

## Appendix 29: River Chess Association

1. River Chess Association		
1.1	Representation	<p>It is encouraging to see that the Affinity Water Resource Management Plan 2019 is adaptive and addressing these issues but is this plan achievable?</p> <p>We are concentrating our comments on their Central Region, which makes up most of its business.</p>
	<b>Our Response</b>	<b>We agree there are significant risks associated with water resources which is why we have constructed an adaptive approach which is designed to manage these risks.</b>
	Summary of any change to our final WRMP	N/A
1.2		
1.2	Representation	<p><b>Business Strategy</b></p> <p>We have a problem understanding the Affinity business case. Looking at it from a distance we see the following:</p> <ol style="list-style-type: none"> <li>1. Affinity are planning to reduce demand for their product, while keeping prices low, if this is successful this will have a negative impact on the affinity turnover.</li> <li>2. Affinity plan to move away from low cost water production from the aquifer that requires minimal treatment and is close to market attracting low transportation costs and replacing it with water production that will require more treatment and is far from market incurring high transportation costs. This will increase unit cost of production.</li> <li>3. Affinity also have a very ambitious investment plan, including direct involvement in the South East Strategic Reservoir with Thames Water.</li> </ol> <p>While we commend all three initiatives we do not see how this can be achieved in a commercially sustainable entity, revenue down, production costs up and investments costs up just does not add up. We ask Affinity to clarify how this can be achieved, we would welcome a conversation.</p>
	<b>Our Response</b>	<b>The revenue all Water Companies receive is fixed through the Ofwat Price Review process. The volume of water we sell does not affect the revenue we receive. We encourage a reduction in demand through our demand management strategy as outlined in section 6.2 of our fWRMP19 as this the sustainable approach. We welcome the opportunity to clarify this with you as part of our ongoing stakeholder liaison.</b>
	Summary of any change to our final WRMP	N/A
1.3		
1.3	Representation	<p><b>Reducing Demand</b></p> <p><i>“Per Capita Consumption (PCC) - Our plan sets a PCC target of 129 l/h/d by 2025 compared to our 2016/17 average consumption of 152 l/h/d, taking us towards industry leading levels. We then propose to continue to further reduce PCC through concerted action on water efficiency and smart metering. This ‘concerted action’ is aimed at developing wider collaboration. It includes aspirations to reduce this further (potentially as low as 110l/h/d), depending on industry wide and policy support for demand management.”</i></p> <p>Affinity have in their grasp the capability to achieve these targets, in their South East and East Regions they are already achieving levels close to the 129 l/h/d target. If demand management techniques used in these two regions are applied to the Central Region they should also see this target achieved.</p> <p>We also notice that 22% of demand is used for flushing toilets. We talk a great deal of changing building regulations for new housing to ensure they are more water efficient,</p>

1. River Chess Association		
		<p>although needed it only makes up a small element of total demand. If an initiative was focused on retrofitting existing houses to use greywater for flushing toilets we could see a significant demand reduction. It would also have the added bonus of reducing the volume of wastewater being processed through our sewage system. This is such a huge prize it is worth serious research.</p> <p>Affinity have assessed population growth in their areas of supply. They all reflect substantial growth for the short, medium and long term with the exception of Central Region Water Resource Zone 1, which sees a 2% decline in the long term. This seems so at odds with all the other Resource Zones that it might require further investigation.</p>
	<b>Our Response</b>	<p><b>Our fWRMP19 Section 6.2 describes our demand management strategy in detail, the main components of which are:</b></p> <ul style="list-style-type: none"> <li>• <b>reducing PCC of household customers</b></li> <li>• <b>reducing non-household demand</b></li> <li>• <b>reducing leakage</b></li> </ul> <p><b>We have recently launched our ‘manifesto’ of water efficiency and have already started public events (such as our #whynotwater campaign), which seeks to gain public and NGO support for initiatives such as Water Efficient Labelling Schemes (WELs) and hence influence local authorities and national bodies to support initiatives that will inherently improve the efficiency of water using devices to reduce demand.</b></p> <p><b>The long-term population decrease in WRZ1 is due to the method used to extend the forecast by applying a linear extrapolation. The methodology used is consistent with the that followed in all other zones and the decrease reflects consistent application of this methodology. Population estimates after 2045 contain significant uncertainties and we will monitor any new evidence as it becomes available.</b></p>
	Summary of any change to our final WRMP	An update regarding our demand management strategy is provided in Chapter 6 of the fWRMP19.
1.4	Representation	<p><b>Leakage</b></p> <p><i>“Leakage - Our plan provides for 18.5% leakage reduction within the 2020 to 2025 period through increasing intensity of leakage activities, innovation, efficiency and reducing customer side leakage. This represents an overall reduction of 30% leakage compared to our 2015 position. In the longer-term we will aim to achieve an overall level of 50% leakage reduction by 2045, through further innovation and efficiencies in distribution network leakage control and customer supply pipe leakage reduction.”</i></p> <p>This is a highly commendable statement, but we are concerned that this ambitious target will not be achieved. If this is the case the Affinity water supply deficit will be further stretched. This will need close monitoring and if it fails the adaptive plan will need to focus on alternative short-term supply sources.</p>
	<b>Our Response</b>	<p><b>We agree there are significant risks associated with water resources which is why we have constructed an adaptive approach which is designed to manage these risks.</b></p> <p><b>We fully support the ambitions to substantially reduce leakage by 2050. Our initial aim is to achieve a 50% reduction in leakage between 2015 to 2045. This 30-year programme to reduce leakage by 50% is planned to deliver five years earlier than most other water companies because we started the process in 2015, and will already have delivered a 14% reduction by 2020, followed by a further 18.5% reduction between 2020 and 2025. We will then aspire to achieve a higher level of reduction, to 57% from the 2015 position, which will allow us to reduce leakage by 50% from our 2020 position.</b></p> <p><b>Clarification of the 50% target and the ambition for 50% post AMP7 (i.e. 57% overall) is included in the fWRMP19 along with clarification of how we have</b></p>

1. River Chess Association		
		handled mains renewals for leakage and trunk mains schemes. Explanation of how we will achieve leakage efficiencies and details of our leakage reduction strategy are provided in Technical Report 4.8: Leakage Strategy Report and referenced in the fWRMP19.
	Summary of any change to our final WRMP	An update regarding leakage is provided in Chapter 6 and Technical Report 4.8: Leakage Strategy Report in the fWRMP19.
1.5	Representation	<p><b>Alternative Water Resources</b></p> <p><b>Central region</b></p> <p><i>“Smaller Resource Options: We have included Lower Greensand abstractions, which we are currently in the process of developing to a total of 5MI/d by 2022, and have included a potential 9MI/d of further development in the medium term (between 2025 and 2035). We have also identified that the existing Canal &amp; River Trust reservoir in Brent can be utilised to deliver up to 7.5MI/d into the west of the region.”</i></p> <p>This is still abstraction, it might not have an immediate impact on the environment, unlike chalk aquifer abstraction, which does have an immediate impact, there will be consequences. Let's hope we are not creating a new problem for future generations and the research is appropriate.</p>
	<b>Our Response</b>	<p><b>Please refer to section 4.7.7 in our fWRMP19. Our Water Framework Directive (WFD) assessment considered each of our feasible options. It identified potential issues with three groundwater options: Runley Wood and Kings Walden Lower Greensand boreholes and GSK Slough boreholes. These were identified as potentially posing a WFD compliance risk if abstractions start to affect the northwards flow of groundwater. It will only be possible to assess this through a pumping test and monitoring of the impact of pumping on groundwater flows. We would carry out these tests prior to implementation of any these options. We would only abstract a volume of water that was demonstrated not to risk deterioration of WFD status or achievement of good status.</b></p> <p><b>We would also implement these options incrementally. Runley Wood and Kings Walden are abstractions that are located in close proximity to each other. We can implement Runley Wood first and monitor impacts over a longer period of time to provide further confidence in our assessment before increasing our abstraction by implementing Kings Walden. GlaxoSmithKline (GSK) Slough comprises two sub-options that can be implemented on an incremental basis in the same way. In this way, we will ensure that we only abstract a volume of water that it is demonstrated does not cause a risk of deterioration or failure to achieve good status.</b></p> <p><b>Further information about our overall WFD assessment is provided in Section 6.8 below and Technical Report 4.13.</b></p>
	Summary of any change to our final WRMP	Please refer to Chapter 4 in our fWRMP19. Further information about our overall WFD assessment is provided in Section 6.8 below and Technical Report 4.13. Chapter 5 of our fWRMP19 explains the decision making process on strategic options.
1.6	Representation	<p><i>“Import from Anglian Water: Currently we are only able to make use of around 50MI/d of our shared resource with Anglian Water. We will install a conditioning plant and network storage to allow us to increase that to its full capacity of 91MI/d by 2025 (pre impact of climate change).”</i></p> <p>Optimising and enhancing existing infrastructure will add much needed additional capacity.</p>
	<b>Our Response</b>	<b>We welcome your positive representation.</b>

1. River Chess Association		
	Summary of any change to our final WRMP	N/A
1.7	Representation	<p><i>“Internal transfers – as well as facilitating the Anglian Water import, our Supply 2040 programme allows us to build better inter-connectivity throughout our Central region to remove constraints within our distribution network that will allow us to ‘unlock’ and transfer 17MI/d of existing capacity from the south west of our Central region by 2025.”</i></p> <p>Debottlenecking the supply network will assist with the often highly variable and localised rainfall we have seen in recent years. This will add to adaptable supply to meet local shortages.</p>
	<b>Our Response</b>	<b>We welcome your positive representation.</b>
	Summary of any change to our final WRMP	N/A
1.8	Representation	<p><i>“Strategic supply options – the nature and timing of strategic options is a key part of our adaptive planning process. Our main focus is on ensuring that we progress with investigations and investment in a timely manner. Our ‘best value plan’ includes joint development of the South East Strategic Reservoir option with Thames Water in 2038. We intend to utilise 100MI/d of the yield capacity of the reservoir, which we will abstract and treat for supply into the south and west of the region through staged network and treatment developments. “</i></p> <p>We see this as a key part of the Affinity WRMP19. With the uncertainty surrounding demand management and leakage reduction this major new water resource is essential. With this in mind we are pleased to see that Thames Water and Affinity Water are planning to work together on a new reservoir project near Oxford. It now features strongly in both the new Water Resource Management Plans and in the Thames Water’s revised business plan 2020-2025. The South East Region of the UK is the driest and most populated corner of the country with the highest demand for water. It has been in need of this new reservoir capacity for years and it cannot come too soon. This scheme will allow water to be taken from the River Thames at times of high flow and stored to be used when supply from other sources particularly the aquifer that supplies our struggling iconic chalk streams is short. Our area domestic supply comes from Affinity Water, of which over 60% is sourced from the aquifer. The aquifer also supplies the flow to our chalk streams such as the Rivers Misbourne, Chess, Ver, Gade and Wye, all of which have long dry sections and very low flows. In the Affinity Central region their current estimate of supply and demand reveals that we already have greater demand for water than supply. This is why a joint project between Thames Water and Affinity Water to build a new reservoir is so important to ensure water security for the future in terms of population growth and climate change, reduces our dependence on groundwater for domestic water supply, saving our chalk streams. This supports the stated aims of Thames Water and Affinity Water to protect these chalk streams.</p> <p>We are urging DEFRA, OFWAT and the Environment Agency to provide support for this project. There is a concerted message coming from the Angling Trust, Rivers Trust, Wild trout Trust, Salmon and Trout Conservation Trust and various local pressure groups all working together supporting this project.</p> <p>We could be heading for a crisis this year. Low winter rainfall has meant minimal recharge of the aquifer and our already struggling chalk streams will further dry up. Less than two years ago we were seeing pictures of a dried up River Colne and it is likely to happen again this year. In Chesham, the River Chess has been dry since September 2018; this is the 5<sup>th</sup> time the river has dried up since 2011. This is why the reservoir project is so important.</p> <p>We would encourage both Thames and Affinity Water to accelerate this project, if this reservoir had been in operation today there would have been two opportunities this winter when large volumes of water could have been harvested from the Thames and stored for use later this summer when we fear we will need it most. With this in mind please look at Water Resource Management Plan 2019 and see if there are ways of shortening the lead-time for this critical project. We have looked at other proposals for water transfer</p>

1. River Chess Association		
		from other areas and are concerned by the environmental risk they carry from invasive species and water quality.
	<b>Our Response</b>	<b>The timing of our first strategic option has been carefully considered and determined according to our decision-making methodology. The results of that modelling are provided in section 7.2.4 of the main SoR document.</b>
	Summary of any change to our final WRMP	Chapter 5 of our fWRMP19 explains the decision-making process on strategic options.