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Subject:	Response to consultation on Water Company Draft Water Resource Management Plans
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Summary: This paper provides an overview of the water industry planning process and the Draft Water Resource Management Plans of the five water companies that supply parts of Kent. It sets out, and seeks approval for, the key elements of the proposed KCC response to the consultation on these plans.

Introduction

1. During 2008 to 2009 all the water companies in England and Wales are required to produce Water Resource Management Plans (WRMPs) that set out how they propose to balance demand and supply for mains water into the future. These plans are produced every five years but cover a rolling period of 25 years. The first five years of each plan includes a programme of works that forms part of the company's business plan and this provides the basis on which the industry financial regulator OFWAT will determine the charges that each company is allowed to make to its customers. The remaining 20 year period provides a forward strategy and options analysis. It also provides the rationale for investigations and studies that will be included within the 5 year business plan.

2. This water industry process is generally referred to as the Periodic Review. The current Periodic Review 2009 (PR09) will cover the period 2010 to 2035.

3. In the past these plans have only been available to the Environment Agency (the environmental regulator for the water companies) and OFWAT. However the Water Act 2003 placed these plans on a statutory footing, which requires companies to publish and consult on their plans and submit them to the Secretary of State (Defra) Formal representations can be made to the Secretary of State by consultees.

4. There are five water companies that provide water supply services to Kent. South East Water (SEW), Folkestone & Dover Water Services (FDWS) and Southern Water Services (SWS) cover most of the county. Parts of the Dartford and Sevenoaks local authority areas fall within the supply zones of Thames Water and Sutton & East Surrey Water.

5. SEW, FDWS and SWS have agreements for bulk water transfers between companies and SWS and SEW also share some resources such as Bewl Water Reservoir. However each company is required to produce a separate plan, making it difficult for consultees to develop a strategic overview of the plans.

6. The water companies are involved in the Water Resources in the South East Group (WRSE), chaired by the Environment Agency (EA), which comprises representatives from the water companies, OFWAT, SEERA and Natural England. The group consider the shared strategic development of water resources in the South East. Modelling work has been undertaken for the group to inform possible future regional solutions for optimising the use of resources. This work also looked at a number of housing scenarios which informed discussions at the South East Plan Examination in Public.

7. For some time, water companies have had a commercial interest in acquiring new capital infrastructure assets as OFWAT allows interest charges on capital investments at a rate that is seen to be attractive to the financial institutions that own these companies. This has tended to incentivise highly engineered, capital-intensive water supply solutions at the expense of measures that would control water demand and hence decrease company revenues. Partly as a result of this, the energy demands of the water industry have increased greatly over the last 15 years.

8. OFWAT is now developing financial mechanisms to redress this imbalance and is also currently consulting on Water Efficiency Targets that would operate in a similar way to the existing Leakage Reduction Targets. The water companies' final WRMPs will need to accommodate these targets and this may result in significant adjustments to the plans.

Pressures on Kent Water Resources

9. Kent is already designated by the EA as an area of 'severe water stress'. This status requires water companies to consider the case for universal metering of households as part of their WRMPs. KCC supported this approach. In the future climate change is expected to further reduce the county's available water resources at the same time as increasing the demand for water. In addition to this, planned housing growth alongside continuing changes in household occupancy characteristics will add significantly to the pressure on these limited resources.

10. The implementation of the EU Water Framework Directive will require river water quality improvements on a number river reaches within Kent. Kent has a high dependency on groundwater sources for its water supply and in many cases these improvements are expected to require the reduction of groundwater abstractions by water companies in order to allow natural chalk springs to recover their flow rates and recharge the river systems

11. Water companies have been instructed by the EA not to consider these possible abstraction reductions within their PR09 planning. It is understood that the reason for this is that studies are still on-going so the nature and level of reductions is not yet known, and also because the timescales for implementation of the WFD are long and give time for alternative water supply options to be developed. However, SEW , for example, estimate that this process could result in decreases of up to 20 percent in their deployable output.

The Draft Water Resource Management Plans for Kent

12. The WRMP process is tightly prescribed and water companies are given detailed guidance on how to incorporate a number of factors into their plans. In PR09 this has included, for the first time, guidance on how to incorporate climate change impacts.

13. Each draft WRMP first establishes a baseline situation. This is based on:

a) the assumption of no additional supply infrastructure beyond that which is already funded.

b) a projection of future water demand based on predicted demographic and water use changes.

c) a continuation of current policies on, for example, water metering.

14. This baseline situation normally reveals a widening deficit between demand and supply.

15. The WRMP then includes a comprehensive analysis that gives consideration to a wide range of options that might contribute towards balancing supply and demand. These are screened and feasible options are prioritised according to their efficacy, cost and impact on carbon emissions. The options are then introduced incrementally into the plan until demand and supply are brought into balance throughout the plan period.

16. The draft WRMPs from the five water companies differ from each other considerably in the detailed schemes that are proposed. However they can be generally characterised as follows:

(a) During the period 2010 to 2015 the companies are focussing on managing water demand by introducing universal compulsory metering, promoting greater water efficiency and further reducing leakage levels. This is thought to be a sound and fair approach that will deliver value for money for water customers and will also give some reduction in energy consumption and carbon emissions.

(b) During the period 2015 to 2020 the companies are planning to improve water transfers and develop some new water supply measures such as schemes for recycling of wastewater effluent. Both FDWS and SWS are also expecting they will need to develop some desalination plants. For FDWS this threatens to quickly escalate their carbon emissions. By this time the financial cost of these carbon emissions is likely to be high and it can be expected that this may lead to significant increases in customers' water bills.

(c) Beyond about 2020 all the Kent water companies are expecting to have to fall back on more expensive and carbon-intensive solutions such as new reservoirs or desalination schemes. In the case of FDWS, the company anticipates a threefold increase in its carbon emissions by about 2030.

17. In their 2008 Strategic Direction Statements all the local water companies anticipate above-inflation increases in water bills over the long-term.

18. Regarding the later years of the WRMPs, the water companies stress that the schemes listed are merely indicative and subject to adjustment within two further planning cycles. However some proposals, such as the development of a major new reservoir and associated strategic pipelines, have particularly long lead times. Indeed feasibility studies for the proposed Broad Oak reservoir have already started during the 2005 to 2010 planning period. It may be very difficult to make significant changes later on to the approach taken within these current plans other than to adjust the timescales for some options.

19. For this reason it is of particular concern that there appears to have been inadequate attention given to the best use of water transfers around the county. SWS already transfer water from Bewl Water Reservoir via the Medway Scheme to their

'Kent Medway' supply zone and onwards via a strategic main pipeline to their 'Kent Thanet' supply zone. After 2025 SWS expects to be using the full capacity of this pipeline, moving approximately 20 Ml/day from west to east. At about this time SEW, on the other hand, expects to be moving a similar quantity of water from the new Broad Oak reservoir near Canterbury to its supply zones in the south-west of the county, having invested some £50m in the necessary pipelines. KCC is presented with five separate company plans and there is no overall rationale put forward for this pattern of investment and transfers. However, on the face of it, it would seem reasonable to expect that SEW should plan to make additional use of SWS's Bewl Water Reservoir to supply its zones in south west Kent and SWS should use water from SEW's Broad Oak Reservoir to supply Thanet.

20. There may be advantages of having a strategic ring main across the county but this case is not made. Instead the emphasis within SEW's draft plan, in particular, is on supplying its water supply zones from its own reservoirs and strategic pipelines.

21. Although there are some references in these documents to inter-company transfers they fail to present a coherent approach to this issue and there are major discrepancies in approach between the WRMPs. For example, SWS is a net exporter of water and assumes all existing agreements, due to expire as early as 2012, will be renewed. However FWDS have taken the approach that these will not be renewed and have considered a worst case scenario. This illustrates an urgent need for better inter-company co-operation to strategically plan for water supply across Kent and calls into question whether the commercial decisions of the individual water companies are leading towards the future best value for Kent's water customers.

22. This also brings into question the effectiveness of the WRSE group that should be facilitating integrated solutions across the whole of the South East.

23. On a more fundamental level, the water companies appear to have systematically over-estimated water demand by assuming high figures for population and per capita water consumption along with cautious estimates of the impact of demand management measures. On top of this they then adopt a very low risk level compared to the industry average and they do not follow the EA guidance on the calculation of headroom, both of which lead to further over-estimation of the need for additional supply infrastructure. FDWS has also departed from the EA guidance on climate change with the result that they estimate a 20% reduction in their deployable output (DO) over the planning period. This compares to a 1.5% reduction for SWS who have followed the guidance.

24. There are merits in adopting a cautious approach that would provide a high security of supply but this is adequately addressed within the established EA guidance. The systematic over-estimation of demand that is evident with these plans would result in significant unnecessary increases to household water bills.

25. In the case of SEW, similar weaknesses can be found in their analysis of non-household water demands and in the calculation of peak demand factors. Taken together, these discrepancies mean that the case for the company's preferred option of constructing Broad Oak reservoir is undermined and it would only be needed towards the end of this 25 year planning period at times of peak demands. These peaks could be accommodated by other solutions that would be much more cost-effective, such as effluent re-use schemes.

26. In their draft WRMP SWS propose a new effluent re-use scheme for the Medway. We understand that this would take effluent that is currently discharged into the Medway estuary and pump this back 5km upstream of the Springfield intake to

augment supplies to the Kent Medway zone. This highly cost-effective scheme would make available an additional 28Ml/d which, if shared with SEW, could meet the increased demands for both companies. Furthermore such effluent re-use schemes are highly resilient to the impacts of droughts and climate change because any additional demand leads directly to an increase in supply.

27. Similar effluent re-use schemes should be given greater attention elsewhere in the county too. During the preparation of the Ashford Integrated Water Strategy the consultants identified a feasible effluent re-use scheme for the River Stour that would return diluted effluent from the river at Wye into supply for Ashford. This scheme appears to have not even been considered by SEW.

KCC Policy and Action

28. In September 2005 the Strategic Planning Policy Overview Committee produced a select committee report on water and wastewater particularly in Ashford. This was undertaken as a result of concern raised at the high level of development planned for the area and the pressure that this would place on the regions natural water resources and its water and wastewater infrastructure and it aquatic environment. The report made 16 recommendations to address the issues. The report concluded that there was real concern over the lack of clarity regarding projections for population and demand and regarding regulatory requirements such as the Water Framework Directives and the impact that these could have on water resource planning, these concerns are still relevant today.

29. The committee also raised concern that the phasing and funding of water infrastructure development is not necessarily synchronised with or linked to the pace of growth in Ashford, but to water industry funding mechanisms. Again this still appears to be the case and timescales for key infrastructure appears to have changed as more reliance is put on compulsory metering. The committee identified the need for key stakeholders to work together and to ensure that potable water is used wisely. Concern was raised over the capacity of the environment to meet the needs of growth and development in a tight timescale. Again this is still applicable particularly with increased sustainable reductions being required in future and the predicted impact on the local environment from possible options like desalination and effluent reuse. The committee recognised that the concerns highlighted in the report could equally apply to other areas of the County.

30. In December 2006 KCC adopted a Water Policy reflecting widespread concern about the current and future water situation in Kent. It provides key principles for KCC to observe in all its decisions and to reflect them in the management of its own operations and estate. It recognises the threats arising from increased levels of consumption, climate change, and new development and demonstrates that we will need to adhere to a water policy hierarchy which seeks to reduce, reuse and recycle.

31. Through its policy, planning and procurement decisions KCC will seek to ensure an adequate supply of water in Kent to meet environmental, social and economic need, through the most sustainable means. Water efficiency will be promoted, through the planning system and the Kent Design Guide ensuring the highest possible levels of water efficiency measures are implemented in new and existing development.

32. In 2004 KCC set up the Kent Water Demand Management Group with Mid Kent Water (now part of South East Water), the EA and Ashford's Future to develop partnership activities to promote water efficiency. KCC chairs this group which has since expanded to include FDWS, the Consumer Council for Water and the Kent Thameside Delivery Partnership. The KWDMG has developed an award-winning

project in Ashford with a local housing developer and the group has itself won a nation commendation in the 2007 EA Water Efficiency Awards.

33. KCC is now also leading a KWDMG project called “Savings On Tap: Water Savings for Existing Homes” that is piloting the installation of well-proven, cost-effective water saving technologies into existing properties in a small neighbourhood of Ashford. The project aims to develop a mechanism by which funds from the Ashford Strategic Tariff can be invested in delivering water savings within the existing local housing stock. This would give housing developers the opportunity to offset the residual water demand of their new homes and thereby achieve “water neutral” development and it would also give existing residents the opportunity to save money on their water bills and to benefit from the housing growth agenda.

34. The KWDMG is looking to develop similar schemes aimed at the property refurbishment sector.

Kent Agreement

35. Through the work described above KCC has already positioned itself at the forefront of public sector approaches to water efficiency and is also making progress on decreasing its own water use. The best opportunity to build on this position now lies in better engagement and target setting with all the Kent local authorities. The Kent Agreement 2 provides the opportunity to develop voluntary local water demand management targets across the county. The water companies are crucial to this and they face strengthening pressure, and potential obligations to deliver on water efficiency. The KWDMG offers a good platform for the development of joint public – private sector targets and delivery projects. Efforts are underway to reinforce the structure and delivery capacity of this group.

36. The current consultation is an opportunity to present these intentions to DEFRA and the water companies.

Housing growth and water demand

37. Housing growth and household change across the county clearly adds to overall water demand and to the water supply infrastructure necessary to meet this demand. Some of this infrastructure is directly related to specific housing or commercial developments and can be funded through water company connection charges. But housing growth also contributes incrementally to the total water demand and can trigger the need for major new infrastructure developments such as strategic reservoirs. Such investment requirements are funded through the normal water industry mechanisms and are paid for by customers through their water bills. In this way, existing residents pay for some of the costs associated with new housing.

38. A tariff on new homes might be a fairer way of funding this but it would be difficult to distinguish between costs associated with the upgrading of infrastructure assets to improve the security of supply and those costs attributable to specific developments. There also appears to be little prospect of OFWAT supporting such a change to the water industry funding mechanisms.

39. An alternative solution might be to allocate part of a strategic tariff, such as that included in the Ashford LDF, to investments in improving water efficiency of the existing local housing stock. This would have the advantage of offering existing residents the chance to control their own water bills and it would be a more sustainable, low carbon route to balancing demand and supply of water.

The Big Water Debate

40. Some of these issues were debated with water companies, the Kent local authorities and the EA at "The Big Water Debate" on 27th June 2008. This event was jointly organised with KCC and the key outcomes were:

(a) Full support for the accelerated compulsory metering programmes proposed by the water companies with a request to South East Water to consider faster implementation of their metering programme within Kent. All local authorities were urged to support this strongly in their consultation responses to ensure that DEFRA accepts this element of the draft WRMPs.

(b) Climate change is predicted to gradually reduce the yield of boreholes and reservoirs into the future. In the long-term (post 2020) water companies are expecting to have to rely on new reservoir construction and desalination facilities to make good the deficit, but both of these options will result in increased CO2 emissions that will run directly counter to the thrust of climate change adaptation. It was agreed that this would be deeply undesirable and that the best option for avoiding this lies in a vigorous programme of water demand management supported by a strong public - private sector partnership and shared targets linked to KA2. Robust monitoring will also be needed in order to give water companies the confidence that demand really is being reduced and allow them to delay or shelve investments in further supply options.

(c) Assurance by the Environment Agency that mechanisms would be put in place to control the impacts of the potential new reservoir at Broad Oak on low flow levels in the River Stour.

Wastewater Issues

41. The current draft Water Resource Management Plans do not address wastewater issues as these are managed through a separate process that is primarily driven by river water quality objectives. The EA sets the effluent quality standards that they require of the wastewater companies (Kent is covered by Southern Water Services and Thames Water) and the investment requirements are appraised by the EA nationally.

42. There are wastewater issues within Kent but the general trend is towards tightening of discharge consents and improving wastewater treatment and river water quality. This will enhance the opportunities for effluent re-use schemes into the future.

43. KCC is the planning authority for wastewater issues and will undertake a thorough assessment of these within the coming Waste Development Framework.

The Way Forward

44. The County Council has also established itself in a position of some influence on the management of water demand but now needs to strengthen this through developing agreements and targets with both water companies and with local authorities.

45. But, on the issue of strategic water supply infrastructure, KCC's influence is limited. We are a statutory consultee on planning applications for specific water supply infrastructure but that role comes too late in the process to influence the overall strategy. The current process of developing WRMPs represents the only significant

opportunity within the next 5 years for KCC to influence the strategic direction on water supply and to deliver on our Towards 2010 Target 46.

46. We are now responding strongly to DEFRA on each of the draft WRMPs but, under Section 62 of the Water Act 2003 and Section 37 of the Water Industry Act, the Secretary of State has the power through to call a public inquiry to consider the impact of the WRMPs. KCC therefore also has the opportunity to lobby the Secretary of State for such a Public Inquiry. Ideally this would be a last resort if the water companies are not willing to integrate their plans and look at the issue strategically, however this course of action is only open to us over the coming few weeks.

47. Given the serious concerns raised during our assessment of the draft WRMPs it appears that KCC should lobby for a Public Inquiry into the plans of SEW, SWS and FDWS. As a first step KCC would require urgent legal advice into the implications and costs of this approach.

Recommendations

48. The following recommendations are made to Cabinet:

(a) The KCC responses to the WRMP consultations should include:

(i) Strong support for the emphasis on demand management and the implementation of universal compulsory metering providing that there are appropriate tariffs in place to ensure that vulnerable families in Kent are not subjected to higher bills.

(ii) Strong response to DEFRA that existing customers should not be made to pay higher water charges to pay for the water infrastructure needed to accommodate housing growth.

(iii) Detailed questioning of the basis for the water companies' proposals for balancing water demand.

(iv) Pointing out the unacceptable lack of strategic co-operation between companies regarding their medium and long-term infrastructure proposals and rejecting some of these proposals.

(b) KCC should seek legal advice with a view to requesting the Secretary of State to call a public inquiry into the Draft Water Resource Management Plans of South East Water, Southern Water Services and Folkestone & Dover Water Services.

(c) KCC should use our influence on Local Development Frameworks by:

(i) Demanding high standards of water efficiency in new homes.

(ii) Calling for a strategic tariff on new developments that would be partly used to off-set the residual water demands of new homes by investing in improvements to the water efficiency of the existing local housing stock.

(iii) Ensuring land is identified and safeguarded for future infrastructure that maybe required in the long term.

(d) KCC should continue to play a leadership role in promoting the sustainable management of water demand and should encourage local water demand targets within the District Chapters of the Kent Agreement 2.

Background documents

(a) KCC Water Policy (December 2006)

(b) Water and Wastewater, Particularly in Ashford Select Committee Report (September 2005)

(c) Draft Water Resource Management Plan (April 2008) Folkestone and Dover Water Services Ltd (Veolia Water)

(d) Water Resource Management Plan Main Report (April 2008) Southern Water

(e) Draft Water Resource Management Plan (May 2008) South East Water

(f) Draft Water Resource Management Plan Main Report (May 2008) Sutton and East Surrey Water PLC

(g) Water – Planning for the Future Draft Water Resource Management Plan (May 2008) Thames Water

(h) Ashford Integrated Water Strategy 2006 – 2031, July 2007. Ashford's Future.

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