

Water Resources South East  
**By Email**

2 February 2023

Dear Sir/madam

## **Water Resources South East – Consultation on draft Regional Plan**

Rowlands Castle Parish Council ('RCPC' or, 'the Council') has carefully reviewed the WRSE draft regional plan and the letter below lays out the Council's detailed response and concerns with respect to the draft plan. The letter comprises 2 parts, firstly some Key Points and supporting comments and then further comments on a range of future water management options.

### **Key Points and Comments**

- The Plan needs a more challenging target for reducing leakage, a 50% reduction by 2050 still leaves millions of litres of drinking water that cost money to treat being lost into the ground. A 75% reduction should be the objective with a stretching target of 90% reduction.
- The Council does not support either effluent recycling or desalination as preferred solutions to solve the potential water shortage when there are other, environmentally better solutions available to progress first and when for much of the year the costly production of recycled water is unnecessary because of good rainfall and full rivers/aquifers.
- There is a need to store the water falling freely from the skies in winter in reservoirs and confined aquifers, keeping them topped up for any drought period. The lack of focus on using this freely available water is astonishing!
- Water companies should not reduce the requirement or frequency of hosepipe bans or other water use restrictions in times of shortage as this sends out entirely the wrong message that people can continue to use water freely when there is a drought.
- Interim solutions should be sought by developing smaller, less expensive schemes and generally reducing customers' demands through education and advice that cumulatively may well address the presumed water shortfall in future years. This would obviate the need for large infrastructure projects that remain expensive to run and carbon-use intensive over decades, further adversely impacting the environment.

It is recognised that there will be increasing pressure on our water supplies as a result of a steadily increasing population, both for household and business/industry use and also because climate change could have an adverse impact on how much rain will fall in the UK each year and when. However, on the basis used in medicine that 'prevention is better than cure' so the adage 'achieving a good reduction in water excessive use and unnecessary loss is better than spending millions of pounds unnecessarily in infrastructure additions' should apply to the water industry and its users. Thus some of the proposed measures to combat potential water shortage are much more attractive in terms of lower costs and positive contribution to climate change factors than others and they can be implemented sooner.

RCPC considers the huge additional costs to consumers plus the high energy requirements long term of major projects such as recycling or desalination are entirely at odds with what should be the water companies priorities; these should be holding down costs to consumers, positively contributing to a reduction in carbon, energy and chemical use and working to retain and store the water that is freely given from the skies when it rains. Therefore the Council opposes the drive to build recycling plants as a priority (and also desalination plants) and considers the relatively cheaper, more environmentally friendly and quicker options to implement should be taken forward first. If Thames Water receives approval for the new Oxfordshire reservoir and some transfer schemes are approved there may not be a need for large effluent recycling schemes.

RCPC is concerned that the water companies do not recognise that much surplus water will be available in wet winters that will now be more common due to the warm wet climate at that time of the year. If collected and stored this will negate the requirement to recycle large quantities of treated water and makes investing in such infrastructure even more unnecessary when there is no requirement for the water. There is also insufficient consideration given to using confined aquifers to hold water, topping them up from the rivers in winter. Southern Water (SW) has just one such scheme on the River Test, which is delayed until 2041! Why is it delayed when that area is exactly where the water is needed now?

### **Future water management**

#### **Leakage reduction**

The plan proposes that water leakage be reduced by at least 50% by 2050. It is considered that this is not stretching enough. There is no point in spending money on additional large infrastructure projects to hold or transfer more water if a significant amount of what is then pushed out to consumers is lost into the ground. That is just a waste of valuable funds and customer payments. RCPC considers that the plan should require that water leakage be reduced by at least 75% in the period to 2050 and that a stretching objective of 90% should be firmly stated and pursued by water companies to ensure that this precious commodity is not wasted. It is recognised that it would be impossible to reduce leakage to zero but companies should aim to reduce the losses to a minimum compared with losses in 2022. This leakage reduction should be the highest priority for all concerned, including improving the supply pipeline resilience to cold winters and having more ambitious mains replacement programmes. The development of small robots able to pass along water pipes to monitor their condition and to look for leaks should improve the leakage management process. Every litre of processed water suitable for drinking that is lost is a waste of the money and effort put in to producing it in the first place. That is not how good businesses should be run.

#### **Customer education to reduce water use by individuals and organisations**

The plan proposes to lower water use by 40 litres per person per day (on average) by 2050. The lowering of water use is fully supported but, as for leakage reduction, this is not a demanding enough target in terms of years to achieve. Water companies should set themselves the challenge of achieving that reduction by 2035 because it just needs 3 things, leading by example in driving down loss due to leakage, education of their customers and universal metering to help achieve the aim. It is important to stress to all water customers (household and industry) that climate change may bring long periods when there is no rain and groundwater supplies run low and rivers also see greatly reduced flows, with summer 2022 as an excellent example. Customers should be encouraged not to waste water and treat it as a precious commodity. The extended drought in California is an example of how all the technology in the world cannot stop areas running out of water if users are profligate with it.

## **Increasing the use of water meters**

These meters are an essential tool in helping customers to reduce usage and costs, while ensuring that those who are perhaps wasteful of this precious resource are penalised initially through their bills but can improve matters by not wasting water in the future. There is no reason why all properties should not be fitted with them by 2035 except lack of production or lack of a trained workforce to fit them.

## **Temporary drought management restrictions**

It should be made clear to customers that the use of temporary restrictions (Temporary Use Bans and Non-Essential Use Bans) in times of drought must form part of the plan to deal with increased demand. There is still a strong belief by many that water is a freely available resource that they don't need to protect and respect. The water companies must never indicate that drought restrictions will be reduced because other measures have been brought in. Water companies changing their level of service so that restrictions like hose pipe bans occur less often for customers sends out completely the wrong message on the need for customers to save water. Sanctioning increased customer demand drives the volume of water that companies say they need in a drought and they can use this to help justify effluent recycling proposals. This is just wrong.

## **Increasing the number of reservoirs**

With a maritime environment producing large amounts of rainfall from warmer air when weather fronts come in from the Atlantic building more reservoirs/storage systems makes eminent sense. Reservoirs are not in themselves energy demanding over the long term once built and they ensure that water that may otherwise be lost to sea can be held back. The current Havant Thicket Reservoir (HTR) and the 3 proposed for other counties are all supported and the latter should be brought forward from their planned start dates if possible. More ground water storage and reservoirs of varying sizes should be developed to hold the free rainwater that falls on our land, rather than developing recycling and desalination systems that will cost the consumers a great deal of money over a long period of time.

## **Water transfer using canals/rivers**

It is not clear how much energy will be required to move large quantities of water along canals particularly if that involves pushing the water uphill at any stage and any long-term costs involved. The other concern is that water shortages might occur widely if there are long dry periods across a large swathe of the country and so there may not be surplus water available to move about, thus the cost of developing this option may be wasted. Thus water transfer using various methods must be tied into increased storage capacity across the south-east of England in particular although it should also be looked at across the country as a whole. If storage using reservoirs or confined aquifers is increased then the building of interconnecting pipe work and use of canals and rivers makes sense.

## **Storing water underground and improving retention in water catchment areas**

Both these approaches seem very suitable in terms of retaining water that is beneficial to the environment as well as helping to address potential shortfall for customers. In particular retaining more water in catchment areas helps the rivers that run through them as well as providing more water for customers if required. Just as beavers can successfully retain considerable volumes of water in the upper reaches of a river so careful engineering could see considerable volumes retained to help in drought situations but also to support the general health of the river.

More consideration should be given to capturing winter rainwater and storing it in confined aquifers to ensure the aquifers are topped up at the start of each summer. This solution works with climate change, taking advantage of wetter winters to provide for potentially drier summers.

Water stored in confined aquifers will not evaporate and treatment works will often be present already avoiding the need for new infrastructure and pipelines. At the time of writing the winter lavant that flows through Rowlands Castle is passing millions of litres from the chalk aquifers out to sea with no possibility of capturing some of it for summer use. We would not let oil run away like that yet water is equally as precious.

### **Water recycling**

The Council understands why the further processing and re-use of water that has already gone through the first stage of treatment from being effluent to something that can be discharged into the environment (river or sea) seems initially attractive but it has some major drawbacks. It is very energy and chemical intensive and that implies greatly increased costs for consumers over the long term at a time when energy is no longer cheap and in fact will continue to be much more expensive than in the past. The investment in the structures and technology associated with these schemes will need to be paid for and the operating costs will remain high throughout the life of the schemes. The Council is very concerned that the drive to make profits for their owners is leading water companies to seek to invest in large amounts of infrastructure that will justify higher charges and thus greater profits. The current system of incentivisation by Government appears to lend itself to this approach by water companies. For the consumer the water will not be as pleasant to drink as that which is drawn from ground sources and this may put some people off drinking tap water and using bottled water instead, which would be a hugely retrograde step in terms of the use of plastic. The Council believes that more work needs to be done to drive down costs for this approach before it should be considered further but that the other options of leakage reduction, customer education and development of new reservoirs and storage capacity must be taken forward first.

There also needs to be a re-assessment of how much recycled water is needed if leakage is greatly reduced and customers respond positively to education on how to save water. There will be no requirement for recycled water during the winter months and yet recycling systems apparently need to be operated 24/7. This means that consumers will be paying large amounts of money to produce recycled water when none is needed. This is just plain wrong. Should some areas eventually require recycling schemes and they be deemed cost effective the water should not be mixed with high quality water held in reservoirs and derived from natural sources but sent directly to environmental buffer lakes if required and returned to rivers for abstraction downstream. In any event the recycling should be carried out close to the area requiring this type of support so as to reduce the cost of pumping the water over long distances.

Finally and specifically with regard to the SW plan to put recycled water into HTR as an Environmental Buffer Lake, RCPC firmly opposes this proposal as it will dilute the high quality chalk-aquifer-derived water in the reservoir and reduce the environment benefits that formed a large part of the original planning application justification.

### **De-salination**

Desalination is very energy intensive, has the potential to increase fossil fuel dependence, will increase greenhouse gas emissions and exacerbate climate change if renewable energy sources are not used for freshwater production. This process is only used in countries where there is a sustained real shortage of water from other sources so that sea water needs to be converted to drinking water. It is not appropriate at all for this country where over the course of a year, increasing amounts of rain at times can supply all our needs if the rainwater is captured effectively. Desalination surface water intakes are a huge threat to marine life and the discharge of highly saline water will negatively affect all organisms in the water in that vicinity with a slow spread of that high saline effect over time. The Gateway Water Treatment Works in Beckton, east London should take water from the Thames Estuary, treat it and make drinking water and was completed in 2010 to be used during dry weather events. However Thames Water wanted to close the desalination plant as it was too costly to run. When it was needed during the drought conditions of last year only a small volume of output was available as the rest of the plant was

supposedly out of action for maintenance. The Council believes that it was just too costly to run. According to Thames Water data, traditional large treatment plants in London cost approximately £45 to produce one million litres of water and this much cheaper than the cost of £660 per one million litres from the desalination plant. The energy usage per day appears to be 14MW to produce 100 megalitres and with the high cost of energy this looks unsustainable. For all the stated reasons RCPC does not support the use of desalination as a means of addressing future water needs and considers the process a waste of customer money and damaging to the environment.

### **Over-investment in infrastructure and technology**

The concern with regard to climate change and issues such as the potential for water shortages can influence thinking too much towards investing in new expensive solutions such as recycling and desalination, rather than reducing excessive and unnecessary use/loss and also retaining more of the water that falls freely from the sky for much of each year. Those new solutions will always demand high energy expenditure over tens of years with the resulting high costs to consumers and negative effects on the environment. It is essential that the lower-cost wins of reducing consumption, stopping unnecessary loss and retaining water in reservoirs and underground storage are prioritised over the pursuit of high-cost solutions to water management. While it is understood that stopping leaks may be quite expensive the rapid development of new robotic technologies in identifying and repairing leaks will greatly assist in the process. The headlong pursuit of high-cost infrastructure options needs to be very carefully controlled; for all we know in future years with increased temperatures and a maritime climate we may get far more 'tropical' rain than we ever bargained for across a calendar year and then, apart from reservoirs and storage facilities, the high cost infrastructure improvements will be seen as white elephants on a grand scale that customers will continue to pay for unjustifiably just because they are company assets.

### **A final comment**

In 2018 Michael Gove, Environment Secretary at the time, berated water bosses in general saying: "Far too often, there is evidence that water companies have not been acting sufficiently in the public interest. Some companies have been playing the system for the benefit of wealthy managers and owners, at the expense of consumers and the environment. Some companies have not been as transparent as they should have been. They have shielded themselves from scrutiny, hidden behind complex financial structures, avoided paying taxes, rewarded the already well off, kept charges higher than they needed to be and allowed leaks, pollution and other failures to persist for far too long". Water company charges (and therefore revenues) are determined by Ofwat, based on the costs presented by the companies, including an inflation-linked factor to ensure attractive returns to investors. There is thus a financial incentive to boost 'investment' and therefore returns to shareholders and owners. RCPC is greatly concerned that this attitude persists today and that WRMPs reflect the desire to make good profits for owners and shareholders rather than provide a cost-effective solution for consumers who have to pay for all the developments and the environment. This must not be allowed to continue unchecked.

### **Summary**

In summary, RCPC believes that maximum effort should be directed to prevent water loss through leakage and to educate customers and help them save unnecessary wastage through changing their habits and installing water meters. Effort should also be directed at building more reservoirs, large and small, and also catchment improvements and the use of confined aquifers for storing excess winter water. It is far better to reduce the loss of treated water than to spend large sums of money on recycling or desalination both of which will require continued use of energy and chemical processes over their life time at the expense of the customers many of whom can ill afford large increases to their utility bills. In addition it should be remembered that for much of the year, the expensive production of recycled and desalinated water will be unnecessary as rainfall will supply all we need. By selecting and progressing smaller,

environmentally-friendly solutions first it may well be possible to remove the need for large, costly and environmentally damaging infrastructure projects.

Yours faithfully

Lisa Walker – Clerk to the Council  
For and behalf of Rowlands Castle Parish Council