Rowlands Castle Parish Council

Lisa Walker
Clerk

11 The Green
Rowlands Castle
Hampshire PO9 6BW
Tel: 02392 413044
Email: clerk@rowlandscastlepc.org.uk
Website: www.rowlandscastlepc.org.uk

Department for Environment, Food & Rural Affairs (DEFRA)
2 Marsham Street
LONDON
By Email: defra.helpline@defra.gov.uk

2 February 2023

Dear Sir/Madam

Southern Water (WW) draft Water Resource Management Plan (WRMP)

Rowlands Castle Parish Council ('RCPC' or, 'the Council') has carefully reviewed the draft SW WRMP and the extensive letter below lays out the Council's detailed response and concerns with respect to the draft plan in 3 parts, 1) Key Points and comments with regard to SW WRMP, 2) generic comments on future water management and 3) in Annex A the answers to the 20 questions posed by SW in its WRMP.

Key Points

- The Plan needs a more challenging target for reducing leakage, a 50% reduction by 2050 still leaves some 46 million litres per day being lost into the ground. This daily loss of water that has been treated at a cost is unacceptable and this must be addressed as a high priority by setting a target of at least a 75% reduction in leaks and preferably a stretching objective 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.
- Following on from the above key point, the Council firmly opposes the SW proposal to pump recycled effluent into Havant Thicket Reservoir (HTR) as an Environmental Buffer Lake, thus diluting the high-quality chalk-aquifer-derived water within it and negating the environmental benefits promised when the HTR planning application was submitted.
- There is a need to store the water falling freely from the skies in wetter winters 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.

Further comments re SW WRMP

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 SW does not recognise that water will be freely available in wet winters that will now be more common due to the warm wet climate at that time of the year. This will negate the requirement to recycle large quantities of treated water and make 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, except for one 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?

The Council is also concerned that there is reference to needing to address a 1 in 500-year drought that is mentioned in National Guidelines (i.e. it is guidance only). This requirement is skewing the WRMP towards building recycling plants and desalination plants to meet an extremely rare occurrence when other cheaper solutions, properly implemented, may result in no drought restrictions at all.

SW has published a very high-level Strategic Environment Assessment but has not yet completed modelling to be able to understand the impact of water recycling on either Havant Thicket Reservoir (HTR) or on the local coastal area (Langstone Harbour). Therefore how could the company have quantified the environmental risk?

Effluent recycling is a complex process, requiring a steady treatment stream, highly trained operators and regular maintenance. SW has a poor track record on pollution incidents, general maintenance and compliance with regulations generally. How can they be trusted to properly treat the recycled effluent? There only needs to be one failure in the recycling process to adversely affect the environment at HTR.

RCPC is concerned that the Gate 2 documents produced by SW have been massively redacted to remove most of the key facts on the grounds of commercial sensitivity. It has proved very hard for members of the public to get a full understanding of the options considered and the costs, benefits and drawbacks. There is a lack of transparency that is frankly worrying in the matter of our future water supply, particularly when SW has such a poor reputation already with the public it purports to serve.

There has been a lack of engagement by both SW and Portsmouth Water (PW) with customers to determine if people are prepared to drink recycled effluent.

If recycled water has to be produced, Peel Common Waste Water Treatment Works (WWTW) has been proposed by SW as an alternative site for effluent recycling. It has advantages, including a shorter pipeline to get the water to where it is needed with less pumping required. SW even recognised in their own Gate 2 report that it would be better for the coastal environment to

use the Peel Common WWTW and Ofwat have approved funding to develop this scheme in parallel to the Budds farm WWTW yet SW are not doing this – why not?

The proposed site for the Water Recycling Plant at Broadmarsh is contaminated and unstable land. It was created as a 'dilute and disperse' landfill on the edge of Langstone Harbour with no pollution control or leaching barriers. It will require massive piling through the landfill to get at the chalk substrate and there is gas emerging at the surface. It is altogether a most unsuitable site for the recycling plant and the pipelines proposed.

When SW conducted a consultation in summer 2022 it was indicated that recycling treated effluent from Budds Farm WWTW only needed to provide 15Ml/d in the early years but the company wanted the option to expand the scheme to be able to treat up to 60Ml/day, by adding treatment modules at a later date that, in conjunction with the reservoir, could deliver up to 90Ml/day in the long-term. Therefore in the short term if they prioritise options that can deliver 15Ml/day between 2025 and 2030/35, such as those discussed in this letter, then a decision on effluent recycling is not needed now, it can be deferred to 2030. That buys more time for progress to be made on the impact assessments and regional transfer options. If regional transfers can then be confirmed as feasible by 2030 (the next critical decision point), the current need to press for large environmentally unfriendly, carbon hungry, effluent recycling schemes, which have to be operated all year round despite only being needed in a severe drought, is greatly reduced and the decision can be deferred. This extra time should enable water companies to look for more environmentally friendly solutions and allow for technological advances in treatment to be developed that should be less environmentally unfriendly.

Future water management

Customer education

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. 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 on customers 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 is not appropriate as it 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 use this to help justify expensive effluent recycling proposals. This is just wrong

Leakage reduction

Along with educating customers water companies should ensure that the treated water they produce for drinking, which is what is supplied to all, is not lost through leaks or misuse. It remains a great concern to RCPC that more effort is not being prioritised to reduce the loss of water through leakage. This water has already incurred treatment costs that are thus a waste of money when millions of litres are lost from supply pipes. By 2050 SW are only planning to have reduced leakage by half from the 92 million litres per day (Page 29 of SW WRMP summary) and approximately 46 million litres per day will still be lost. SW needs to have a much more ambitious mains replacement programme and to fix leaks more quickly to stop this massive, costly, wastage of treated water.

Increasing the number of reservoirs

With a maritime climate forecast to produce wetter winters and dryer summers building more reservoirs/storage systems makes eminent sense. Reservoirs are not in themselves energy demanding over the long term and make for a sensible capital investment that can last for many decades and enhance their environment. They ensure that water that may otherwise be lost to sea can be held back. HTR and the current 3 reservoir proposed for other counties are all strongly supported and the latter should be brought forward from their planned start dates as a key objective. More schemes should be developed to store higher winter river flows in reservoirs, these could be quite small but yet make the difference between sustaining a useful water flow to customers or not. The failure to regularly invest in reservoirs of varying sizes is of great concern and RCPC wishes all water resource management plans to put such investment as a high priority after leakage reduction and customer education. Defra should be pushing the water companies hard in these respects. 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 transfer using pipelines/canals/rivers

It is not clear how much energy will be required to move large quantities of water along pipelines or canals particularly if that involves pushing the water uphill at any stage and therefore there is some concern about the 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 needs careful consideration. Thus water transfer using various methods must be tied into increased storage capacity across the South-East 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.

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 results in greatly increased costs for consumers 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, e.g. the requirement for the Havant recycling scheme to treat 3 Olympic-sized swimming pools worth of water every single day and pump it 40 km even when the water is not required. 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 from the HTR will taste different from what they are used to and this may put some people off drinking tap water and using bottled water instead (especially if they think about where it has come from), which would be a hugely retrograde step in terms of the use of plastic. The Council believes that more work needs to 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, including underground, must be taken forward first.

Specifically, wrt the SW plan to put recycled water into HTR, RCPC does not support the proposal to use the reservoir as an environmental buffer lake. The Council is concerned about the risk of pollution associated with treatment failures, water quality issues including a great risk of algal blooms and adverse impacts on biodiversity, and at the potential loss or diminishment of the benefits promised by PW to the local community when seeking support for the HTR project.

Desalination

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 (and effluent recycling) 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 is 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 significant 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.

Yours faithfully

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

Encs: Annex A – Answers to 20 questions posed in SW’s WRMP

CC: Southern Water and WRSE

Annex A
to RCPC's Letter to DEFRA of 2 February 2023

RCPC's Answers to the 20 Questions posed in Southern Water's (PW) draft Water Resource Management Plan (WRMP)

1. *Do you agree that our WRMP should reflect the best value regional plan, so we are aligned with our neighbouring water companies?*

It makes sense that the WRMP reflects the best value regional plan to ensure that water companies are working to a common theme provided that regional plan has been properly considered and reflects the need to provide best value to customers and for the environment. That requires the water companies to adjust the current regional plan that they have produced between them as it is currently not best value. Providing sufficient water for users plus improving the environment plus providing social benefits must not come at a significant cost to consumers; many are finding living costs rising disproportionately to their incomes from all sources.

2. *To protect the environment, we currently have a lower level of service in our Central area, covering West Sussex and Brighton and Hove compared to our target. This means up to 2027 there is an increased likelihood of needing to impose restrictions on water use. We have set out our plan to address this gap. Do you have any comments or concerns about this level of service in our Central area and our plan to address it?*

As this area is outside of our knowledge RCPC does not intend to comment on this question.

3. *We propose to stop using drought orders and permits that allow us to continue abstracting from the environment after 2040, unless we experience a severe drought. This means we will need to develop new water supplies to replace them. Do you agree with this approach and the timescale we are proposing to deliver it?*

RCPC agrees with this approach but considers that SW should bring forward the date by which it implements this aspect of the plan, particularly if the reduction of leaks and reduction in daily use by customers is progressing well.

4. *We have considered a range of future scenarios in our adaptive planning approach. Are there any other future scenarios that you think we should consider?*

The three scenarios considered in the plan appear to provide the best, median and worst options for population growth that need to be considered. No other scenarios come to mind.

5. *Do you support our plans to at least halve leakage by 2050?*

The plan proposes that water leakage be reduced by at least 50% by 2050 and possibly by 62% dependent on how the reduction is delivered. RCPC considers that 50% is not stretching enough, that 62% is a better objective to achieve but that a stretching objective of 75% reduction from the current total should be pursued (and by all water companies). <u>There is no point in spending large amounts of customers' 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</u>. That is just a waste of valuable effort, company funds and customer payments. It is recognised that it will be impossible to reduce leakage to zero but companies should aim to reduce the losses to being only around 10% of the present total by 2060, if not earlier. <u>Leakage reduction should be the highest priority for all concerned as it addresses waste and will reduce considerably the need for large, costly infrastructure projects</u>. Given the rapid development of new robotic technologies in identifying and repairing leaks, a target of 65-75% should be considered achievable

6. *Do you support us achieving our WRMP target of reducing average personal daily use to 109 litres by 2040 or should we retain our more ambitious target of 100 litres by 2040?*

RCPC supports very strongly the ambition to reduce average personal daily use to 109 litres and believe that SW should also retain the more ambitious target of only 100 litres by 2040 as a stretching objective. If SW as a company shows itself willing to really tackle the leakage problem they should be no real difficulty in encouraging most customers to use meters and to take advice on how to reduce their use of water without depriving themselves of necessary use. Bringing forward the target date of everyone having meters to 2035 should be stated as a stretching objective. To achieve this just needs 2 things, education and metering, to help achieve the aim. By helping customers to understand the need to conserve water and how they can achieve real reductions in use through careful management of their day-to-day consumption a majority of customers will be able to achieve the reductions over the next 10 years by changing their habits. A well-written encouraging advice note that lays out all the ways that reduced water use can be achieved without being prescriptive and demanding will enable many customers to implement savings successfully and they should be helped to understand the financial savings consequent upon their actions as well. The Council considers that households and businesses will respond positively to messages that show that SW intends to lead by example with respect to reducing leaks from its supply pipes. It is imperative that customers are incentivised to change behaviours, and that their efforts produce tangible results (not just minor reductions in bills) and are matched "like for like" with providers. Incentivising projects such as supplying rainwater storage units and hoses for gardens/allotments/green spaces may have value.

7. *Do you support additional proposed government interventions and the timing of their introduction?*

The Council supports the additional proposed Government interventions but believes the timescales quoted in the WRMP are too long. The interventions should be brought forward by at least 10 years in each case if not more. Good minimum standards for devices that use water and amendments to building regulations will both be positive factors in helping to reduce overall consumption and should be pursued by the Government with urgency!

8. *Our plan continues to rely upon temporary restrictions on water use to help lower demand during droughts to avoid further investment in new supplies Do you agree with our approach to continue using temporary water restrictions during droughts?*

Yes the Council absolutely agrees with the continued use of temporary restrictions. Customers must understand that water is a precious commodity and that non-essential use can waste millions of litres that could be better used for drinking, cooking and washing than keeping plants alive or a car cleaned. SW should encourage the use of water butts that can supply much of these non-essential uses. Incentivising and creating a new culture around water conservation is important as public memory is short and novel activities/events that bring change will need to be embedded. The Council is concerned that on Page 24 of the SW WRMP Summary document it is proposed that Temporary Use (hose pipe) Bans will be reduced from 1 in 5 years to 1 in 10 years from 2030. This sends out completely the wrong message to customers. We believe the existing levels of service should be maintained, not increased.

9. *A new strategic reservoir is an integral part of the regional best value plan for the South East. Do you have any comments on the size of the new reservoir? Does your position change if the size of that reservoir (which will supply the transfer into Hampshire) impacts on the size of water recycling plant needed at Havant Thicket? (See Sec 7 in tech doc for more info).*

Thames Water's new South East Strategic Reservoir (SESRO) is a key component of the South East Regional Plan. The reservoir should be of a size that means that effluent recycling is not needed so it should be larger than 100 Mm3 if necessary. The issue of how to store recycled water (if produced) must be considered separately. It is the Council's view that pumping recycled water into the HTR and then 40km to Otterbourne is not an appropriate solution. If recycled water

really has to be used by SW it should be piped directly from the recycling plant to a bespoke holding system (buffer lake) adjacent to where it is needed. This would reduce the length of pipes needed and hence the costs of operating such a system. The original selling point of the PW reservoir is that it freed up PW water sources to the west for SW to use and retained the high quality water for PW customers. To now dilute it with recycled water, which actually should be going directly to elsewhere in Hampshire where it is actually needed, just seems pointless. RCPC remains firmly of the view that developing water recycling plants should be a much lower priority than fixing leaks and developing further storage capacity using reservoirs and underground aquifers.

10. Do you support our strategy to develop new pipelines that will transfer water into our supply area that is made available through the development of new strategic water sources in other water companies' supply areas?

It makes sense to develop new pipelines to move water about over long distances if they will draw on sustainable large strategic water sources in adjacent areas. However, it must be ensured that there will be sufficient extra water in those areas to support such a transfer bearing in mind that droughts could spread over much of the south east and central part of England at one time. Pipelines and the subsequent pumping effort required do not come cheap so opportunities for more, smaller reservoirs/underground storage areas, both in the SW area and adjacent water companys' areas, should be considered and pushed forward.

11. Do you agree that water recycling has a role to play in securing water supplies for the future?

Water recycling may have some role in the future to play in securing water supplies but it comes at a very considerable long-term cost in not just building but operating the plant over the long term. It will require considerable energy every day and chemicals and other materials that need renewal. In the drive for zero-carbon and the general reduction in energy use the building of energy-hungry systems seems entirely counter-productive hence the earlier call for much more effort on leak reductions and consumer education to use less water. RCPC does not support the use of effluent recycling until all other options to retain and store surplus water and reduce leakage have been implemented. In particular the Council does not support transferring water recycled from effluent into HTR as a buffer lake, a separate environmental buffer lake should be developed in the area where the water is required.

- Recycled water will be detrimental to the chalk-water-filled reservoir and will reduce the environmental benefits promised the residents and customers by Portsmouth Water.
- There will be water quality risks, an increase in temperature, algal blooms and salt content pollution risk
- Loss of biodiversity benefits, reducing the net gain promised at the planning application.

12. Our plan has shown we could need a desalination plant in Sussex by 2030 and that more could be needed in the future if we experience high population growth and we need to reduce how much water we take from sensitive sources. Do you think we should use desalination to provide additional water supplies?

Desalination should only be considered in extremis when all other options have been considered and found unable to provide the solution. It is a very expensive, energy-intensive option and produces a highly saline waste output that will negatively impact the waters around the outflow in the adjacent estuary/coastal waters. This process is only used in countries where there is a sustained 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 can supply all our needs if the rainwater is captured effectively. SW's original proposal to have a desalination plant near Fawley was dropped because of the costs, the high adverse environmental impact and challenges that would result and Thames Water has previously indicated it wanted to stop operating its only desalination plant owing to the high

operational costs. Therefore RCPC does not support the use of desalination as a process for producing additional water supplies.

13. Our plan has identified the need for a new reservoir to store water in West Sussex. Do you think we should investigate this further to establish whether it could provide a new source for the area?

Emphatically yes; new reservoirs represent a very important means of holding water to meet demand at times of low/no rainfall. Once built they do not demand high energy usage/carbon output and can provide a useful improvement to the environment around them. More reservoirs need to be built of varying sizes to help hold water ready for dry conditions, taking advantage of the heavy winter rainfall we can expect in the UK due to the warming climate holding more moisture.

14. Do you think we should look at water recycling options where water is stored in reservoirs, lakes or other water bodies as well as those where it is released back into nearby rivers and abstracted again?

Emphatically no. If mixing recycled water really has to go ahead it is much better to put it in flowing rivers with stringent controls. This will result in quick mixing and will support a river flow as the drought progresses, which will help maintain biodiversity. There is a downside to putting recycled water into reservoirs or lakes where there is minimal flow. If recycled water has to be used in the long term to a large extent it must be stored in separate bespoke stand-alone holding buffer lakes but there must be a robust mixing system to reduce the risk of dead spots and algal blooms. However, that will mean an additional infrastructure and long-term energy costs that customers will have to pay for. The Budds Farm recycled effluent will suffer from saline intrusion because of the WWTW's location so the salty effluent will have to go into an Environmental Buffer Lake. This factor means that if recycled water really has to be used SW should choose the Peel Common or Woolston sewage treatment works as their source of water for recycling as neither of those sites suffer from salt intrusion.

15. Do you have any additional comments on any of the schemes we have proposed in our draft plan?

RCPC reiterates that it is better to expend funds to minimise loss of water that have already been treated at a cost than to invest unnecessarily in expensive infrastructure where high energy costs have to be borne by consumers for many decades and the carbon footprint is high over the long term.

SW has achieved a high degree of metering but with that should go a carefully considered education plan for your customers to help them reduce unnecessary usage. The introduction of variable tariffs for water supply should be considered for the future so that above a base level (to be determined) people have to pay more to use more water. This must be subject to social safeguards for some people who may require a higher usage but could help drive water usage down.

SW has rejected quite a few good schemes in its technical paper, all of which merit implementation as interim solutions (e.g. River Test aquifer storage) to bridge the gap before Thames Water gets permission for the Oxfordshire reservoir and for canal transfers to be delivered.

The Council believes that abstraction points from rivers should be moved closer to the tidal limits as a good way of leaving more water in the upper reaches of rivers to sustain biodiversity. Taking water from the upper reaches has a bad effect on the lower reaches but is also some distance from where the majority of customers live along the coast.

SW should work to improve borehole/treatment systems that are not working optimally and this should be done before developing other new sources.

The educational and behaviour changing aspect of strategic planning is very important and, considering the time scale of planning, it would be prudent to consider the future customer cohort. There is no mention of working with the young people today who will be your customers in the future.

16. Do you agree that we should develop our pipeline network so we can move more water between our supply areas and share supplies with our neighbouring water companies?

It makes sense to improve connectivity to aid water transfer within and between individual water company areas of responsibility. The need for any additional pipelines should be carefully assessed so that they are not unnecessarily long and that they can make a quantifiable difference in improving water availability. It cost energy and thus money to transfer water so the need to regularly move large amounts of water must be carefully considered. Again it is stressed that having a large number of storage systems within each water area would reduce the need to pump water long distances.

17. Do you support our ambition to proactively use catchment and nature-based solutions where we can to help improve the quality of the water sources we rely upon so we can abstract water sustainably and deliver wider environmental benefits?

Yes, catchments and nature-based solutions must form part of the overall package to deliver greater water availability. They will also contribute to improving the environment for wildlife. By using permeable, natural dams, such as those built by beavers, water may be held back in many places to sustain a river flow more evenly and this would aid abstraction downstream.

18. Do you think that others who benefit from a healthy water environment should contribute to the cost of delivering these solutions?

It is not clear as to what people or organisations SW is referring to but all of us benefit from having a healthy water environment so if there are non-water-consumers that might still benefit it would seem reasonable to ask them to make a contribution, provided it is clear what benefit would accrue to them and that they are not being charged merely to enhance water company profits.

19. Do you or your organisation have similar work planned in our catchments? Do you have any views on how best we can co-ordinate this work so we achieve the most benefits?

This is not applicable to RC Parish Council.

20. Our draft WRMP includes options that will reduce demand and a mix of different schemes to produce extra water supplies. Do you think our plan strikes the right balance between demand and supply solutions?

No, your plan falls a long way short of what you should be doing Whilst some of your proposed schemes have a place in the mix of solutions you must prioritise reducing the loss or unnecessary use of water because that is the best way of making the most of the water we have and on which you have expended energy and funds producing in the first place. A real drive on these 2 aspects, plus increasing storage capacity (reservoirs and confined aquifers) will reduce the need for the expensive and high-energy consuming solutions of water recycling and desalination.