

30<sup>th</sup> August 2019

FAO Rachel Fletcher  
Chief Executive  
Ofwat  
Via web portal – consultation response

Dear Rachel,

**RE: CONSULTATION RESPONSE – OFWAT’S EMERGING STRATEGY**

**The Rivers Trust**

The Rivers Trust (RT) is a registered independent environmental charity and the umbrella body of the rivers trust movement in England and Wales (including Afonydd Cymru), with local Rivers Trusts covering all river catchments. RT also represents Rivers Trusts in Scotland and all Ireland. RT has a national strategic MoU with the Environment Agency (EA) in England and an agreed set of working principles with Natural England (NE). RT also works closely with the MMO and alongside other government agencies including Forestry Commission and the RPA. Crucially community-based rivers trusts have catchment boundaries that allow them to work seamlessly across county and national (political) boundaries. Rivers trusts are non-campaigning, delivery focussed organisations active in both urban and rural areas and all of the 11 Water Framework Directive (WFD) River Basin Districts.

The Rivers Trust is a leading supporter of the Catchment Based Approach (CaBA) and works closely with all Water Companies in England and Wales as a partner and co-deliverer of catchment management.

**Background**

Sir James Bevan, CEO of the Environment Agency states in the “WISER” guidance to Water Companies:

*“...there is much still to do:*

- - *Less than a fifth (14%) of rivers and lakes in England are at “good” status or above in terms of water quality and ecology.*

- - *There are still over 50 serious pollution incidents a year for which water companies are responsible.*

*As demand rises and the climate changes, bringing periods of hotter and drier weather, the long term risk of severe water shortages is rising.”*

**The EA’s WISER goes on to say...**

**“Phosphorus stewardship - embracing best practice and innovation**

*Phosphorus (P) is the most common reason for English water bodies not achieving their objectives. The concept of P stewardship focusses on making better use of this non-renewable resource whilst also protecting the environment. You are well placed to support more sustainable future management of P and we encourage you to view and manage P as a resource for potential recycling and/or recovery (for agricultural or other uses) as well as a pollutant to remove from sewage.*

**Nutrient trading**

*Nutrient trading encourages the use of more cost effective land management improvements as an alternative to upgrading smaller wastewater treatment works (WwTWs). Trials have shown that bigger pollution reductions are possible under nutrient trading at potentially less cost than hard engineering solutions. We encourage you to incorporate forward thinking about nutrient trading into your business plans. You can consider trading as part of options appraisal for improvement measures, or you can undertake trials linked to nutrient trading to enable you to:*

- *better understand the practicalities of adopting such approaches*
- *align nutrient trading with other mechanisms (for example, flood risk planning)*

*that could potentially pay for wider benefits*

*It is important to consider long term sustainability of the solution, its ecological effectiveness and the relationship with other required improvements (including land management improvements to tackle the existing contribution). It should not increase the cost or economic impact to the water sector.”*

Globally, freshwater ecosystems are in crisis. WWF’s Living Planet Report has shown that populations of freshwater species are declining at more than twice the rate of those in forests

or oceans. Causes include pollution, over-abstraction of water, and poorly planned and operated water infrastructure. Rivers, lakes and wetlands are not immune.

As well as in securing safe, reliable and affordable public water supplies, Ofwat has a key role to play in tackling the specific reasons for failure and in this wider challenge a duty to ensure resilience.

With reference to the above extract from the WISER; The Rivers Trust is pioneering new successful cost effective green approaches to the removal of Phosphorus through the adoption of Integrated Constructed Wetlands (with examples at Ingoldisthorpe with Norfolk Rivers Trust and Anglian Water) and catchment nutrient balancing / trading with a number of other Rivers Trusts in England and Wales, working with corporate partners from the food and drink supply chain.

The Rivers Trust welcomes this opportunity to respond to Ofwat's emerging strategy.

## **THE RIVERS TRUST RESPONSE**

We strongly welcome the formation of the Customer Challenge Groups (CCGs), which have been a great success. Going forward it would be good to see a strengthening of the relationship between the Catchment Based Approach (CaBA) Catchment Partnerships and the CCGs. This would help them to be better informed at the community level, drawing on the CaBA catchment database and Catchment Plan (which feature in the WFD RBDMPs). It would also save any duplication of effort and bring customers closer to the decision-making and on the ground delivery.

Despite the undoubted success of the CCGs and the growing confidence in their function, Ofwat still appear unwilling to accept that when customers offer to pay higher bills for environmental improvements, this is not necessarily accepted at face value. We feel this is one aspect of a growing gap between high customer expectations (supported by the view of environmental NGOs) and Ofwat as the regulator, perhaps overly focused on keeping customer bills down in the short term, at the expense of increasing risk and rising costs in the longer term.

Ofwat have a duty to ensure resilience but this may sometimes be interpreted as resilience in relation to customer supply in the short term rather than resilience in the wider ecosystem, catchment or wider environment. The EA are rightly putting pressure on the Water Companies to meet the guidance set out in the WISER and detailed in the WINEP, toward meeting WFD 3<sup>rd</sup> Cycle and the Government's 25 Year Environment Plan targets.

Increasingly the solutions to some of these requirements are often best delivered by innovative, green or integrated catchment investment. However, there would also appear to be some barriers in Ofwat's Price Review assessment system and the econometrics criteria and analysis applied, which may possibly limit rather than reward Water Company ambition for 'upstream', catchment or green solutions. These barriers appear particularly in relation to the approval of Opex costs and the rolling out of innovative cost: beneficial programmes, for example; Integrated Constructed Wetlands (ICWs) and Nutrient Balancing or Trading to achieve Phosphate reductions at the catchment scale.

### **Meeting Environmental Regulations and Targets**

Wetlands attached to Sewage Treatment Works (STWs), have already been successfully demonstrated in partnership between Anglian Water and Norfolk Rivers Trust and are judged to be most effective in removing phosphorus, nitrate, plastics and pathogens (including antibiotic resistant bacteria). In addition, they offer a considerable cost saving on both Capex and Opex over conventional P stripping systems that release rather than remove carbon, require chemicals, energy and transport. Utilizing ICWs means that part of the costs saved over conventional methods can be used to achieve the additional phosphorus reductions required through supporting 'upstream' or catchment initiatives such as Nutrient Balancing, tackling small STWs with descriptive permits, CSOs and agriculture, to improve wider catchment water quality and availability, all in the customer's interest.

It appears to us there may be some issues around how flexible Ofwat are prepared to be regarding investment by Water Companies to deliver a specific outcome, favoring Capex investments in fixed assets and infrastructure, with a known Opex annual cost i.e. P stripping tanks and chemical; over a Totex investment in ICWs combined with nutrient balancing or trading, which may offer a better cost: benefit but require a more adaptive approach. This situation may arise in relation to improving water quality, availability and supply as well as waste management and regulatory targets required by the Environment Agency (EA).

### **Water Companies**

Due to the nature of the complex relationship between water companies, government, the EA and customer bill payers it is understandable and necessary that Ofwat operate firmly and fairly in the customer's interest. However, we believe that with water companies now undertaking a great deal more positive and welcome activity outside their strict asset base and new cost: beneficial approaches to solving water quality and supply problems at source rather than end of pipe, some changes in the way Ofwat assess investment plans are still

required. This also extends to the treatment and discharge of waste and flooding (including sewer flooding).

### **Environment Agency (EA)**

As the Water Companies and Ofwat both respond to the EA as the environmental regulator, there is also need to consider how the regulatory requirements set out can perhaps be more ambitious and intuitive, stimulating progressive integrated catchment investment programmes. For example, more flexible permitting of individual Phosphorus discharges at medium sized STWs with a greater focus on meeting challenging catchment targets, would support the development of ICWs applied to medium sized works, together with small STWs with descriptive permits and regularly discharging CSO. These measures when combined with cap & trade mechanisms for Phosphorus reductions through farmer contracts and the wider food and drink supply chain could offer a far more cost effective, green solution to meeting WFD, 25 Year Environment Plan and GHG emission targets.

A similar approach could be taken to protecting water supply and water quality particularly in the South and East, applying a cap and trade approach to abstraction and catchment water quality and conservation measures.

The EA would seem open to a more progressive way forward, but it is necessary that Ofwat also have confidence in these new innovative, green, cost-effective approaches and integrated green delivery programmes, that is reflected in their guidance and analysis of Water Company investment plans.

### **Water Supply, Smart Abstraction and Water Trading**

Much of England is under extreme water-stress, with climate change and population growth predictions forecasting only greater deficits. 14% of rivers are already over-abstracted, with a further 9% over-licensed and therefore vulnerable to over-abstraction in the future. Moreover, England is home to 85% of the world's chalk stream ecosystems, and yet approximately 25% of these currently suffer from severe over-abstraction. Population growth and increasing demand for water are putting immense pressure upon these unique environments, of which we are global custodians.

Sir James Bevan the CEO of the Environment Agency (EA) at the Waterwise Conference on the 19<sup>th</sup> March 2019 highlighted the very real threat to our future water supplies and in turn, the pressures that brings, on our wider environment and wildlife.

Although we strongly agree with the scale of the problem set out by the EA, linked to population growth particularly in the South and East together with climate change, we feel

that this is not just a stark choice between providing drinking water for people and business or water for wildlife. The need to maintain our water resources in the form of groundwater reserves, flowing rivers and streams is also important in supporting community lives and livelihoods, human health and wellbeing together with growth and infrastructure for business development. This includes farming and tourism and offers some resilience in an otherwise stressed system. This approach also supports Natural Capital accounting and the 25 Year Environment Plan.

### **Demand management and leakage**

As Sir James stated, we need to reduce leakage in the supply system and move consumption per head from ~140 litres/ day, toward ~100 litres/ day. This must be achievable, as Denmark have reduced theirs to nearer ~80 litres/ day. Critical to this is rolling out universal metering and adoption of water saving devices, which allows a sliding scale of charges driving down wasteful consumption while protecting low-income households.

Partly due to the present Water Company charging mechanisms for household waste water and a lack of regulatory drivers and incentives for the water industry, planners, builders and white goods manufacturers, there has been little progress in rolling out grey-water recycling. However even modest grey-water recycling for flushing toilets could provide substantial saving in potable water consumption.

### **Culture of water saving**

Usually when Water Companies ask customers to reduce water usage the customer response is, “What’s in it for the Water Company? However where the Water Company has teamed up with a Rivers Trust or similar charity and the message has been, “help us to save our rivers” the response has been much more sympathetic and positive. This approach was successfully tested in the Kennet system, promoting wise use and the installation of water saving devices in households.

### **CAMS and abstraction**

We believe that the present Catchment Abstraction Management Strategy (CAMS) process undertaken by the EA overestimates the amount of water available for abstraction and underestimates the damage to river ecosystems from resultant low flows.

In reality minimum flow limits as defined by Q95 are often exceeded during droughts and this does inevitably impact on the annual carrying capacity of rivers for fish and diversity of wildlife including invertebrates. This is because of the reduced wetted area, resultant concentration of polluted waters, slower flows and higher temperatures. In turn, reduced resources and resilience in the system can result in ecosystem failure and damage to the environment that will impact on livelihoods, health and wellbeing.

### **Abstraction licence reform**

We support current proposals for the Environment Agency to be able to revoke or vary licences without paying compensation and while the EA has made some progress in tackling over-abstraction, the compensation obligation has represented a major barrier to tackling

many of the remaining damaging abstractions, which may amount to up to 1500 licences affecting 100 surface water bodies. We should, therefore, not inhibit the ability of our environmental regulator to control unsustainable abstraction for fear of needing to compensate. In addition, the existing compensation obligation has created unfairness whereby some abstractors are liable for compensation when their licence is amended or revoked, while others are not. The new proposals will help create a level playing field, upon which no abstractor has a right to compensation if they are causing a detrimental impact to the environment. However, Ministers have said that they will delay this vital reform of the abstraction regime until the early 2020s in spite of a pledge in 2011 to legislate.

The Water Framework Directive (WFD) obliges the UK government to improve water bodies to Good Ecological Status and take measures to prevent deterioration. We know that the vast majority of water bodies continue to fail, with abstraction a significant factor for many. We believe that the WFD delivery timetable should be implemented as part of the success indicators within the 25-Year Environment Plan. Particular attention should be paid to ensure that Heavily Modified Water bodies with a target of Good Ecological Potential do not fall through a loophole.

### **Water trading mechanisms**

Based on the premise that all abstraction will negatively affect natural ecosystem function and subsequent biodiversity; smart water resource management mechanisms that create an economic and cultural climate of joined-up investment, self-reliance and thriftiness, must be the way forward to optimise management for all sectors. Essential to establishing a trading mechanism is first, limiting licences and capping catchment abstraction. This then creates an opportunity to trade and advantageously invest in a range of smart water saving and water storage options across all sectors, users and consumers.

This approach would pave the way for new continuous smart in-river flow and groundwater monitoring allowing abstractors including water companies, industry and farmers and to track water availability on-line and coupled with hands-off periods, utilise a sliding scale of abstraction charges with a lower price per litre during periods of hi-flow and higher charges during times of water scarcity. This would not only help protect potable water supplies but also allow other abstractors to plan forward and incentivise them to build in water storage and saving systems into their businesses.

### **On-farm winter storage irrigation reservoirs and groundwater re-charge**

Smart monitoring and charging mechanisms, creating a market for water trading, could be aligned to encourage Water Companies to engage with farmers and invest in on-farm winter



storage reservoirs, in return for the farmers trading their summer abstraction rights. These on-farm reservoirs would capture winter rainfall with additional water being pumped and stored during hi-flows. This would allow farmers to plan their cropping around their water storage giving them independence of droughts or summer licencing restrictions, considerably increasing their productivity and increasing water and energy efficiency. At the same time, large amounts of water would be released for household use and for wildlife. The on-farm reservoirs would also provide havens for a range of wildlife. The Rivers Trust/ CaBA estimate that with an attractive grant offer they could have 100 significant winter storage reservoirs established within a couple of years. Compare that with the costs and lengthy processes around a water company attempting to build a new strategic reservoir.

However, certain policy drivers and mechanisms need to be in place to make this happen. At present, the out-dated abstraction system offers little incentive for farmers or water companies to save water or invest in storage reservoirs in this way. Under Defra's 2017 Abstraction Plan, the national CaBA Water Resources Abstraction Working Group in partnership with Defra and EA were tasked by the 25 Year Environment Plan to lead and oversee sustainable abstraction approaches in "Priority Catchments". These include testing a range of innovative solutions including continuous flow monitoring linked to an "App" which would allow abstraction based on real-time water availability, with a sliding scale of charges. Together with abstraction licence caps imposed by the Environment Agency, this could be a step toward enabling trading of water between farmers and water companies.

### **Integrated management of water resources**

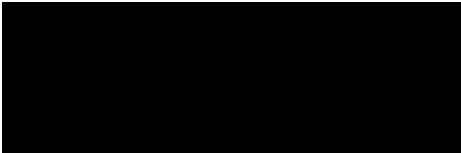
In addition to testing continuous flow monitoring technology and smart phone "App" development, the "Priority Catchments" are also exploring efficient use of water for crop irrigation through improved crop selection and management with systems like trickle irrigation. Other approaches under evaluation include combining reducing local winter flood risk with water storage, by pumping floodwaters upstream into storage for summer use, rather than out to sea as previously. Other projects in the programme include aquifer re-charge through forced pumping of surplus winter flows back into the aquifer and improving soil health and permeability over aquifers to better accept winter rainfall, allowing free percolation through to the aquifer.

It is also important to highlight that poor water quality hugely reduces available supplies for drinking water abstraction. This means that due to impacts resulting from high sediment loads, pesticides or perhaps algal blooms, the Water Company often has to let water go to sea rather than abstract for use. The incidence of this problem is exacerbated by recent often short-term intense rainfall events, which often feature poor water quality with high flows.



To properly address future drinking water supplies and the ambition set out in the 25 Year Environment Plan and make best use of “public money for public goods” it is essential to adopt a multi-sector integrated catchment approach together with new innovative mechanisms that support “cap and trade” as part of a wider system of Paid Ecosystem Services.

Yours Sincerely



Arlin Rickard

Chief Executive  
The Rivers Trust  
(Chairman, CaBA National Support Group)

