

The following schedule summarises the representations received by Cambridge Water at the end of the consultation period on its draft Water Resources Management Plan. Also listed in the schedule are the actions the Company intends to take in its final plan, in response to those representations.

The following abbreviations are used throughout the schedule:

CW	- Cambridge Water
DWRMP dWRMP	- draft Water Resources Management Plan
UKWIR	- United Kingdom Water Industry Research

Reference	Comment	CW Response
Environment Agency		
EA.1	<p>Critical Period A critical period deficit has been identified in the draft plan although the company has chosen not to undertake a full critical period scenario analysis. We believe this may pose a slight risk to public water supplies towards the end of the planning period. We believe the demand forecasts could be hiding a dry year deficit towards the end of the planning period and therefore possibly an additional critical period deficit. We recommend that the company presents a full critical period analysis as set out in our guidelines for its final plan.</p>	<p>We have reviewed the methodology used to forecast Average Day Peak Week (ADPW) demand, and have fully explained our approach in our updated draft plan. No ADPW deficit has been predicted during the planning period: hence, no critical period analysis has been included.</p>
EA.2.1	<p>Water Supply We expect CW to justify why it has changed its deployable output since its 2004 plan. Any changes in deployable output can have a significant affect on a water company plan. These changes need to be clearly identified and supported in the final plan.</p>	<p>The reasons for the changes in deployable output since our 2004 Water Resources Plan have been explained more fully, and tabulated, in our updated draft plan.</p>
EA.2.2	<p>We believe CW should improve its outage levels and use UKWIR methodology <i>Outage allowances for water resources planning 1995</i> for assessing outage (as outlined in our water resources planning guideline). Currently the company plans for a level that is 11 per cent of deployable output and is too high when compared to an England and Wales average of 3.4 per cent. Outage reduction should be the company's first area of option appraisal to correct any supply demand balance deficit.</p>	<p>We feel strongly that an outage event at our largest sourceworks at a time of peak demand is a risk we are currently unable to mitigate: therefore, we have not revised our outage allowance in our updated draft plan. We have already stated that our first option will be to reduce outage in order to maintain our supply demand balance.</p>

EA.3.1	<p>Demand Management - Water Efficiency and Consumption</p> <p>CW's draft plan shows a decrease in average per capita consumption from 152 to 148 litres per person per day by 2035. We believe the company should set out a strategy to show how it will reduce per capita consumption towards the Government aim of 130 litres per person per day. If it cannot reach 130 litres per person per day, we would expect the company to fully explain the reasons why. We also expect the company to increase its programme of water efficiency with non-household users.</p>	<p>By including Ofwat's water efficiency targets (see response to EA3.3 below) average per capita consumption reduces to 137 litres/head/day.</p>
EA.3.2	<p>We recommend that the company clearly sets out what are the current water efficiency measures and those that are included as part of the final planning scenario. This should provide more detail on the proposed timing of measures and the predicted savings.</p>	<p>Our updated draft plan explains the activities we plan to undertake in order to meet the water efficiency targets set by Ofwat.</p>
EA.3.3	<p>For its final plan we expect the company to:</p> <ul style="list-style-type: none"> • assess the concept of water neutrality within the final water resource management plan. This assessment needs to draw upon the Thames Gateway Water Neutrality work³ and assess the transferability of the concept to areas subject to growth over the planning period. • explicitly build-in the water efficiency targets detailed in Ofwat's current consultation⁴. These reductions should be included within forecast per capita consumption values and the impact of base level water efficiency activity to be quantified within the plan <p>³ Environment Agency - <i>Towards water neutrality in the Thames Gateway, 2007</i> ⁴ Ofwat – <i>Future Water Efficiency Targets – a consultation, 2008</i></p>	<p>We have assessed the concept of water neutrality in our updated draft plan.</p> <p>The demand forecast contained in our updated draft plan includes Ofwat's water efficiency targets.</p>
EA.4	<p>Demand Management - Leakage</p> <p>We recommend that the company reappraise its leakage forecasts. We have noted that several similar sized water companies are reducing their leakage even further and we would expect CW to include a similar approach.</p>	<p>The leakage forecast contained within our updated draft plan is based on the conclusions of the latest Sustainable Economic Level of Leakage (SELL) study, completed in December 2008.</p>
EA.5	<p>Demand Management - Population and Properties</p> <p>We recommend that CW uses the latest forecast housing growth provided with Regional Spatial Strategy (RSS)14. The draft plan is based on a forecast growth of 2000 households which is significantly lower than our best estimate of 2,450 households per year. Over the planning period this could result in a total of over 11,000 more homes than are planned for.</p>	<p>We consider that, given the current state of the property market, the RSS14 housing numbers will not be achieved during the first 5 years of the planning period. This view is acknowledged by Ofwat, who, in a letter to the Minister in September 2008, stated, "...the water resource planning guideline requires companies to base their demand forecasts on official population and housing</p>

	<p>The Company should:</p> <ul style="list-style-type: none"> • revise its housing growth forecasts and use the figures from the RSS14 • revise its occupancy rate assumptions for new build properties and provide evidence of how it has been derived. Presently the company is assuming an occupancy rate of two persons for new builds • include an allowance for external consumption for new builds. The draft plan assumes new build properties after 2010/11 will meet the Code for Sustainable Homes level 3 water efficiency rating and have a per capita consumption of 105 litres/head/day. The Code for Sustainable Homes pcc figures do not include an allowance for external water use. 	<p>projections. We think that companies may need to revise their assumptions in their final water resource plans...for example to take account of the likely effects of the credit crunch on the property market over the next few years.”</p> <p>The forecast of new housing construction is constantly under review. In our updated draft plan, the shortfall below RSS14 predictions during the first 5 years has been distributed over the remaining 20 years of the plan. Thereby, the total number of new dwellings predicted by RSS14 has been accommodated during the full life of the plan.</p> <p>Our updated draft plan includes further justification of the occupancy rates we have assumed for new build properties.</p> <p>Within the demand forecast included in our updated draft plan, per capita consumption figures for new properties built to the Code for Sustainable Homes include an appropriate allowance for external consumption.</p>
EA.6.1	<p>Demand Management - Metering</p> <p>We expect CW to justify why it cannot achieve a 90% meter penetration by 2015 or by 2020 at the latest., especially as a number of similar water companies have demonstrated that this is achievable. We are especially concerned about this as the company is within a serious water stressed area.</p>	<p>We have reassessed the economic case for an enhanced metering programme, and have omitted all such proposals in our updated draft plan. This is supported by Ofwat, who have stated (see Of.1 below) that <i>“any enhanced metering programme, in addition to providing meters to optants or installing meters in new properties, is not justified as the company has no supply demand balance deficit over the planning period.”</i></p>
EA.6.2	<p>We expect the company to set out its metering strategy more clearly in the final plan. The draft plan does not set out how the change in domestic metering rates between the baseline and final planning scenarios will be achieved.</p>	
EA.6.3	<p>We believe metering is the fairest way to pay, provides a mechanism for reducing pcc and, with lower demand, will help reduce future greenhouse gas emissions by both company and the consumer.</p>	<p>We acknowledge the Agency's view on metering.</p>

EA.6.4	We would recommend that CW takes full advantage of its planned increase in household metering to assess the installation of smart meters, using new tariffs and reducing customer supply pipe losses.	We are currently carrying out smart meter trials, with a view to assessing their potential benefits.
EA.7.1	<p>Demand Management - Demand Forecasting Methods</p> <p>We recommend that the company improves its methods for forecasting demands, particularly those of its household customers. The present trend analysis methodology does not follow the recommended methods in our planning guidelines and is not sufficiently robust. We recommend that the company makes a commitment to develop a micro-component model and begins to collect data to populate the model in time for it to be used in the next review of its water resources management plan in five years. The company should also demonstrate how the draft plan's assumptions on grey water recycling and its effect on the supply demand balance compare to those presented in its Strategic Direction Statement.</p>	<p>We consider that, given the Company's current healthy supply demand balance, our demand forecasting methods are appropriate. Historically, actual demands have matched the values predicted by trend analysis. Our proposal to develop a microcomponent model was not funded by Ofwat at PR04, and there is no provision for one in our current draft business plan (DBP): nevertheless, we anticipate that our collaboration with a neighbouring water company (see below) will provide opportunities in this area.</p> <p>Our updated draft plan explains the apparent discrepancies with the supply-demand assumptions made in our Strategic Direction Statement.</p>
EA.7.2	We also recommend that the company develops a new domestic consumption monitor, either alone or jointly with neighbouring companies, to enable a better understanding of its unmeasured household customers' demands.	In our draft Business Plan we have stated our aim to work closely with a neighbouring company to develop a domestic consumption monitor. From this collaboration we expect to be able to eliminate some of the perceived uncertainties in our unmeasured demand forecast.
EA.8.1	<p>Options</p> <p>We expect the company to provide more detail on how the appraisal mechanism in section 2.8 was used to select and justify the options chosen to maintain the supply demand balance. We also expect the company to provide full details on proposed activities within its plan, to include timings, predicted savings and full details of costs, for example, the proposed metering strategy.</p>	We have covered all these areas in more detail in our updated draft plan. In particular we have explained the decision-making process that was used to evolve our metering, leakage and water efficiency strategies.
EA.8.2	As outlined in the water resources planning guideline, we expect the company to complete an additional table WRP6 for the final planning scenario. The final plan should also include an explanation on the derivation of the information in both the baseline and final planning versions of table WRP6.	Our updated draft plan no longer includes a final planning solution.

	<p><i>measures it intends to take or continue for the purpose set out in section 37A(2), and its reasons for choosing those measures;</i> and 2. In accordance with section 37A(3)(d), a water undertaker shall include in its water resources management plan a description of the following matters— <i>(c) its estimate of the increase in the number of domestic premises in its area (excluding any domestic premises which are included in the estimate referred to in sub-paragraph (b)), over the planning period, in respect of which section 144B(2) will not apply because the conditions referred to in section 144B(1)(c) are not satisfied and in respect of which it will fix charges by reference to volume of water supplied to those premises;</i> <i>(d) full details of the likely effect of what is forecasted pursuant to sub-paragraphs (a) to (c) on demand for water in its area;</i> <i>(e) the estimated cost to the water undertaker in relation to the installation and operation of water meters to meet what is forecasted pursuant to sub-paragraphs (a) to (c) and a comparison of that cost with the other measures which it might take to manage demand for water, or increase supplies of water, in its area to meet its obligations under Part III of the Water Industry Act 1991;</i></p>	
<p>EA.12</p>	<p>EA View of the Public Consultation The company has provided opportunity for people to comment on its draft plan. The company has published the draft plan and tables on its website. This is easily accessible from a link on its homepage.</p> <p>Copies of the draft plan have also been sent to statutory consultees and a number of national and local organisations. Customers have been informed of the plan’s publication through the company’s newsletter, which has been included with all water bills.</p>	<p>We are pleased that the Agency has recognised our efforts to publicise our draft plan.</p> <p>A Public Notice of the draft plan’s publication was also placed in the local press.</p> <p>We intend to use a similar approach to publicise our final plan.</p>
<p>Ofwat</p>		
<p>Of.1</p>	<p>Preliminary Views While CW does not have a supply demand deficit, it still needs to develop some elements of its plan. For example, the company provides little evidence to support its conclusion that climate change has little or no impact on the supply of and demand for water. We expect the company to provide more evidence to support its conclusions in its final plan. We welcome the fact that the company has indicated within its plan that it will undertake further studies.</p>	<p>See response to Of.4.1 below</p>

	<p>CW assumes full household metering by 2035 but does not explain how or why it will achieve this. The company does not clarify whether it will achieve this through optional metering, or whether it will use metering on change of ownership or compulsory metering. Any enhanced metering programme, in addition to providing meters to optants or installing meters in new properties, is not justified as the company has no supply demand balance deficit over the planning period. The company should explain in its final plan how universal metering by 2035 will be achieved.</p> <p>CW has not set out in its plan the basis of its assumed target level of service, in terms of restrictions on water use. We expect the company to explain, in its draft business plan and the final water resources management plan, how it has derived its level of service, as required by The Economics of Balancing Supply and Demand guideline. It should do this with reference to customers' willingness to pay or some other method to determine the economic level of service. We will use this to assess the company's proposed investment in the period 2010-15.</p>	<p>We have reassessed the economic case for an enhanced metering programme, and have omitted all such proposals from our updated draft plan.</p> <p>Our reference level of service was set exogenously in our 1994 Strategic Business Plan, and it remains appropriate, given the Company's healthy supply demand balance. Recent willingness to pay surveys indicated that security of supply was a high priority for customers. Further explanation will be included in our final plan.</p>
Of.2.1	<p>Supply CW has not determined its outage allowance in accordance with the 1995 UKWIR methodology, instead taking a pragmatic approach based on the loss of deployable output that would occur if their largest source were to be lost. This results in an assessment of outage that is 11% of the company's deployable output, which is very high when compared to levels adopted by other similar companies in the industry. We believe that the company should adopt a risk based methodology in line with the 1995 UKWIR guidance.</p>	<p>We do not propose to change our approach to outage (see response to EA.2.2 above).</p>
Of.3.1	<p>Demand The company's reporter notes that non-household population numbers were difficult to substantiate or justify and could not be considered robust. The company should investigate ways of reducing the uncertainty around non-household population for the final plan.</p>	<p>We acknowledge the challenge in substantiating non-household population numbers: however, in our demand model, population is not a driver of non-household demand.</p>
Of.3.2	<p>The water resources planning guideline requires the company to use property projections from the East of England Regional Assembly, but CW has used its own numbers. We recommend that it uses the forecast housing growth provided with Regional Spatial Strategy 14 for its final plan.</p>	<p>See response to EA.5 above.</p>
Of.3.3	<p>CW has not separated non-household demand into the main Standard Industrial Classification categories as required by the water resources planning guideline. It</p>	<p>Our billing system holds only limited information on Standard Industrial Classification categories, and so we are currently unable to provide this detail. We will look at ways of improving the situation in our</p>

Of.3.4	<p>should provide this detail in its final plan.</p> <p>We note that the company does not have a domestic consumption monitor and it is difficult to justify unmeasured per capita consumption. We would like the company to provide further evidence to support its estimate of unmeasured per capita consumption for its final plan.</p>	<p>final plan.</p> <p>In our draft Business Plan we have stated our aim to work closely with a neighbouring company to develop a domestic consumption monitor. From this collaboration we expect to be able to eliminate some of the perceived uncertainties in our unmeasured demand forecast.</p>
Of.3.5	<p>It is not clear what the baseline demand forecast of demand takes into account. It should only include the impact of meter optants and meters installed in new properties. Any enhanced metering programme beyond 2009-10 should be justified by an economic analysis of the costs and benefits of those programmes compared with the costs and benefits of other options to restore or maintain the supply demand balance. The company should clarify this in its final plan.</p>	<p>We have confirmed, in our updated draft plan, that our baseline forecast only includes the impact of meter optants and meters installed at new properties. Having reassessed the economic case for an enhanced metering programme, we have omitted all such proposals from our updated plan.</p>
Of.3.6	<p>It is also not clear whether CW has included the impact of ongoing water efficiency savings in its baseline demand forecast. The company should factor into its final plan the base service water efficiency targets, which we will set in the autumn of 2008.</p>	<p>Our updated draft plan has factored in the base service water efficiency targets set by Ofwat.</p>
Of.4.1	<p>Climate Change</p> <p>The DWRMP provides insufficient detail on CW's approach to climate change. We would like the company to explain in more detail the analysis that its consultants carried out on the impact of climate change on supply. This could be provided as an appendix for the final plan.</p>	<p>We have included our consultants' study on the effects of climate change on supply as an Appendix to our updated draft plan. Further studies will be undertaken when better information is available, as stated in 2.4.4 of our draft plan – 'Future Work'.</p>
Of.4.2	<p>We note that the company has used the 2003 regional figure reported in 'Climate Change and the Demand for Water' (DoE, 1996; Downing et al., 2003) to determine the impact of climate change on demand. But it is not clear what social and economic scenario the company has used and it should clarify this in its final plan.</p>	<p>Our updated draft plan clarifies which social and economic scenarios have been used.</p>
Of.4.3	<p>The company's reporter states that it has included an allowance for the impact of climate change on demand in both the target headroom assessment and the demand forecast. Target headroom should only include an allowance for the uncertainty of the impact of climate change on demand, and the company should correct this for its final plan.</p>	<p>We have followed the 1998 methodology for assessing target headroom, which includes an allowance only for the <i>uncertainty</i> of climate change on demand (and supply). An expanded text has been included in our updated draft plan in an attempt to dispel any ambiguities in this regard.</p>
Of.5.1	<p>Target Headroom</p> <p>The target headroom calculation incorrectly includes an allowance for three time limited abstraction licences at Brettenham, Euston and Fowlmere. This is contrary to</p>	<p>We have removed the allowance for our 3 time-limited licences from our target headroom</p>

Of.5.2	<p>guidance and CW should remove this allowance in its final plan.</p> <p>Target headroom also includes an allowance for the impact of climate change on demand. Target headroom should only include an allowance for the uncertainty of the impact of climate change on demand, and the company should correct this for its final plan.</p>	<p>calculation in our updated draft plan.</p> <p>See response to Of.4.3 above.</p>
Of.6.1	<p>Options Appraisal</p> <p>Despite the fact that the company does not expect to experience a supply demand deficit throughout the planning period, it proposes to meter all remaining unmeasured non-households by 2015. This action is not supported by the company's supply demand balance and the company should remove this proposal from its final plan.</p>	<p>We have reassessed the economic case for an enhanced metering programme, and have omitted all such proposals from our updated draft plan.</p>
Of.6.2	<p>CW expects that all of its customers will be 'paying for water in relation to the volume they use' by 2035. But it is not clear from the DWRMP how this will be achieved. It does not appear that this objective can be achieved by a continuation of the current rate of customers opting for a meter. Any enhanced metering programme, in addition to providing meters to optants or installing meters in new properties, is not justified by the company's supply demand balance. The company should explain in its final plan how universal metering by 2035 will be achieved.</p>	<p>See response to Of.6.1 above.</p>
Of.6.3	<p>The DWRMP contains some of the aspirations set out in CW's Strategic Direction Statement, such as metering all properties by 2035 and ensuring leakage does not exceed 14 MI/d. While it is for the company to determine its overall strategic direction, it must be able to demonstrate that it has adopted the most economic solution to balancing supply and demand, taking account of customers' preferences. The company must provide convincing evidence to support its proposed investment, such as robust survey evidence that its customers are willing to pay for it, and that its customers understand the permanent effect of their preferences on their bills.</p>	<p>We have omitted all enhanced metering proposals from our updated draft plan.</p> <p>The latest analysis (December 2008) confirms that our leakage target aligns with our Sustainable Economic Level of Leakage (SELL).</p>
Natural England		
NE.1	<p>General</p> <p>We welcome the long term forward look provided by the plan.</p> <p>We welcome the metering and consumption assumptions in the plan but encourage CW to be even more ambitious given the water stresses in the region and the impacts of climate change in the period.</p>	<p>Having reviewed the economic case for an enhanced metering programme, we have omitted all such proposals from our updated draft plan. Nevertheless, we expect to achieve a meter penetration of 88% by the end of the planning period, through meter options and the metering of new properties.</p>

<p>NE.2.1</p> <p>NE.2.2</p> <p>NE.2.3</p>	<p>Water Availability for the Natural Environment</p> <p>Unsustainable water abstraction is one of the main problems affecting the condition of the region's Sites of Special Scientific Interest (SSSIs). For example, over 4,000 ha of SSSIs in the East of England are in unfavourable condition due partly or wholly to abstraction pressures. Many of these pressures relate to water company abstractions. Environmental impacts of abstraction need to be an important consideration for CW, given that it operates in an area of severe water stress and relies greatly on groundwater sources.</p> <p>Defra has recently agreed new priorities for biodiversity in England, including defining all river habitats (as opposed to chalk rivers previously) as being in the priority category. Freshwater wetland habitats are especially important to this region's biodiversity. New regional biodiversity targets are currently being discussed.</p> <p>Natural England, together with the Environment Agency, RSPB, English Heritage and the Wildlife Trusts, launched our 50 year vision for wetlands in July 2008 (www.wetlandvision.org.uk). This vision records the significant loss of wetland habitats over the past few centuries, and sets targets for restoration over the next 50 years, including doubling of the number of ponds, and significant increases in reedbeds and grazing marsh. The area covered by CW has potential for wetland habitat restoration in pursuit of the Vision. We encourage CW to consider these longer term environmental needs in its final plan</p>	<p>The investigations we have undertaken as part of the National Environment Programme (NEP) have studied the impacts of abstraction at full licensed rates. We will continue to fulfil our obligations under the NEP, and to work with the Environment Agency and Natural England to mitigate the environmental impacts of our abstractions.</p> <p>No further comment.</p> <p>We support the broad aims of Wetland Vision Project and, through our relationship with partner organisations, we hope to play a full part in the long-term vision for wetlands within our area of supply.</p>
<p>NE.3.1</p> <p>NE.3.2</p>	<p>Sustainability Reductions</p> <p>Given that the WRMP is a statutory plan taking a long term view, Natural England would like to see all water companies' plans set out a clear strategy for reducing <u>overall</u> abstraction pressures on our wetland habitats, including:</p> <ul style="list-style-type: none"> • consideration of reduced abstraction amounts to take account of other SSSIs affected, to meet the company's duty under the Countryside and Rights of Way Act (2002); and • taking account of how abstraction reductions could help other sites, to demonstrate the company's commitment to its wider biodiversity responsibilities under the Natural Environment and Rural Communities Act (2006). These wider considerations were included in the Environment Agency's advice in July 2007. <p>We welcome the planned sustainability reduction in response to the Environment</p>	<p>We recognise our obligations under the Countryside and Rights of Way Act, and the Natural Environment and Rural Communities Act, and are happy to participate in further investigation works, under established procedures, where our abstractions are considered to have a deleterious effect on SSSIs.</p> <p>The latest Agency guidance states that only definite sustainability changes should be included in final</p>

NE.3.3	<p>Agency's advice i.e. in relation to River Granta impacts. We would welcome clarification about whether the Little Wilbraham River impacts are also covered by this proposal.</p> <p>We recommend that the final plan lists those sites identified by the Environment Agency for possible sustainability reductions in the future (i.e. those not identified with an indicative reduction of zero). We would encourage consideration, at least as a sensitivity analysis, of the possible environmental needs of these sites and a margin for longer term wetland habitat creation needs.</p>	<p>plans. As we have only been advised of indicative reductions at this stage, our updated draft plan takes no account of sustainability reductions. Little Wilbraham River has yet to be investigated, and no sustainability reduction has been indicated to date.</p> <p>Our updated draft plan takes into account the most recent advice on sustainability reductions, and includes a list of sites identified to us by the Agency, together with their indicative reductions (other than zero). We will continue to work closely with the Agency and Natural England to understand the environmental needs of the sites identified to us.</p>
NE.4.1 NE.4.2 NE.4.3 NE.4.4 NE.4.5	<p>Demand and Demand Management</p> <p>The Catchment Abstraction Management Strategies show much of the area as being already stressed in terms of actual abstraction during times of low flows.</p> <p>We welcome and support the proposals for 88% metering by the end of the planning period. Is it possible to be even more ambitious by the end of the plan period?</p> <p>We note the reference to development of grey water technology. This was one of the highlights of the Strategic Direction Statement and we would welcome more detail in this plan about how this initiative might be taken forward and the effect it might have on overall per capita consumption.</p> <p>We welcome the assumption that new homes will be built to the incoming standards i.e. 105 l/prop/day.</p> <p>We would welcome clarification about the overall assumptions about per capita consumption during the planning period. We encourage CW to work on the basis of at least achieving the benchmarks set out in Defra's recent Water Strategy i.e. 130 l/prop/d (average consumption), moving to 120 l/prop/d given reasonable implementation of appropriate technology in future years.</p>	<p>88% metering is forecast to be achieved by the take-up of meter options and metering of new properties: going beyond this involves an element of compulsion, and we consider that there is no justification for an enhanced metering programme, given the Company's healthy supply demand balance (see Of.1 above).</p> <p>The demand forecast included in our updated draft plan contains an allowance for new dwellings built to the Code for Sustainable Homes Level 6, which assumes an element of grey water technology.</p> <p>We have reassessed our assumptions for new homes' consumption, based on the latest information and guidance, and have used a figure of 125 litres/head/day (in accordance with the proposed revisions to the Building Regulations) in our updated draft plan.</p> <p>Table WRP1BL of our updated draft plan shows the progression of measured and unmeasured pcc over the planning period. By incorporating Ofwat's year on year water efficiency target of 1 litre per property per day into our demand forecast, average household pcc reduces to 137 l/h/d by 2035.</p>

NE.4.6	We note the assumptions about housing growth which seem reasonable. We recommend these are reviewed prior to finalising the plan, in the light of worsening conditions in the housing market, and EERA's recent statement on housing growth assumptions (see press release on their website).	See response to EA.5 above.
NE.5.1	Environmental Impacts We note there are no specific resource development proposals in the plan.	We will continue to work closely with Natural England to address any concerns regarding the effects of our abstractions on environmentally-sensitive sites. We have included a reference to this in our updated draft plan, at the end of Appendix 2.
NE.5.2	We welcome the content of the environmental report and its inclusion as part of the plan. We are grateful for the opportunity we have been given to comment on that draft report. We are happy that our final comments have been taken account of and that the report identifies the environmental concerns we are currently aware of. Given the sensitivity of our chalk-related sites to groundwater abstraction, we would like to keep closely involved in monitoring of impacts of current abstractions, as explained in this report, especially given the plan to make full use of currently licensed abstraction sources.	
NE.5.3	We request that a statement be made in the document that any future resource development proposals possibly affecting European sites will be subject to a more detailed Habitats Regulations Assessment (HRA) before implementation work begins, particularly since this WRMP has not been subject to a specific HRA or a full Strategic Environmental Assessment.	
NE.6	Presentation Other than some specific comments above requiring clarification, we found the plan generally easy to read and understand. We welcome the inclusion of the map showing important water dependent habitats in the area.	No further comment.
English Heritage		
EH.1	We recognise that no proposals for new resources are under consideration; however, we note that Natural England was consulted extensively (cf. Fig 3 & Appendix 2(i)) to provide statements on the potential environmental impact of abstraction on wetland sites, comprising both Sites of Special Scientific Interest (SSSIs) and Local Nature Reserves (LNRs). No comparable consideration and consultation was given to the historic environment aspect of wetland areas even though these may contain buried, waterlogged archaeological and palaeoenvironmental (relict wetland) remains of significant interest and fragility: such features may be recorded on the Local Authority Historic Environment Record (HER). Such sites may be even more vulnerable to new	Efforts were made to consult with English Heritage, as a statutory consultee, during the SEA screening process, but we acknowledge that the outcome was less than satisfactory. We are happy to work more closely with English Heritage in the future, to better understand their concerns.

	groundwater abstractions or increases on existing licenses than modern wetland habitats.	
EH.2	We recognise that the WRMP is a high level strategy document and that as such, HER data have not been considered at this stage. However, these data must be considered, and the views of the local authority archaeological officers sought where variations in abstraction licenses are proposed.	Our plan contains no proposals to vary current abstraction licences.
Consumer Council for Water Central & Eastern		
CCWE.1.1	<p>General</p> <p>We found the DWRMP useful and are supportive of the company's approach in acknowledging the uncertainties of climate change and housing growth. We welcome the company's commitment to an ongoing review of its assumptions, particularly in the above areas. We would want to see CW responding quickly and with flexibility if it emerges that climate change will have a more definite impact on water resource management and the environment than what is currently anticipated.</p>	Our updated draft plan takes full account of the latest available information and guidance on climate change and future housing growth, as will subsequent updates of the plan. We will take prompt action to modify our plan if our current assumptions appear to be ill-founded.
CCWE.1.2	Managing a finite resource such as water against these challenges will require the company to continue to minimise leakage as well as encouraging and facilitating greater water efficiency.	Our commitment to reducing leakage is evidenced by our investment in the Cambridge district metering project, and our intention to increase the annual rate of infrastructure renewals.
CCWE.1.3	Consumers place a safe, reliable supply of water as their top priority for the water industry, and from recent consumer research appear to support investment in resource development, leakage reduction and more water efficiency activities and education.	Our customer survey showed support for our leakage and water efficiency strategies, but highlighted concerns for meeting future demands. Our plan demonstrates that, from a water resources viewpoint, there are no issues in this area.
CCWE.2.1	<p>Resources</p> <p>We are pleased to note that despite population growth, CW has no plans for major investment in additional resources during the next 25 years due to the current healthy supply-demand balance.</p>	No further comment.
CCWE.2.2	In order to balance supply and demand, CW has adopted a strategy that seeks to implement a package of measures, an approach which we support. These measures include leakage control, continued domestic metering, improving connectivity and increasing water efficiency. We would be interested to know whether linking resources across the area served by the company will also improve the overall resilience of the network.	Our network already has a high degree of resilience and, where practicable, resources have been interlinked. Schemes to improve resilience are highlighted through routine modelling work, and incorporated into the business planning process.

CCWE.2.3	<p>CW has stated that it expects a number of sources to be subject to abstraction reduction by the Environment Agency's (EA) Restoring Sustainable Abstraction (RSA) programme. We note that this will be balanced by the planned refurbishment of one of the Company's resources to allow its full licensed quantity to be abstracted. We expect water companies to be integrally involved in the RSA programme and that as a result, any reductions in companies' abstractions have been taken into account in their WRMPs.</p>	<p>We continue to follow the latest planning guidance to take account of all confirmed and likely reductions in our abstractions.</p>
CCWE.2.4	<p>CW has taken into account the EA's guidance on planning and future population growth when considering likely demand levels, although it would appear the Company does not expect the same level of new connections to take place. The company has also sought to ensure that its DWRMP is aligned with its Strategic Direction Statement (SDS).</p>	<p>See response to EA.5 above.</p>
CCWE.3.1	<p>Metering We note that CW intends to reach 88% of meter penetration by 2035. Given the high rate of domestic metering and that there is no immediate threat to water resources in the area, we support the Company's proposals not to undertake an accelerated household metering programme during the first five years of its WRMP.</p>	<p>All proposals for enhanced metering have been removed from our updated draft plan.</p>
CCWE.3.2	<p>CCWater remains concerned about the incidence effects and distributional impacts of metering, particularly when a company already has such a high level of metered domestic properties. We believe there should be mechanisms in place to protect those customers who will face difficulties when switching to a meter, for example large families and those on low income.</p>	<p>The Company's Water-Care scheme provides assistance for metered customers who are suffering financial hardship. Our updated draft plan contains a link to where further information on this scheme may be found.</p>
CCWE.4.1	<p>Leakage Control and Water Efficiency The company plans to maintain leakage at the current level despite the anticipated increase in the number of properties supplied and the increase in length of the water mains network. We note that the company's leakage targets may change for the final WRMP after Ofwat issue a new methodology.</p>	<p>See response to EA.4 above.</p>
CCWE.4.2	<p>We note that a substantial investment is proposed to install district meters in and around Cambridge City. We look forward to receiving further information from the company regarding this project and the benefits it will have in terms of leakage control.</p>	<p>Our updated draft plan expands on the benefits of district metering.</p>
CCWE.4.3	<p>While we note that the company sees no significant savings arising from the retro-</p>	<p>No further comment.</p>

CCWE.4.4	<p>fitting of water efficient devices on a large scale, we welcome the company's commitment to work with commercial and domestic customers to promote water efficient behaviour.</p> <p>We note that the company believes that the amount of water consumed by new properties will be reduced. However, one of the expected measures is the incorporation of grey water recycling at a percentage of new builds, creating a big source of uncertainty. In addition, the company are reliant upon Government to introduce regulations for higher standards of water efficiency in new homes and to improve existing housing stock. We would be interested to learn if CW would support a call for companies to become statutory consultees in the planning process.</p>	<p>We acknowledge the uncertainty that surrounds grey water recycling, which is why we have not included any resultant savings in our plan.</p> <p>The Company would strongly support a call for water companies to become statutory consultees in the planning process.</p>
	<p>Conclusion In general we support CW's approach to the development of its DWRMP and its alignment with the company's SDS.</p>	
Waterwise		
Ww.0	<p><i>In addition to the representations it made to individual companies, Waterwise also submitted a separate representation to Defra, dealing with the planning process and companies' submissions in general. In view of the length of that document, it is not reproduced here: nevertheless, the Company has considered the points made therein, and is satisfied they have been addressed in the responses given to other representations in this schedule.</i></p>	
Ww.1	<p>General We strongly feel that standards and a consistent methodology should be set for and across the water industry. It is often difficult to make comparisons between companies because their methodologies vary and/or their plans are presented differently. This makes it especially hard, for example, to understand why PCC varies so much now and in projections for similar companies, such as between Cambridge Water, Thames Water and South West Water.</p>	<p>No further comment.</p>
Ww.2	<p>CW already has low leakage levels: it is good that they want to maintain this situation and to reduce customers' pipe leaks.</p>	<p>No further comment.</p>
Ww.3	<p>CW already has a relatively high level of metering and it is encouraging that they intend to increase this. We support their aspiration of full metering and we would like to see them move more quickly towards full metering than is proposed in the plan: however, without clear guidance at a national level, it is currently difficult for them to justify accelerating their metering programme any further.</p>	<p>No further comment.</p>

Ww.4	It is possible that CW could use Waterwise's Evidence Base to assess the cost benefit analysis of toilet retrofits, rather than carrying out their own cost/benefit trial.	We will consider the merits of this suggestion as part of our pre-trial feasibility studies.
Ww.5	With regard to water efficiency we would like to have seen more information on costing and yields for the various options. It is good that CW is proposing a range of water efficiency measures, but we would like to see them carried out at a larger scale. It is good to see that CW will be undertaking a toilet retrofit trial to assess costs and benefits, but this should be designed to complement and draw upon the work of other water companies as summarised and analysed in Waterwise's evidence base report.	Our updated draft plan includes full details of our current and proposed water efficiency measures.
Ww.6	We particularly welcome CW's proposals for trials of large-scale grey water systems. They are one of the leading companies in this area and their innovation should be encouraged.	We are grateful for the support of Waterwise for our efforts in this area.
Local Councils (South Cambridgeshire District, Cambridge City, Cambridgeshire County and Huntingdonshire District)		
LC.1	The assumptions on housing growth appear too low, and do not fit in with current RSS targets. However, following discussions with the County Council and the relevant District authorities, CW developed a revised model which was considered more realistic and should form part of the risk assessment.	See response to EA.5 above.
LC.2	The assumptions do not take into account any development other than housing, and should include demand from employment, the construction sector, and increasing student population in Cambridge.	The company's demand forecast includes for 100 new non-household connections per year for the duration of the plan. Underlying non-household growth is forecast to be zero, as increased water efficiency measures continue to be implemented.
LC.3	The issues around the potential risks to important ecological habitats situated near the Thetford boreholes in Norfolk should be looked at in greater detail, given that the aquifer under the Breckland SPA/SAC also supplies the growth point at Thetford, the growth area around Bury St Edmunds and the Norwich area.	The Thetford sources account for around 17% of the Company's deployable output. A proportion of the Thetford abstraction licences are time-limited. As a condition of future applications to renew the time-limited elements we will have to continue to demonstrate environmental sustainability (see below).
LC.4	The risk to elements of supply, particularly from loss of time limited abstraction licences, should be appropriately documented.	The water resources planning guideline states that the target headroom calculation should exclude any allowance for the non-renewal of time-limited licences. Our updated draft plan expands on the

		<p>process and criteria for renewing such licences, which were clarified by the Environment Agency in its document <i>Managing Water Abstraction: Interim Update – June 2008</i>.</p>																																																																		
<p>South Cambridgeshire District Council</p>																																																																				
<p>SCDC.1</p>	<p>The Draft Water Resources Plan includes an annual build rate assumption of 2000 dwellings per year throughout the planning period. The plan details that it is based on Cambridgeshire Horizons published housing trajectories, which anticipated an average of 2400 to 2600 per annum, but with a reduction based on the rates that have actually been achieved in the past, the competition for technical skills from other sectors of the construction industry, and the current uncertainty in the housing market. It is noted that the plan includes sensitivity analysis to consider the impact of +/- 20% development, but the highest development rate tested is 2400 per annum.</p> <p>Evidence from housing trajectories produced by the District Councils, and the requirements of the East of England Plan indicate that the rates tested are not sufficiently high, and the water company should be planning for a higher level of housing development.</p> <p><u>Local Planning Authority Annual Monitoring Report Housing Trajectories</u></p> <p>District Councils are required to produce housing trajectories as part of Local Development Framework Annual Monitoring Reports (AMR). Current AMRs trajectories cover the period up to 2016. The table below shows the combined trajectories for the Cambridge Water company supply area.</p> <p>Housing Trajectory for Cambridge Water Area</p> <table border="1" data-bbox="392 1117 1400 1337"> <thead> <tr> <th></th> <th>2007/8</th> <th>2008/9</th> <th>2009/10</th> <th>2010/11</th> <th>2011/12</th> <th>2012/13</th> <th>2013/14</th> <th>2014/15</th> <th>2015/16</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Cambridge City</td> <td>507</td> <td>799</td> <td>1844</td> <td>2288</td> <td>1975</td> <td>1878</td> <td>1914</td> <td>1050</td> <td>1200</td> <td>13455</td> </tr> <tr> <td>South Cambs</td> <td>1528</td> <td>1420</td> <td>1483</td> <td>1346</td> <td>1708</td> <td>1788</td> <td>1478</td> <td>1532</td> <td>1572</td> <td>13855</td> </tr> <tr> <td>Huntingdonshire (Part)</td> <td>143</td> <td>113</td> <td>111</td> <td>165</td> <td>168</td> <td>220</td> <td>196</td> <td>178</td> <td>135</td> <td>1429</td> </tr> <tr> <td>Annual</td> <td>2178</td> <td>2332</td> <td>3438</td> <td>3799</td> <td>3851</td> <td>3886</td> <td>3588</td> <td>2760</td> <td>2907</td> <td>28739</td> </tr> <tr> <td>Annual Average</td> <td colspan="9"></td> <td>3193</td> </tr> </tbody> </table> <p>Note: Based on Cambridge City AMR 2007, South Cambs AMR 2007 Huntingdonshire AMR Trajectory (for area within CWC area)</p>		2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	TOTAL	Cambridge City	507	799	1844	2288	1975	1878	1914	1050	1200	13455	South Cambs	1528	1420	1483	1346	1708	1788	1478	1532	1572	13855	Huntingdonshire (Part)	143	113	111	165	168	220	196	178	135	1429	Annual	2178	2332	3438	3799	3851	3886	3588	2760	2907	28739	Annual Average										3193	<p>We are mindful of local councils' concerns over our interpretation of new housing numbers. Our response to EA.5 above explains the approach we have adopted in our updated draft plan, and is reproduced below:</p> <p>We consider that, given the current state of the property market, the RSS14 housing numbers will not be achieved during the first 5 years of the planning period. This view is acknowledged by Ofwat, who, in a letter to the Minister in September 2008, stated, "...the water resource planning guideline requires companies to base their demand forecasts on official population and housing projections. We think that companies may need to revise their assumptions in their final water resource plans...for example to take account of the likely effects of the credit crunch on the property market over the next few years."</p> <p>The forecast of new housing construction is constantly under review. In our updated draft plan, the shortfall below RSS14 predictions during the first 5 years has been distributed over the remaining 20 years of the plan. Thereby, the total number of new dwellings predicted by RSS14 has been accommodated during the full life of the plan.</p>
	2007/8	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	TOTAL																																																										
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The combined trajectories indicate a rate of construction as high as 3800 dwellings in a single year, averaging at 3193 dwellings per year up to 2016, as the major development around the edge of Cambridge, and Northstowe, begin to deliver.

Cambridge City Council and South Cambridgeshire District Council have yet to publish a trajectory for 2016 to 2021. High development rates are likely to continue as the major developments continue to deliver. Cambridge East and Northstowe will be reaching their peak delivery rates during this period.

East of England Plan

The East of England Plan policy H1 requires local authorities to facilitate the delivery of at least the following between 2006 and 2021:

	Total 2006 - 2021	Average Annual Rate
South Cambridgeshire	19,980	1,330
Cambridge City	16,700	1,110
Huntingdonshire (part)	1,851	123
TOTAL	38,531	2,568

Only a proportion of the requirement in Huntingdonshire will be provided in the Cambridge Water Supply area, and an estimate has been used in the table above based on HDC housing trajectories.

The East of England Plan requires in excess of 2500 per annum in order to achieve dwelling targets. It must also be noted that the East of England Plan housing figures represent minimum targets to be achieved, rather than ceilings that must not be exceeded.

Development Rates Beyond 2021

There is no indication thus far that future development rates, determined by the review of the East of England Plan will be any lower. The opposite is actually the case, as the current East of England Plan indicates that the proposed review will bring forward proposals for higher growth in the period 2011 to 2021 (paragraph 5.5). There may also be an increase in future development rates.

When planning for the years beyond 2021, until the review of the East of England

	<p>Plan is completed, paragraph 5.6 requires the assumption to be the continuation of planned annual rates 2001 to 2021, or 2006 to 2021, whichever is higher. In the case of this area, the 2006 to 2021 rates are higher, therefore the assumption must be 2500 new dwellings per annum during the remaining period of the Cambridge Water Company draft Water Resources Supply plan.</p> <p><u>Implications of Cambridge Water Company Development Assumptions</u></p> <p>Cambridge Water's assessment of future development based on past rates is fundamentally flawed. A step change in the rate of development in the Cambridge area, as a result of major urban extensions and Northstowe, is about to begin. PPS3 'Housing' places a duty on Local Planning Authorities to ensure that housing trajectories in their DPDs are delivered. This includes unblocking obstacles to development.</p> <p>It is only by allowing for only 2000 new connections per year, the draft Water Resources Management Plan indicates sufficient supply will be maintained up to 2034/5 without utilising water in the target headroom range. Figure 6 of the draft Water Resources Management Plan provides sensitivity analysis, allowing for 20% additional growth. However, even the 20% sensitivity analysis equates to only to 2400 dwellings per year. In this scenario in a dry year forecast, 2031/32 would see demand enter the target headroom.</p> <p>The evidence above suggests that 2500 dwellings per annum is a more appropriate normal growth assumption. Sensitivity testing should be carried out for a range of higher and lower development rates from this point.</p> <p>If a rate of 3000 dwellings per year (20% above 2500) is applied to the entire Water Resources Management Plan period, the demand would exceed the target headroom by the year 2027, and enter the outages allowance by 2033, in a dry year allowing for the impacts of climate change. The risks of such an approach and the measures that would be required to accommodate it need to be appropriately tested and documented. This will provide important information when considering potential future development scenarios.</p> <p>After discussions with officers from various Local Authorities, Cambridge Water Company did provide a graph illustrating the impact of a 3000 dwelling per annum growth rate. This is helpful, and this modelling should form part of the risk assessment in the Water Resources Plan.</p>	<p>Our updated draft plan accommodates a total of 62,500 new dwellings (i.e. an average of 2,500 per year) over the planning period, whilst still maintaining a positive supply demand balance.</p> <p>In our updated draft plan we have updated our sensitivity analyses to take account of our latest housing forecast, and have commented on the implications for the supply demand balance.</p>
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	<p>It is also noted that the sensitivity testing scenarios included in figure 6 of the draft Water Resources Plan, and the additional graph supplied, only diverge at 2010, i.e. all scenarios assume only 2000 dwellings per annum in the period 2006 to 2010. The district’s Annual Monitoring Report on housing trajectories predicts potentially higher levels of development in this period, and such a scenario should be modelled.</p> <p>Water Resources Planning Guidance April 2007, produced by the Environment Agency, states that, ‘A company’s final property and population projections should be policy-based. The policy based approach will enable the water resource plans to be as consistent as possible with the regional spatial strategies.’ This guidance is not reflected by the draft Water Resources Management Plan. The guidance goes on to state that, ‘If the new house completion rates assumed in the policy-based projections have not been realised in the base year then, in the absence of other information, companies should assume that the planned total number of households is still correct.’ By making an assumption based on past growth rates, the plan ignores this guidance.</p> <p>The draft Water Resources Plan states that Cambridge Water Company considers that the trend towards higher housing numbers would be detected early, and there would be time to take action before the situation became critical. This would be likely be through future reviews of this plan. However, it is unsound to base the plan on flawed assumptions. Without sufficient testing of higher growth rates, the draft Water Resources Plan does not appropriately reflect development that is likely to happen, or the potential risks associated with additional development levels. This could hinder resource planning for current development, and consideration of the implications of future development rates. This is a crucial issue in this area, which has been defined as an area of serious water stress by the Environment Agency.</p>	<p>This point is covered in our responses above.</p> <p>This point is covered in our responses above.</p> <p>This point is covered in our response regarding sensitivity testing, above.</p>
<p>SCDC.2.1</p>	<p>Demand from Other Development</p> <p>It is noted that demand forecasting in the draft WRMP does not take account of any form of development other than dwellings. It does not include any assessment of the water demands of the construction industry, particularly important in this growth area. A significant amount of employment development is planned in the Cambridge area. Developments include the Cambridge Biomedical Campus, which will almost double the size of the existing Addenbrooke’s hospital site. The Addenbrooke’s Biomedical Campus will require the delivery of 250 litres of water per second. The student population of Cambridge is also expected to substantially increase as a result of</p>	<p>The company’s demand forecast includes for 100 new non-household connections per year for the duration of the plan. Underlying non-household growth is forecast to be zero, as increased water efficiency measures continue to be implemented.</p> <p>The volumes of water used in construction are small and temporary, and do not have a significant impact on our long-term water resource situation.</p>

	planned growth at Cambridge's two Universities. The impact of other forms of infrastructure projects and development should be considered and documented.	The estimated water requirement for Addenbrooke's Biomedical Centre is the developer's assessment of the cumulative instantaneous flows, and is unrealistically high.
SCDC.3.1	<p>Water Resources Assumptions</p> <p>In order to meet future demand, CW plans to fully utilise existing licensing agreements at its two Thetford boreholes. These licences were agreed on the basis of a constant base allowance, and time limited upward variations. These upward variations have been approved by the Environment Agency until 2015. At that point they will be reviewed, and the EA could require the level of abstraction to be reduced.</p> <p>The Thetford Boreholes are near a number of SSSIs, many of which are water dependent. The Breckland Aquifer is also used by Anglian Water (AW) to supply other growth areas, some of which are also growth areas/points.</p> <p>The draft WRMP makes the assumption that the licences for abstraction at Thetford will be renewed in 2015 when they are reviewed. CW, in consultation with the EA, agrees a programme of investigations every 5 years under the National Environment Programme covered by the Habitats Directive. The Company has indicated that it considers there is no evidence to suggest that impact on the environment would be a factor considered by the EA when the Brettenham and Euston licences are due for renewal in 2015.</p> <p>The total resources available are illustrated by the 'deployable output' in the water resources management plan. The impact of the loss of the temporary licences would be around 10% of the available supply.</p> <p>Although CW considers that its assumption are justified, and there is available balance between supply and demand to accommodate potential reductions (the 'outages' and 'headroom' allowances), the risk of the loss of this element of supply should be considered and documented in the WRMP.</p>	<p>The EA is also obliged to have particular regard to the duties imposed on any water undertaker.</p> <p>In its latest guidance <i>Managing Water Abstraction: Interim Update - June 2008</i> the Agency confirms that it applies a 'presumption of renewal' when licences reach the end of their time limit, provided the three tests of environmental sustainability, continued justification of need, and efficient use of water, can be met. We have already undertaken a considerable amount of work to demonstrate that our Thetford abstractions have no significant effect on nearby environmental sites, and this was accepted by the Agency when agreeing the current licence extension. There is no reason to think that the outcome will be different when the licences are next considered for renewal, in 2015.</p>
SCDC.4.1	<p>Leakages</p> <p>The Council would stress the importance of addressing supply leakages. In this area of serious water stress it is crucial that resources are not wasted. It is noted that in the base year leakages accounts for over 10% of the water available for use. This is a situation that must be improved.</p>	Recent analysis has confirmed that CW's current leakage is at its economic level. The company is committed to reducing leakage still further, and has made significant investment to monitor the performance of its network, through increased district meter coverage. Further investment is

		planned, to upgrade the network through increased mains renewal activity. Per property leakage is forecast to reduce by 30% over the planning period.
East of England Regional Assembly (EERA)		
EERA.1.1	<p>General Preparing a response to these draft WRMPs has presented a number of challenges, not least because the water companies use different geographical boundaries to the RSS, their planning timescales are not aligned with those of the RSS and, by their very nature, much of the information presented is both technically detailed and based on any number of given assumptions.</p> <p>In view of the above, it is intended only to draw attention to those matters perceived to be of most relevance to the growth levels set out in the adopted RSS. They are:</p> <ul style="list-style-type: none"> • Water Company growth projections v RSS growth forecasts (Policy H1 & WAT2) • Metering targets, water usage and water saving (Policy WAT1) • Supply infrastructure & resource development (Policies WAT2 & WAT3) 	
EERA.1.2	Policy WAT2 requires the water companies, among others, to ensure the timely provision of water supply infrastructure to cater for levels of development provided through the Plan. Policy H1 sets out the levels of development on a district basis. All the water companies indicate that they have taken account of the targets in the Plan in developing their demand scenarios and plans and, in most cases, these assessments appear to be in line with the RSS.	No further comment.
EERA.1.3	It is important that, in preparing their final WRMPs, the water companies take account of policy H1 in the published RSS (May 2008) rather than the draft Plan (2004); and that they should take account of the 'minimum still to build' targets for the period 2006/21 onwards rather than the 2001/21 targets (i.e. reflecting the completions 2001-06 which in many cases have been below target). A number of water companies indicate that they will be preparing further forecasts to take account of the 2006-based household projections published in June. It is assumed that all will do this and take the opportunity to take account of the published Plan targets.	We have addressed this point at length in our response to EA.5 above.
EERA.1.4	In the interests of good practice and transparency, the final WRMPs should make clear how their assessments of future development have been arrived at and the sources they have used (with the sources clearly and fully referenced with web-links).	Our updated draft plan includes references to, and extracts from, the RSS14 plan, and shows how our new housing forecast has been derived.
EERA.1.5	The Assembly is concerned about predicted levels of per capita consumption (pcc),	We have covered this in our response to EA.3.1

	<p>where identified, as these are invariably at odds with advice received during preparation of the RSS (see para 3.3 above) and, in many cases, are also higher than those set out in "Future Water: The Government's water strategy for England" (Defra, February 2008)¹. The latter seeks to reduce per capita consumption of water through cost effective measures to an average of 130 l/h/d by 2030, or possibly even 120 l/h/d depending on new technology developments and innovations. For transparency, and for external monitoring purposes, it would be helpful if both measured and unmeasured pcc rates were more clearly identified.</p> <p>¹ Future Water: http://www.defra.gov.uk/Environment/water/strategy/index.htm</p>	<p>above.</p> <p>The progression of measured and unmeasured pcc rates during the planning period are set out in lines 36 and 40 of Table WRP1-BL in Section 3.0 of our plan.</p>
EERA.1.6	<p>The proposed Government Independent Review on Water Charging, which is expected later this year, will look at the social, economic and environmental concerns of water charging. In their draft WRMPs, each company sets out its programme on domestic metering, whether that be selective or compulsory. Whilst the latter may prove to be a necessity in the long term as a means of reducing water usage, companies will need to take into account the issue of water poverty which is a potential concern in this region. Qualifying metered households should be offered support to help improve the water efficiency of their homes and pilot schemes (such as South West Waters 'Watercare' scheme) could be used to target vulnerable groups to enable metering to be a viable option for them.</p>	<p>We await the outcome of the Walker Review, which we will implement as required.</p>
EERA.1.7	<p>Opportunities also exist for more to be done to increase general awareness of the carbon costs associated with the provision of water. Whilst it is noted that the water companies themselves are looking at quantifying their own carbon emissions, and reducing their carbon footprint, many of their customers may not have established these links.</p>	
EERA.1.8	<p>Each company has also reported on leakage targets. Whilst rates vary across the region, they are expected to remain fairly constant throughout the WRMP period. Excluding Thames Water (whose supply area covers only a small part of this region) and allowing for the fact that some other companies supply areas extend beyond the regional boundary, the total leakage level targets is approximately 425 Mega litres per day (one mega litre equals one million litres or 1,000 cubic metres of water). Assuming a current average usage of 150 l/h/d, this equates to enough water to supply approximately half the population of this region on a daily basis.</p>	<p>Cambridge Water's total leakage figure equates to around 19% of distribution input. This figure is planned to reduce to around 16% by the end of the planning period, as more sophisticated methods of targeting leakage are implemented.</p>
EERA.1.9	<p>Whilst it is accepted that totally eliminating leakages may not be possible, it should be recognised that such losses will continue to raise two important issues:</p>	

	<ul style="list-style-type: none"> research has confirmed that the failure by companies to adequately control leakages is the main reason why consumers are unwilling to make water savings themselves², and there is a physical and environmental cost in terms of the energy that has been used to treat and distribute this water in the first instance. <p>Water companies are aware of this and measures to tackle these problems and to continually reduce leakage levels over time would be supported.</p> <p>² 2008, DEFRA, 'Government response to the consultation on the draft statutory Social and Environmental Guidance to the Water Services Regulatory Authority (OFWAT)', p22, London</p>	<p>We will continue to gear our leakage effort to match the findings of the updated Sustainable Economic Level of Leakage study, completed in December 2008.</p>
EERA.2	<p>Whilst CW recognises that the Cambridge Sub-region has been earmarked for significant levels of growth over the next 15 years its draft WRMP is planning for development at a lower level than RSS policy H1 - on the basis that development in the past has fallen short of predicted outcomes. (CW is assuming an annual average build rate of 2,000 dwellings per year whereas policy H1 sets a minimum of 2,440 dwellings per year). Whilst this may raise some concerns at a regional level it is noted that CW has undertaken a sensitivity analysis of a dwelling provision figure in line with the RSS and concludes that this is unlikely to cause difficulties until 2031. CW is confident that a trend towards greater housing numbers would be detected at an early stage and that it would have ample time to take action, before the situation became critical.</p>	<p>See response to EA.5 above.</p>
EERA.3	<p>Plans include metering <u>all</u> domestic properties by 2035.</p> <p>No detailed water consumption figures are given, thus making it difficult to compare CW's pcc levels against those set out in either 'Future Water' or in the RSS. There is however a suggestion that some sort of equilibrium in usage may be struck between existing properties (where a modest growth in pcc is forecast, with no significant savings being derived from retro-fitting water-efficient devices on a large scale) and new build (where it assumed that homes will be built to Level 3 of the Code for Sustainable Homes and that consumption at these properties will reduce to around 105 l/h/d).</p> <p>CW will continue to promote, inform and involve customers on the issue of water efficiency. The company also holds the view the increase in pressure to limit per property consumption over time will result in other initiatives, such as grey water recycling, to become more widely adopted.</p>	<p>All proposals for enhanced metering have been removed from our updated draft plan.</p> <p>Table WRP1BL of our updated draft plan shows the progression of measured and unmeasured pcc over the planning period. By incorporating Ofwat's year on year water efficiency target of 1 litre/property/day into our demand forecast, average household pcc reduces to 137 l/h/d by 2035.</p> <p>We have reassessed our assumptions for new homes' consumption, based on the latest information and guidance, and have used a figure of 125 litres/head/day (in accordance with the proposed revisions to the Building Regulations) in</p>

		our updated draft plan.
EERA.4	Based upon assumptions made in its draft WRMP, CW anticipates that the supply/demand balance will be maintained throughout the plan period. As a consequence, the company has no plans for major investment in additional resources during the next 25 years.	No further comment.
EERA.5	Overall leakage will remain constant at 14 MI/d.	This represents a reduction of 30% in per property leakage levels over the planning period.
The Middle Level Commissioners		
MLC.1	It is noted that particular reference is made to the significant growth predicted in the area over the next 15 years, notably at Northstowe and the possible extension at Cambourne. Given the current economic situation, this may be delayed but there is a possibility that the rate of development is governed by water supply and CW's Assessment Management Plan process.	We worked closely with Cambridgeshire Horizons and Local Authorities to commission a Cambridge Water Cycle Study, in order to identify key water-related issues which might form obstacles to the planning process. No such water resource, or water supply infrastructure, issues were identified by the study.
MLC.2	The Environment Agency classes the supply area as "an area of serious water stress", yet CW is reasonably content that there will be a healthy supply - demand balance over the plan period. Whilst there are no other water suppliers within the CW area, planning consent for water supply has been granted to the north of its supply area. There is increasing evidence that water supply will become increasingly important with more competition and may be traded as a commodity in the future. This may detrimentally affect the CW's current arrangements in the longer term.	We are aware of the implications of competition, but we are always mindful of our duty to supply customers within our own area.
MLC.3	The Commissioners applaud CW's proactive introduction of grey water recycling/rainwater harvesting. However, they are expensive to install and operate, therefore increasing the costs of the property concerned and reducing profit margins. The use of such devices will only be achieved by a change to the Building Regulations or with the co-operation of the Local Planning Authority (LPA), Developer and respective Water Authority.	We are aware of the challenges to the widespread introduction of grey water schemes and will be evaluating these as part of our pilot studies.
MLC.4	It is recommended that some consideration be given to alleviate the effects of any threats to the CW system, whether it is contamination, changes in water abstraction licenses, power failure, etc.	These matters are already considered, both in the outage allowance and in the target headroom calculation.
MLC.5	Some of CW's water is sourced from Thetford which, it is assumed, adds to its carbon footprint. Therefore, it may be appropriate to consider alternative, more-sustainable	The Catchment Area Management Strategy (CAMS) process has shown that local groundwater units are

	sources within its area.	either over-licensed or over-abstracted, and there is no additional groundwater resource available.
MLC.6	<p>Consideration is given to the effects of climate change. These can be summarised as follows:</p> <p>(a) Hotter, drier periods leading to more drought situations. This will require the storage of more water to allow for evaporation losses.</p> <p>(b) More frequent short duration, high intensity and more frequent period of long duration rainfall, intense rainfall events which may require the provision of strategic surface water/flood defence structures which could also serve as water supply reservoirs. The Commissioners are currently involved in two instances within or immediately adjacent to the CW's supply area.</p> <p>(c) Increased winds which could increase the risk of damage to structures and power supplies.</p>	<p>All the water supplied by the company is groundwater-derived. Replenishment of the underground aquifer depends on effective winter rainfall, which is predicted to increase. The effects of droughts, and their mitigation, are addressed in CW's drought plan, published on its website at www.cambridge-water.co.uk</p>
MLC.7	<p>Whilst not a matter for the plan, it is suggested that in view of the problems encountered with major infrastructure during last year's flood events, that CW gives consideration to the contents of Section 5 of the recently published Pitt Report.</p>	<p>We have reviewed the risks identified in the Pitt Report, and are planning accordingly.</p>
The Conservators of the River Cam		
CRC.1	<p>The Conservators should like to seek recognition of the Cam Conservancy Area in the WRMP. Whilst there are clearly environmental sites of national importance which have been listed in the WRMP, the Cam Conservancy Area represents another 'site' of significance which deserves status in its own right when considering future water supply and demand. The Conservators' prime responsibility is to preserve the right of navigation on the River Cam. Any change in water supply or demand must consider fully the effects on the river water levels and flow regimes in the main river and how they might affect maintenance of the navigation. Secondly, the Conservancy Area represents a 'green corridor' of biodiversity importance which runs through the City of Cambridge, linking the City with the more rural parts of the catchments to the south and north.</p> <p>We have noted from this report that CW is unable to predict, and therefore may be unable to mitigate, the effects of increased abstraction on the River Granta, a major tributary of the River Cam supplying the Cam Conservancy Area. Diminished flows could compromise navigation. This could have repercussions for the City's tourist industry (punting), sports' clubs (rowing, canoeing) and the City's community of river-based dwellers (there are currently 70 licensed residential moorers within the City area). The WRMP reaches into a period in the future where development pressures</p>	<p>The River Granta has been identified as a site for investigation in the AMP5 period (2010/11 – 2014/15) under the United Kingdom's Biodiversity Action Plan. We are likely to be required to carry out an option identification and appraisal report.</p>

	<p>within the Cam catchment are likely to become intense. Recreational use of the river is likely to increase in line with population growth. A shortfall in water supply could lead to serious management problems for the Conservators as the navigation authority.</p> <p>We should like to seek confirmation that CW will maintain a close liaison with the Environment Agency and the Conservators to ensure that the needs of navigators are met within the provisions of this WRMP.</p>	<p>We confirm that we will involve all stakeholders in the consultation process to agree the implementation of any solution to mitigate the effects of our abstractions on river flows.</p>
<p>Wilbraham River Protection Society</p>		
<p>WRPS.1</p>	<p>We note that CW considers that its WRMP does not require SEA. However despite this, we are pleased that CW has undertaken an environmental impact assessment – included as Appendix (i) of the WRMP. In Appendix (i) CW states that its WRMP is unlikely to have ‘<i>significant environmental effects</i>’, and we welcome this. We also note that CW considers that ‘<i>the major area where the environmental impact of its WRMP may be felt is the effect of its abstraction on important wetland sites</i>’. Appendix (i) therefore only considers wetland sites (which are either SSSIs or LNRs).</p> <p>We wish to point out that as a result of our contribution to the Environment Agency’s formal consultation of the Cam and Ely Ouse Catchment Abstraction Management Strategy (CAMS), the EA included a statement that ‘<i>problems in the Wilbraham River are recognised in the CAMS and have been highlighted for consideration as an important local feature...The river has been included in the ‘Restoring Sustainable Abstraction (RSA) Programme’ and if necessary, solutions to improve the abstraction regime in the area will be implemented</i>’. Therefore we consider that the WRMP must also formally consider the effect of abstraction on the Wilbraham River in addition to the wetland sites included in Appendix (i).</p>	<p>The Wilbraham River has been identified as a site for possible investigation in the AMP5 period (2010/11 – 2014/15) under the Environment Agency’s Restoring Sustainable Abstraction programme. At present its status in AMP5 is uncertain. At such time as the site is formally notified to us for investigation we will update our plan to reflect its inclusion.</p>
<p>WRPS.2</p>	<p>Secondly, in the Conclusions section of Appendix (i) we note that in the paragraph referring to Fulbourn Fen; Wilbraham Fen, CW states that ‘<i>as the EAs Lodes Granta groundwater scheme operates to mitigate the impacts of the Company’s abstractions, the risks to the criteria specified in the accompanying table have been scored generally as low.... The Company’s overall assessment of the risk to this site is low</i>’.</p> <p>We disagree with this assessment. The Lodes Granta compensation water has not prevented the Wilbraham River from drying up over long periods and therefore we do not think it helps mitigate the effects of groundwater abstraction. The river ceases to flow because the chalky river bed is naturally porous and unless the groundwater</p>	<p>These concerns should be addressed in the proposed AMP5 scheme, for which the draft scoping brief refers to the consideration of “...all options relevant to augmenting the flows in the Little</p>

	<p>level is up to the level of the river bed the flow leaks away along a relatively short length of the river downstream of the source. The river used to serve several local water mills. This fact and anecdotal evidence suggest a perennial flow of water and the river was in living memory, a significant feature of the local environment, rich in wildlife. However, because the flow is no longer perennial, species such as kingfisher, reed warbler redshank, moorhen and mallard are rarely seen, and the water vole has all but disappeared.</p>	<p>Wilbraham River..”</p>
	<p>Summary We acknowledge the need for CW to exploit the resources of the local aquifer, however we think there should be much more consideration of the effect of groundwater pumping on the Wilbraham River. Our two points are (i) Wilbraham River should be explicitly considered in the WRMP, (ii) CW should not necessarily assume the Lodes Granta groundwater scheme has any significant mitigating effect on the environmental consequences of groundwater abstraction.</p>	<p>Dealt with above.</p>
<p>The Woodland Trust</p>		
<p>WT.1</p>	<p>We understand that boreholes, reservoirs, water treatment works and other infrastructure are dependent upon the location of water sources; however, when considering the options in the Water Resources Management Plans we believe more emphasis needs to be placed on protecting habitats, particularly irreplaceable ones such as ancient woodland. This includes both direct loss from development and indirect impacts to the habitat through increasing pollution, changing water table or disturbance, for example.</p>	<p>We do not propose to carry out any large-scale infrastructure projects as part of our WRMP: our proposals extend only to sinking a satellite borehole at an existing abstraction source.</p> <p>The need for an ecological survey is considered as part of the normal project planning process.</p>