own Ecological Monitoring

4.3.1. The EA's monitoring approach relies heavily on measuring chemical pollutants rather than the readily observable biological response of invertebrates and other wildlife. The monitoring that it does undertake is only done monthly. This is only partially effective as it provides only a 'snapshot'. It is done at sites that are chosen by convenience of accessibility rather than close downstream of STW and other point-source discharges, where they would be most effective to provide timely alert of environmental damage.

4.3.2. Greater use should be made of technology to deliver data from continuous monitoring of receiving water quality downstream of STW effluent discharge points. Such data should be streamed live to a publicly accessible website and presented in a format which is easy to read and interpret. Robust escalation procedures need to be in place to deliver a swift response when trigger levels or other statutory criteria are breached.

4.4. Inconsistent Planning Regulation and Procedures

4.4.1. It seems to us to be rather inconsistent that Natural England should have been fully aware of the Army rebasing programme, while the EA, or at least that part of the EA dealing with water quality matters was not. Whether this was due to an inconsistency in planning regulation and procedures for Statutory Consultees or not, we believe that the EA should always be notified of any proposed development which has the potential to impact water quality in any water body. Without this it would surely be impossible for the EA to deliver on their responsibilities to protect the river environment.

4.5. The EA's lack of Ambition

- 4.5.1. The EA appears to lack ambition to achieve the target set by the WFD to improve the status of rivers to 'Good' or better.
- 4.5.2. The experience of the Club is that it was content that the status of the Avon did not deteriorate below 'Good', notwithstanding that it was on the cusp of such deterioration. There was no apparent aspiration to improve the status of the river. It is notable that there has been no appreciable increase in the number of rivers achieving 'good' ecological status since 2009, with about 85% failing to reach that standard.
- 4.5.3. A good example of the EA's lack of ambition is the endorsement by its Chief Executive, Sir James Bevan, of proposals to weaken standards set by the Water Framework Directive on the ecological status of water bodies by allowing status to be judged on one of the quality criteria rather than all four. At present the One-out, All-out principle is used to determine the status of water bodies (i.e., the worst status of the elements used in the assessment determines the final status of the water body). This would mean for example, that a river could be given the status of 'Good' notwithstanding that levels of, say, phosphate (one of the elements used to assess quality) had turned the river into a eutrophic disaster – a stagnant ditch.
- 4.5.4. The failure may be due to lack of resource or lack of aspiration, or both. If it is a matter of resourcing, and we are aware that there have been large budget cuts in the last half decade, then this needs to be redressed as a matter of urgency. If aspiration is lacking, resolve should be reinforced with more stringent statutory duties and time limits for compliance, or at the very least, greater oversight and accountability.

4.6. Status of the EA as an Arm's Length Body and its capacity to deliver

- 4.6.1. The EA was originally set up as a form of Arm's Length Body. It delivers a public service but is not a ministerial government department. Historically it operated at a distance from government, enabling it to deliver its objectives based on sound scientific evidence without political or commercial bias. Over the last half decade however a considerable shortening of the Arm has become apparent. We worry that this is hindering the EA's ability to deliver its objectives and is constraining staff from expressing objective expert opinion. We believe this poses a significant threat to our environment. A key intended outcome of government reforms in the middle of the last decade was to make Arm's Length Bodies "leaner, more efficient and more accountable". We are not in a position to comment on accountability, but we are certain that the swingeing year-on-year budget cuts have made the EA less efficient and significantly less effective in delivering their responsibilities to provide adequate protection to the river environment. The case study described here is but one clear example of this.
- 4.6.2. One notable outcome of the Covid crisis over the last year has been a reawakening of public awareness and interest in our environment and the value which people place on open space, countryside and rivers as places to recreate and engage with nature. As such we believe there is significant public support for: enhancing environmental protection of our rivers; investing in those bodies charged with delivering that; returning to the arm's length principle; and allowing the EA to deliver their objectives unfettered by political or commercial bias.

4.7. Transparency and Adequacy of Monitoring by Water Undertakers

4.7.1. Water undertakers are required to self-monitor their own compliance with standards² set for pollutants in sewage effluent. The monitoring methodology is thorough, yet there is only a requirement for a single measurement to be disclosed in each month. This is hardly transparent, nor does it inspire any confidence. What is to stop a water company from choosing a day when pollutants are low, or even reducing pollutants on the day that is chosen³?

4.7.2. Water undertakers are perfectly capable of undertaking continuous monitoring of their SWT outflows. There seems little reason why they should not do so and publish the data in real time. This could only improve transparency and would be a major step in rebuilding public confidence.

4.8. The Asset Management Programme (AMP) and Investment in Infrastructure

4.8.1. The AMP is only reviewed every 5 years. Yet circumstances that can adversely impact on water quality can change much more quickly than this. For example, from planning application to final construction of a large housing estate can occur in a far shorter period. In the case of the Avon, although investment in an upgrade to an SWT is needed now, the next AMP (and in turn review and investment in an upgrade) will not take place until 2025 at the earliest.

4.8.2. Not least in view of the current huge increase in local housing development and the demand that this places on the infrastructure of water undertakers, and also taking account of the consequential additional income from water and sewage rates, there should be greater flexibility and responsiveness to the need for improvement and investment than exists at present, with the constraints imposed by OFWAT.

4.9. Responsiveness to Consumer Wishes

4.9.1. Wessex Water undertakes regular surveys and consultations with its water consumers. In a recent survey it found that *“the majority of you would be prepared to pay a little more to future proof water services for generations to come, including investment in our infrastructure”*. This regular survey by Wessex is commendable and other water undertakers should be encouraged to behave likewise. The finding itself is hardly surprising given the ever-increasing public concern over the state of the environment.

4.9.2. Research published by Wessex Water in September 2018 indicated that their customers placed a value of £177k per mile on avoiding deterioration to river status. We estimate that just a small increase in their water rates, say £5 per year per household would generate in the order of £10m odd per year to mitigate environmental damage. Such an environmental damage offsetting amount would be a step change and consumers are clearly willing to pay it.

4.9.3. In its regulation of charges made to consumers, there is no requirement on OFWAT to consider the views (and in particular their environmental concerns) of the very consumers

² The standards that are set by the EA provide another example of lack of ambition. The phosphorus standard for the Avon has been set at 1mg/L since 2010, meanwhile it has for some time been possible to upgrade the SWTs to reduce this to 0.2mg/L.

³ We have no evidence that this is the case, but it puzzles us that while SWT effluent monitoring on the chosen day shows low phosphate loading, the phosphate levels in the river have increased.

whose responsibility it is to respect. There should be and this should be considered a priority.

5. Chalk Streams – Raising their Ecological Status bar

- 5.1. Chalk streams are deserving of special attention. England boasts 85 per cent of the world's total share. They are one of England's most precious and unique natural resources. They are our very own rainforests and deserving of special protection and attention. Their status is of particular interest to WFA as many of them flow through Wiltshire.
- 5.2. Since the adoption of the Water Framework Directive and establishment of the first River Basin Management Plans there has been a significant problem in the application of environmental quality Targets for rivers, based upon a combination of altitude and alkalinity. As a consequence, the chalk streams have been more or less universally categorised as lowland rivers of high alkalinity, placing them alongside slow flowing, higher turbidity rivers typical of predominantly cyprinid fish populations, like the lower Thames or Medway. It is the view of most experts and other interested parties that this is highly inappropriate and sets the bar far too low for these unique rivers. As an organisation with a predominance of chalk streams under our care, we call for new, ambitious, bespoke, regulatory targets for all chalk streams which recognise them separately and the need for their management as the unique habitats which they are.
- 5.3. The global WFD target set by the EU for the ecological status of rivers is merely 'Good'. Brexit provides the opportunity to raise the bar, setting an example of our own improved environmental standards, by adopting the more ambitious target of 'High' for our chalk streams.

6. WFA's willingness to provide further assistance to the Inquiry.

- 6.1. Fishing clubs and their millions of members are easily the largest group having the quality of our rivers closest to their hearts. Their enjoyment is perhaps the most heavily impacted when a river deteriorates. WFA as the umbrella body representing anglers, clubs and riparian owners in Wiltshire is determined to help the enquiry as much as it can.
- 6.2. To that end, as well as being willing to provide further evidence or expand on the evidence we have provided, we are pleased to extend an open invitation to the members of the committee to visit one or more of our chalk streams, to discuss these issues further and experience the fragility of these unique rivers.

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This submission has been prepared through collaboration of the WFA Water Quality Group and SADAC: Dr C Bennet MBE, T Davis MSc DIC (Env Tech), P Heaton-Armstrong BSc CEng FICE FCIWEM, D Holroyd MBA MCIQB, T Putnam (Barrister), A Topitzis BSc, R Wellard MIFM.

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