



# Statement of Consultation Response to draft Water Resource Management Plan 2014



November 2013



Essex & Suffolk Water is a trading division of Northumbrian Water Limited which is a group company of Northumbrian Water Group

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## 1. Introduction

As required by the Water Resources Management Plan Regulations 2007 and the Water Resources Management Plan Direction 2012, we have prepared a new draft Water Resources Management Plan (WRMP) for the period 2015 to 2040. It shows how we intend to maintain the balance between supply and demand over the next 25 years.

Our draft WRMP was prepared in line with the 2012 Water Resources Planning Guideline which was issued jointly by the Environment Agency, OFWAT and DEFRA.

In addition to our customers, we invited the following regulators and other interested stakeholders to comment on our draft WRMP:

- OFWAT
- Environment Agency
- Secretary of State (c/o DEFRA)
- All local authorities in the area of the Plan
- The Broads Authority
- Natural England
- The Historic Buildings and Monuments Commission for England.
- Any navigation authority in the area of the Plan
- TWU
- AWS
- The Consumer Council for Water

The consultation period covered a twelve week period closing on Sunday 4th August 2013. Written representations on the draft WRMP were sent to the Secretary of State for Environment Food and Rural Affairs and were then forwarded to Essex & Suffolk Water (ESW) at the end of the consultation period.

This document is a statement of response to the representations received during the draft WRMP consultation and details:

- (a) the consideration that has been given to representations;
- (b) any changes have been made or will be made to the WRMP as a result of consideration of those representations and the reasons for doing so; and
- (c) where no change has been made to the draft WRMP as a result of consideration of any representation, the reason for this.

This document will be available on our website.

## **2. List of Respondents**

Comments on ESW's draft WRMP were received by Defra from the following organisations (listed in alphabetical order):

- Environment Agency
- Essex County Council
- GARD
- Natural England
- NFU
- Ofwat
- Suffolk County Council
- Uttlesford District Council

A summary of the responses received and ESW's consideration of each is indicated in the following sections.

### 3. Summary of Representations and Consideration Given

A summary of each representation received and ESW's consideration of each is provided as follows:

#### 3.1 Environment Agency

The Environment Agency grouped its comments into:

- i. Compliance with the Water Resources Management Plan Direction 2012;
- ii. recommendations relating to significant issues which if followed, would further ensure that the ESW WRMP demonstrates a secure supply of water and protects the environment; and
- iii. Suggested improvements

Recommended changes to ensure compliance with Direction are as follows:

##### **Compulsory Metering**

The Environment Agency asked for further clarification regarding the method used to appraise compulsory household metering.

**ESW Response:** We are no longer pursuing a compulsory metering strategy from 2015 to 2020. Instead, in Essex we are to continue with the current strategy of optant metering and selective metering on change of occupier of a domestic property. In Suffolk we are to continue with the current strategy of optant metering but also introduce selective metering on change of occupier of a domestic property.

**Change:** Section 5.4 of the WRMP has been updated to cover our revised metering strategy.

##### **Carbon Emissions**

The Environment Agency asked for an estimate of carbon emissions from our current operations.

**ESW Response:** We have included an estimate of carbon emissions from our current operations in Section 6.2.

**Change:** The draft Final Plan has been updated accordingly.

##### **Metering**

The Environment Agency asked for the following to be included in the Plan:

- i. an estimate of the number of households that could be selectively (compulsorily) metered where households have certain high use of water categories as set out in Regulation 2 of the Water Industry (Prescribed Conditions) Regulations 1999;
- ii. estimated demand savings for optant, selective and compulsory metering for both its existing and proposed metering strategies, to clearly show the impact of its proposed strategy on reducing demand;

- iii. Individual cost of optant and selective metering including an assessment of the costs of installing and operating meters for each category under the baseline and preferred metering strategy;
- iv. a comparison between metering options which assesses and compares the cost components for each metering category;
- v. The company should demonstrate that this information has been provided to customers during the consultation on compulsory metering;
- vi. a description of the programme for implementing compulsory metering; and
- vii. information on how households that have certain specified high use of water will be selectively metered.

**ESW Response:**

- i. We believe the vast majority of our customers who are large users of water are, after over 20 years of the regulations being in place, now metered. In the last 3 years (2010/11 -2012/13) we have only selectively metered 38 customers because of their high use of water.
- ii. We have provided additional information on demand savings that could be achieved from each metering category in the draft Final Plan.
- iii. We have provided information on metering costs in the draft Final Plan.
- iv. We have compared metering costs in the draft Final WRMP.
- v. We have provided information on metering costs to our PR14 Customer Challenge Group known as our Water Forum.
- vi. We are no longer pursuing a compulsory metering strategy from 2015 to 2020 (see above).
- vii. Information on how households that have certain specified high use of water will be selectively metered has been included in the draft Final Plan.

**Change:** We have updated Section 5.4 of the Plan to provide further information on each of the areas identified by the Environment Agency.

The Environment Agency's recommendations are as follows:

**Recommendation 1: Population and property forecasting**

The Environment Agency recommended that the following is included in the revised draft Plan:

- i. further justification for the assumptions and data sources used to derive population and properties estimate;
- ii. further justification of the approach taken in estimating population and properties and demonstrate how the demand forecast has incorporated Local Authority plan data.
- iii. The results of population and property scenario testing covering both the Company's chosen scenario against other relevant scenarios;

- iv. A description of the sensitivity and implications of the chosen scenario to forecast demand. It is likely that using a different population and property forecast scenario will affect the company's supply-demand balance;
- v. demonstration in its plan that it will continue to provide a secure supply of water if using a different scenario; and
- vi. a review of its proposed modification to bulk supplies to Thames Water and demonstrate that these modifications are of an appropriate volume and maximise the water available.

**ESW Response:** We have taken account of the points raised by the Environment Agency in Recommendation 1 and have updated Section 4.3 to 4.5 of our draft Final WRMP accordingly. Section 4.3.1 provides further justification for our approach in estimating population and properties while Section 4.3.4 provides further detail on the Edge methodology. In Section 4.3.2 we have presented the results of scenario testing where ESW's chosen scenario for population growth (CR6) and the population growth based on the Sub National Population Projections (SNPP) have been compared. If SNPP was used, a supply demand balance is maintained over the whole planning horizon, including a 20Ml/d supply to TWUL over 20 years.

The Environment Agency's suggested improvements are as follows:

#### **Improvement 1 - compulsory metering option**

The Environment Agency suggested that we provide further evidence to support the inclusion of compulsory metering in our Plan to demonstrate that this option is fully justified and will be implemented appropriately.

**ESW Response:** We are no longer pursuing a compulsory metering strategy from 2015 to 2020. Instead, in Essex we are to continue with the current strategy of optant metering and selective metering on change of occupier of a domestic property. In Suffolk we are to continue with the current strategy of optant metering but also introduce selective metering on change of occupier of a domestic property.

**Change:** Section 5.4 of the WRMP has been updated to cover our revised metering strategy.

#### **Improvement 2 - planning scenarios**

The Environment Agency suggested that the company confirms whether a critical period scenario is required in its final plan, and whether planned improvements to infrastructure in the [Northern Central] zone will resolve the issue.

**ESW Response:** Once the Ormesby Broad abstraction cessation level has been implemented, there remains a dry year annual average supply demand surplus over the planning horizon. This is due to currently modest utilisation of the Company's River Waveney abstraction licence at Shipmeadow which is located in the Barsham and Broome Supply Zone. Increasing utilisation of this licence is possible by increasing intra-Water Resource Zone transfer from the Barsham and Broome Supply Zone to the Lound Supply Zone.

During peak demand periods, increased utilisation of the Waveney abstraction licence will allow the Lound Supply Zone to increase transfer to the Ormesby Supply Zone. However,



this is only possible with a scheme known as the “Lound to Gorleston Pumping Station and Pipeline”.

The early stages of this scheme are already planned as part of an existing ESW resilience scheme with works commencing in 2014/15. With this scheme and with the lower Ormesby Broad abstraction cessation level (only permissible following mud pumping in early AMP6), the Northern Central Water Resource Zone will not be peak constrained. Consequently, we do not believe that a critical period scenario is required.

**No Change.**

### **Improvement 3 - Deployable Output Assessment**

The Environment Agency suggested that we should ensure that the period of record for all sources covers a sufficient time period and is up to date and that we work with the Environment Agency to further improve our DO assessment for the Essex Water Resource Zone.

**ESW Response:** Section 3.1.3 has been updated. Essex DO in our Draft WRMP was based on naturalised flow data for the period 1932 to 1996. We are currently updating the period of record for the Essex system. Good progress is being made and the naturalised flow datasets for the Essex receiving rivers have now been extended to December 2012. Work to extend the naturalised flow data sets for the Ely Ouse donor rivers is ongoing. The next stage will be to prepare naturalised flow datasets for both the Essex receiving rivers and Ely Ouse donor rivers from 1920 to 1933.

Best endeavours will be made to have all flow naturalisation work completed for the final Plan. However, it is proving a time consuming process and so if this is not possible, work will continue during 2014 with progress being reported at the quarterly ESW / EA Liaison Meeting and in the 2014 WRMP Annual Update.

The Essex system model is currently being updated with the revised Great Ouse Groundwater Scheme (GOGS) licence conditions. This is likely to result in only a small change in DO and will be reflected in the final WRMP.

**Change:** The Plan has been updated (Section 3.13 Further updates) to reflect the above commitments.

### **Improvement 4 - leakage and SELL review recommendations**

We suggest that the company considers the recommendations of the SELL review in its future approach to leakage management. The company should demonstrate how these recommendations and other factors have been incorporated into its leakage forecast.

**ESW Response:**

#### **SELL Review**

In the course of preparing our WRMP, we have considered in detail all of the recommendations of the recent DEFRA/EA/Ofwat Review of SELL report. We have taken these into account as follows:

- i. We have included all categories of external costs in the SELL modelling. These were calculated using the methodologies presented in the 2008 Ofwat guidance document on “The Inclusion of Externalities in the SELL Calculation”. Although the SELL Review report provides optional default values for some of these values, all



- the values used were derived from company-specific data, as described in our WRMP document.
- ii. In all previous Water Resource Management Plans our SELL analysis has been fully integrated into a least cost planning approach, as our Essex and Suffolk region has always been in supply deficit. The SELL was therefore an output from the least cost plan, not an input. However for this latest WRMP, the region is expected to be in resource surplus throughout the whole planning period. Therefore a least cost planning approach has not been required, and the SELL is therefore a short-run SELL.
  - iii. Although the company will not be in resource deficit, pressure management was still considered within the SELL analysis. However it was concluded that by the end of the AMP5 period there will be very little remaining scope for economically justifiable pressure management schemes. In the SELL analysis it was assumed that pressure management is developed to the maximum extent.
  - iv. Our calculation methods for leakage and the SELL are entirely consistent, as both are bottom-up methodologies built up from the same DMA-level leakage data.
  - v. We did evaluate in detail the costs and benefits of operating at a leakage level below the SELL, as recommended in the SELL review, for both our Northern and Southern operating areas. In both cases this showed that the additional net cost of operating marginally below the SELL is relatively small. However in the South, as described in the WRMP, the current target of 66 MI/d is 20 MI/d below the short run SELL. Consequently the additional net cost of operating below the current target is quite significant.
  - vi. Nevertheless, these analyses were used as the basis of the leakage options which were presented to our Customer Forums for our willingness to pay investigations. In view of the cost, we did not receive a mandate from our customers for operating below the current target in Essex and Suffolk. Therefore it is proposed that the target should remain at 66 MI/d.
  - vii. The SELL Review report recommended that companies should consider the economics of customer-side leakage separately from company-side leakage. The unique cost/benefit balance of customer-side leakage management is not well understood in the UK, and therefore we have not been able to do this. However Northumbrian Water Limited is taking the lead in formulating, promoting and managing an UKWIR project specifically to examine this aspect of the SELL analysis. This project will begin in November 2013 and will be completed in late 2014.

### **Background Leakage Levels**

We do not agree that “the company’s approach to calculating background leakage as a sum of historic minima is not in line with the industry recommended approach”. We are fully aware of the 2013 UKWIR report on “Factors Affecting Background Leakage”, and in fact we were one of the four companies who provided the data on which this study was based. This study has provided a model which can be used for estimation of background leakage levels for a company which does not have a sufficiently long record of leakage levels with an intensive leakage control policy to justify the historical minima approach. However in Essex and Suffolk we have more than eight years of leakage history during which our leakage control processes have been intensive, robust and consistent. We therefore believe that the historical minima approach, using company-specific data with

appropriate safeguards to avoid erroneously high values in certain DMAs, produces a more robust set of DMA-level background levels than the application of a national model.

**Customer metering**

We are planning to install a further 55,750 meters during the AMP6 period, and expect that 93% of these will be external installations on the property boundary. We have assumed that for these properties the average supply pipe leakage will be reduced from 33 l/prop/day to 16 l/prop/day. This will result in a reduction in overall leakage of 0.9 MI/d. This has been included in our SELL analysis.

**Other Options for Leakage Management**

We have considered a full range of options for leakage management besides find-and-fix. Our plans include a significant programme of leakage-driven renewals of mains and communication pipes. We are also planning to continue our successful programme of proactive renewals of common supply pipes in the Dagenham area throughout the AMP6 period, aiming for completion of all properties by 2019/20. We have taken these programmes into account in our SELL analyses, together with the effect of increased meter penetration. However, even including speculative assumptions on future technological improvements in leak detection, these measures together are not sufficient to reduce the short run SELL below the current target of 66 MI/d. Therefore we are proposing that the target should remain at 66 MI/d throughout the planning period.

**Change:** Section 5.5 of the Plan has been updated accordingly.

### 3.2 Essex County Council

Essex County Council is satisfied that Essex & Suffolk Water's Draft 2014 WRMP is fit for purpose.

**No Change**

### 3.3 GARD

GARD is pleased that both Essex & Suffolk Water's and Thames Water's preferred plans includes a temporary reduction of 20 MI/d in the bulk transfer of 91 MI/d to Essex & Suffolk Water (ESW).

In GARD's opinion, the reduction in bulk transfer could be larger and it could last for the duration of the Plan period.

In Essex & Suffolk Water's final Plan, GARD would like to see:

- A larger reduction in the bulk transfer from TW, probably by in the region of 45 MI/d.
- The reduction continuing throughout the Plan period
- Appraisal of feasible options needed to supply the Chigwell area, replacing the Thames Water bulk transfer with surplus water from Abberton reservoir or elsewhere

A justification of the amount and duration of the amount of the reduction, with reference to the surpluses that would remain in the Essex zone and the costs to both companies and their customers.

**ESW Response:**

GARD (Group Against Reservoir Development) have commented to both the Thames Water (TW) and Essex & Suffolk (ESW) draft WRMPs on the proposed new bulk supply from ESW to TW. Their 3 main points of concern are detailed as:

- The operating costs in TW's appraisal
- The magnitude of the reduction in transfer
- The proposed reversion to the existing 91MI/d transfer in 2035

**Operating costs.**

We cannot comment directly on the operating costs assumed by TW, but we have been liaising closely with them on the costs we require to make the supply. These costs reflect the investment made by ESW customers to enable TW customers to benefit from a 20 year supply. It would be unreasonable for Essex customers to subsidise a supply to TW customers. Therefore the cost of the scheme, linked to the operating costs of the Ely Ouse to Essex Transfer scheme and the Abberton reservoir raising scheme construction and operating costs, is more complex than GARD may have assumed.

**Magnitude of reduction**

GARD's contention is that with the full Chigwell supply of 91MI/d ESW has a surplus Water Available for Use (WAFU) over demand plus headroom of 50MI/d which rises to 65MI/d by 2040, therefore the TW supply could be reduced by about 45MI/d for the full 25 years of the Plan.

This conclusion reached by GARD is overly simplistic and results from confusion as to what the WRMP supply demand balances are actually showing. The dry year supply demand balance is showing the estimated forecast of the **annual** daily average demand (plus headroom) and the **annual** daily average WAFU. These annual averages are derived from the fairly wide seasonal variations in demand (peak summer demand is significantly above the annual average demand and the winter demand is significantly below the annual average. Additionally the WAFU (Deployable Output (DO) minus average daily outages) varies considerably away from the annual average on a seasonal basis due to outages predominantly due to algal blooms in the highly eutrophic waters we abstract and store. This variable demand and WAFU throughout the year means we have to profile the reduction of the TW supply throughout the year to give an annual average reduction of 20MI/d. This profiling, when modelled by TW, only results in an increase in DO to them of 17MI/d whilst the reduction from ESW is 20MI/d.

Because the supply from TW supplies our Chigwell Row WTW, which has no other water source available to it, the more we reduce the raw water supply from TW, the less potable water we can produce in the whole company. It is our ability to produce sufficient potable water, allowing for summer outages due to algae reducing the DO, to meet dry year summer peaks, that determines the volume that the Chigwell supply can be reduced by. If we were to increase the volume to TW by more than 20MI/d annual average then we would have to increase the treatment capacity of our Layer WTW (fed from the raised Abberton reservoir. An upgrade in potable water treatment capacity at Layer WTW of 25MI/d, further triPLICATION of the North to South Essex trunk mains to carry the additional water and enhancement of the transfer mains in east London to take the Layer water from

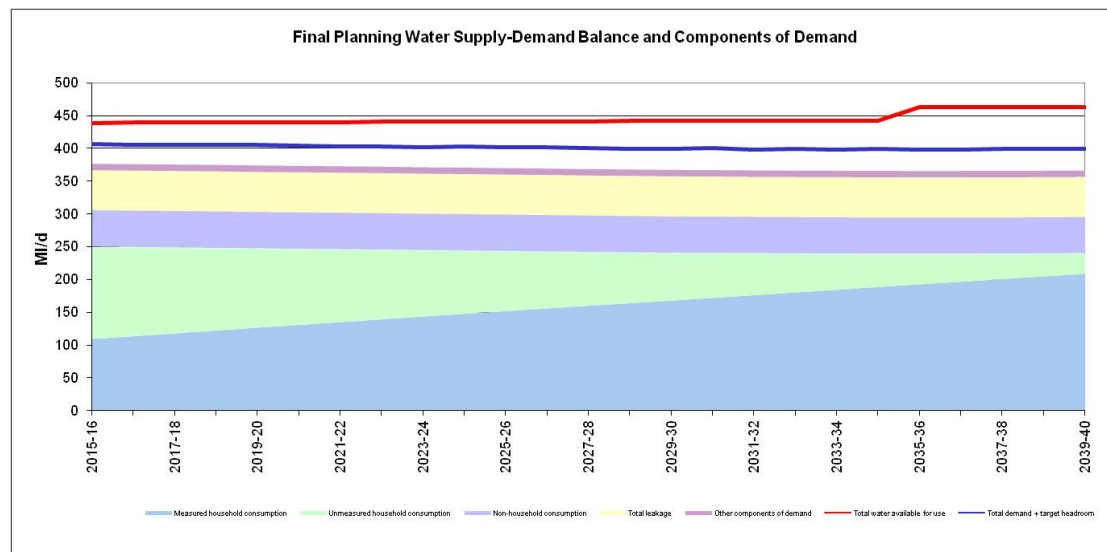
the Herongate zone onto the Heaton grange (Chigwell) zone would cost approximately £50m in today's costs. These cost are rough estimates but recent experience shows mains of this size cost about £1m per km to lay and could be higher through East London. In the time available a full feasibility study could not be undertaken to firm up the costs but equally the cost of a study should not be borne by Essex customers.

However, the above is rather academic as the 45 - 65MI/d surplus is the absolute maximum available and assumes a low level of population growth. As now more fully explained in section 4.3 we have chosen a population forecast based on housing completion rates for the previous 6 years (CR6). In our opinion this better fits the current rate of housing completions and those more likely to be seen going forward. However Government policies may cause this rate to increase which would lead to a higher population growth and a concomitant increase in water demand.

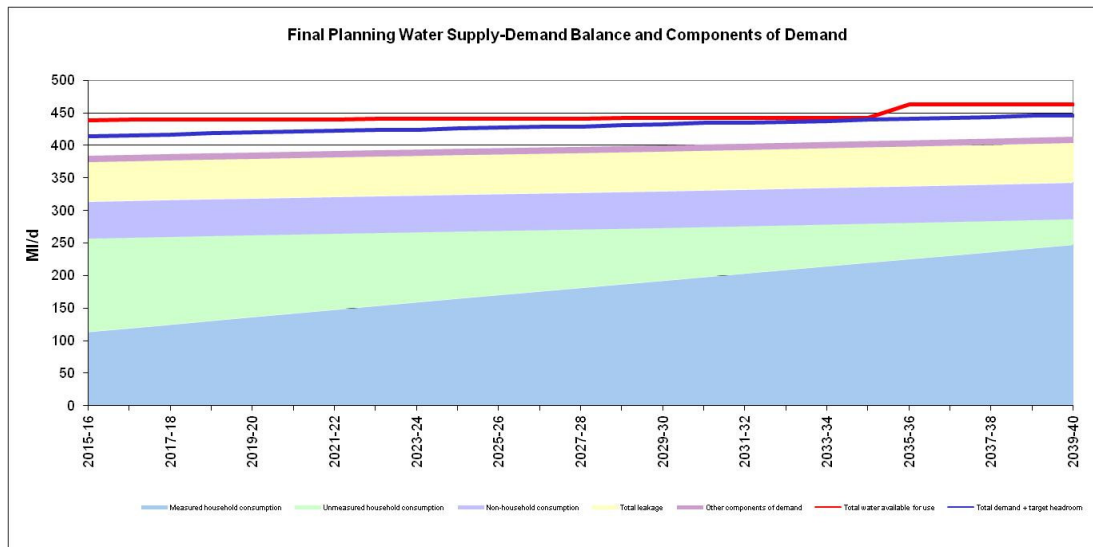
The EA, in their response to our draft Plan, quite rightly questioned why we had chosen CR6 rather than their preferred Sub National population projections (SNPP) from the ONS. Whilst we have explained our choice they also wanted a sensitivity check to see if we could still supply TW with 20 MI/d if population growth did reach the SNPP level.

The difference on water demand from our chosen scenario and the SNPP is graphed below and more fully explained in section 4.3.2 of the Plan.

### Completion Rate - Population and Property forecast



### Sub National - Population and Property forecast



If the SNPP levels of growth are achieved then the only volume of water available to transfer with certainty is the 20MI/d for 20 years from 2015.

Our Essex customers have been in a supply demand deficit since the mid 1990s, thereby having a higher risk of restrictions than our stated Level of Service, and have had to invest £150m to bring the balance back into surplus. The company has no intention of risking their future security of supply by transferring more water than we can absolutely be certain will not risk their future security of supply.

#### Duration of reduction

The current proposal is to reduce the supply, which in the Final plan may be changed from 15MI/d to 20MI/d for the final 5 years, for 20 years to 2035. GARD suggest it could be extended for 25 years.

For any company to accept a bulk supply from another company rather than develop their own new resource, they must have full confidence that the volume contracted is available in a dry year and for the duration of the contract. We are content that this supply can be made available for 20 years but become less confident after that especially if population growth goes towards the SNPP numbers.. One of the reasons we are less confident in the size of our surplus as time goes on, is the requirement under the WRMP guidelines to reduce headroom uncertainty over time, rather than the natural assumption that uncertainty increases the further out one forecasts. Given future changes to the economy and growth in Essex, which could be greater than forecast or less, at this present time we would not be willing to guarantee the supply for longer than 20 years.

**Change:** These additional points will be added to our Final WRMP to aid clarity.

### 3.4 Natural England

Natural England recognises the ambitions of ESW to meet the requirements of the sustainability reductions, however, it considers that there is a risk around the delivery of these schemes which should be implemented by 2015. If delayed, ESW should set out a clear plan as to how it will ensure the sites are not damaged between now and the solution being in place.

**ESW Response:**

ESW has three schemes to meet the requirements of the identified sustainability reductions, namely the Trinity Broads, Geldeston Meadows and Alde / Ore Estuary.

**Trinity Broads**

Since Natural England made its representation on our dWRMP, the Trinity Broads Options Appraisal report has been agreed by both Natural England and the Environment Agency. The detailed design for the solution (mud pumping), will be undertaken over the next 17 months leading to April 2015 which is when the new abstraction cessation level in ESW's Ormesby abstraction licence will become live.

The mud pumping will only commence in 2015 once funding becomes available and so Natural England has asked ESW to set out a clear plan as to how it will ensure the site is not damaged between 2015 and the solution being in place. This requirement is detailed in the Habitat Regulation Assessment for the chosen option of mud pumping. A new abstraction regime will also be implemented which will increase abstraction from the River Bure (thus reducing Ormesby Broad abstraction) as Ormesby Broad levels fall over the drawdown season.

**Geldeston Meadows**

Since Natural England made its representation on our dWRMP, the Geldeston Meadows Options Appraisal report and Habitats Regulation Assessment have been updated. The chosen solution is to provide a compensation discharge to the site. There two sources, namely a dechlorinated treated water discharge from Broome Treatment Works or discharge from Barsham hall Borehole will iron removal. Both options have been subject to a HRA which concluded no likely significant effect from either option. The HRA for the preferred solution is now included in an Appendix 6 to the draft Final WRMP. It is hoped that the final options appraisal can be signed off by Natural England and the Environment Agency in November 2013.

The detailed design for the solution will then be undertaken over the next 17 months leading to April 2015 which is when a new abstraction licence condition to make a compensation discharge in a dry year will become live.

Construction of the compensation discharge pipeline and outfall will only commence in 2015 and so Natural England has asked ESW to set out a clear plan as to how it will ensure the site is not damaged between 2015 and the solution being in place. This plan is detailed in the Habitat Regulation Assessment for the chosen option.

In fulfilment of the above comment, ESW will maximise its abstractions from both its Alder Carr well at Reydon and also its Broome Borehole at Broome in order to reduce the demand on Barsham Treatment Works and the Barsham boreholes. Alder Carr well is outside of the groundwater catchment for Geldeston Marshes SSSI. While Broome borehole is within the SSSI groundwater catchment, RoC concluded that abstraction does not cause likely significant effect.

It is also important to consider the likelihood of the compensation discharge being required which ESW considers to be low. Historical abstraction licence utilisation in 1996 was 69% and is considered by Natural England to have no likely significant effect. However, it is not possible to say the same for abstraction above this level. A review of abstraction licence utilisation has shown that over a 23 year from 1990, the compensation discharge would only have been required in one hydrological year, namely 1996/97.



Further more, it is considered unlikely that the compensation discharge would be required even if a 1996/97 type drought were to take place in 2015. This is because demand is now lower than what it was in 1996/97 when historical licence utilisation was at its highest. For example, licence utilisation in 2011/12 (the most recent dry year) was only 50%. This is largely due to a reduction in industrial demand, a reduction in residential demand due to water efficiency, metering and reduced leakage.

**Alde / Ore**

ESW's preferred solution is to make a river support compensation discharge into the River Alde using an onsite Benhall Water Treatment Works borehole.

Since Natural England made its representation on our dWRMP, the Alde Ore Options Appraisal report has been further progressed through undertaking a trial compensation discharge using an existing borehole.

The flow rate of the required compensation discharge to ensure the target flow is met at the Alde Ore assessment point has been the subject of much discussion. Further work has now been undertaken which confirms that 1.5MI/d is sufficient.

The result of the trial along with the additional work to confirm the required flow rate will be included in the final options appraisal and HRA report which will be submitted to Natural England and the Environment Agency in November 2014. The draft HRA has also been reproduced in an appendix to the draft Final WRMP.

The detailed design for the solution will then be undertaken over the next 17 months leading to April 2015 which is when a new abstraction licence condition to make a compensation discharge in a dry year will become live.

Although funding for the preferred option will not be available until April 2015, ESW will construct a new borehole in 2014. It is therefore confident that it will be able to make a compensation discharge by April 2015, should flow conditions require this.

**Change:** All three HRAs have been reproduced in an appendix to the draft Final WRMP.

Natural England advise ESW that the WRMP plan must demonstrate that the feasible solutions needed to address the sustainability reductions will not have an adverse effect on the integrity of the European sites and should be Habitat Regulation Compliant. Natural England advise timely completion of the option appraisals and their associated Habitat Regulation Assessments and that the solutions are in place and commenced as soon as possible.

**ESW Response:** HRAs have now been completed for all three sustainability reduction schemes. The Trinity Broads HRA has been signed off by Natural England.

The Geldeston Meadows and Alde / Ore HRAs have also been completed and have been included in the draft Final WRMP.

**Change:** All three HRAs will be reproduced in an Appendix to the draft Final WRMP.

Natural England recognises that ESW have not completed SEA and HRA assessments of the dWRMP. We advise that the company, as a Competent Authority, needs to have confidence in these decisions in the light of potential relevant changes in relevant context. This should be considered in the development of the final WRMP. Natural England



welcomes the strategic approach to future supply demand balance and the promotion of Water Resource East Anglia (WREA) project.

**ESW Response:** The draft WRMP will be updated to include the final Trinity Broads HRA and the draft HRAs for Geldeston Meadows and the Alde / Ore.

**Change:** Update the draft Final Plan accordingly.

### 3.5 NFU

NFU were reassured by ESW's willingness to engage with stakeholders through the process of securing the Abberton Scheme. It is also pleased that ESW is actively involved with Water Resources East Anglia which it is also keen to play a part in.

The main points in NFU's representation were as follows:

**Leakage:** NFU said that to combat future water scarcity, it must go beyond delivering 'economic' levels of leakage performance.

**ESW Response:** Our future leakage target remains at 66Ml/d which is significantly less than the Sustainable Economic Level of Leakage which is 86.2 Ml/d.

**No Change.**

#### Levels of Service

NFU said it will be interested to learn of the steps that ESW will take to safeguard levels of service in water supply to rural businesses, all of whom rely on an uninterrupted supply of wholesome water.

**ESW Response:** Water supply to non-residential customers during drought is covered in our Drought Plan which can be found on our website: <http://www.eswater.co.uk/your-home/environment/drought-plan.aspx>

**No Change**

#### Achieving sustainable levels of abstraction

NFU highlighted that many or most catchments in Essex and Suffolk are over-licensed or over-abstracted. NFU recognise the challenges that ESW faces in providing an uninterrupted supply of water for drinking and sanitation in the long term. But it also said that some historic licences are of volumes and/or in environmentally sensitive locations that make them unsustainable. NFU said that the impact of these unsustainable abstractions on farmers can be extreme; many farmers have no access to extra water because there is none left to be licensed, and restrictions imposed on farmers' use of water in short term times of scarcity are not unusual. It continued to say that farmers face significant risks in obtaining access to sufficient water to grow our food, and believes that an important way of relieving some pressure on water for food production is to restore public supply to sustainable levels of abstraction.

**ESW Response:** Over licensed and over abstracted catchments are identified in the Environment Agency's (EA) Catchment Abstraction Management Strategies (CAMS).

Unsustainable abstraction is also identified by the EA through its ongoing water Framework Directive (WFD) assessments.

Where water company abstractions are deemed to be unsustainable and causing significant adverse effect, these have been flagged by the Environment Agency and included in water companies' National Environment Programmes (NEP). Water companies are expected to fulfil the requirements of its NEP both in its Water Resources Management Plan (WRMP) and in its Business Plan where funding is required. ESW's NEP is fully considered in its WRMP.

ESW understands agriculture's need for water resources going forwards. It believes that holistic water management is an important project in this respect of which both ESW and NFU are members of the project group.

**No Change.**

### 3.6 Ofwat

Ofwat identified the following areas for further consideration in finalising its dWRMP.

Ofwat suggested that ESW should provide more information on customer research on levels of service and how customers and stakeholders were consulted and what the results of these consultations were. It also asked for further information on consultation with local authorities when preparing the population forecast.

**ESW Response:** Given our supply surplus, we are not looking to develop any new water resource supply schemes over the planning horizon. Therefore, with the agreement of our customer challenge group, customer consultation has focused on metering and Levels of Service.

Section 2.10.1 of our Plan now includes information on customer research into Levels of service. Section 5.4.1 (Customer Consultation) has been updated to provide further information on customer consultation, specifically in relation to metering.

With regard to the population forecast, Section 4.3.4 has been updated to provide further detail of the methodology used.

**Change:** The Plan has been updated as above.

With regards to compulsory metering, leakage reduction and water efficiency, Ofwat said that ESW should provide an economic justification for choosing between the 'do the right thing' options it considers.

**ESW Response:** We are no longer pursuing a compulsory metering strategy from 2015 to 2020. Instead, in Essex we are to continue with the current strategy of optant metering and selective metering on change of occupier of a domestic property. In Suffolk we are to continue with the current strategy of optant metering but also introduce selective metering on change of occupier of a domestic property.

The company's Essex leakage target is significantly below its Sustainable Economic Level of Leakage since the completion of its Abberton Scheme. There is no economic justification to lowering it further.

We have provided information on metering costs in the draft Final Plan.

We have compared metering costs in the draft Final WRMP.

We have provided information on metering costs to our PR14 Customer Challenge Group known as our Water Forum.

We are no longer pursuing a compulsory metering strategy from 2015 to 2020 (see above).

Information on how households that have certain specified high use of water will be selectively metered has been included in the draft Final Plan.

**Change:** We have updated Section 5.4 of the Plan to provide further information on each of the areas identified by the Environment Agency.

**Change:** Section 5.4 of the WRMP has been updated to cover our revised metering strategy.

### 3.7 Suffolk County Council

Suffolk County Council's representation confirmed that ESW's WRMP provides a great deal of technical information and demonstrates the steps taken to reduce consumption through behaviour change and to control leakage, activities for which ESW should be commended and encouraged to continue. The key points made in their representation are detailed below.

The availability of water in Suffolk is, to our knowledge, over-licensed and over-abstracted. Greater detail could be provided on the actions to address these challenges and the balance between water for the environment and customers. Water availability and quality are important environmental issues for the many water dependant habitats in Suffolk – many of which underpin the county's attraction to tourists.

**ESW Response:** Over licensed and over abstracted catchments are identified in the Environment Agency's (EA) Catchment Abstraction Management Strategies (CAMS). Unsustainable abstraction is also identified by the EA through its ongoing water Framework Directive (WFD) assessments.

Where water company abstractions are deemed to be unsustainable and causing significant adverse effect, these have been flagged by the Environment Agency and included in water companies' National Environment Programmes (NEP). Water companies are expected to fulfil the requirements of its NEP both in its Water Resources Management Plan (WRMP) and in its Business Plan where funding is required. ESW's NEP is fully considered in its WRMP.

**No Change.**

Suffolk County Council is working with Internal Drainage Boards, land managers, the Environment Agency, Natural England and Anglian Water on a pilot project to manage water holistically, looking at surface water capture and storage and local use to support economic activity, growth and the environment. Suffolk County Council would welcome the opportunity to work with DEFRA, the water companies and other interested parties to further the knowledge and potential for this type of approach.

**ESW Response:** ESW is already an active member of the Holistic Water Management project and has attended all of the meetings since the start. The pilot catchment is the Deben. While we do not supply customers or abstract water from the Deben catchment,

we believe it is important to be part of the project given our own experience in catchment management and that the lessons learnt from this pilot, can be applied in our own catchments.

**No Change.**

The resilience of ground water sources to the effects from a changing climate is not fully described in the WRMP. The potential effects from a drought, such as through the use of the 4R model, are described, but saline intrusion is not detailed.

**ESW Response:** Royal Haskoning has undertaken a detailed flood risk assessment for all its major assets. Only Alder Carr well has been identified as being at risk of saline intrusion.

**No Change.**

The WRMP should include an indication of measures to reduce ESWs carbon footprint (and any appropriate targets) through water resource management, not just through leakage.

**ESW Response:** We have included an estimate of carbon emissions from our current operations in Section 6.2.

**Change:** The draft Final Plan has been updated accordingly.

Essex and Suffolk Water will be aware of the proposal by Progress Power for a 299MW gas-fired power station at Eye, which should be considered in finalising the WRMP.

**ESW Response:** We are aware of the proposal.

**No Change.**

Population forecasts have informed the assessment of growing demand and those used in the WRMP are logical and have been updated to reflect the headline results of the 2011 census. However, like the Office for National Statistics' Interim results, the background trends are the same as the 2010-base projections, which means that the birth and other rates might not be correctly applied and could affect the reliability of the forecasts.

**ESW Response:** We acknowledge your comment, however, we are required to follow the Water Resource Planning Guidelines with regard to the use of source data.

**Change:** No Change

Given the lower economic performance since the credit crunch of 2007 (an indication of which is the number of residential transactions being still 38% lower than in August 2007) the short-term nature of the other population scenarios used is questionable. The six year average dwelling completion rate will be affected by the last four years, which have been the lowest completion levels since 1990. The number of pipeline planning applications will also be affected by the economic downturn as these tend to be 35% lower than the summer of 2007. Furthermore, the pipeline planning applications should be following the

local plans, which are longer-term plans, whereas pipeline planning applications reflect short-term conditions.

**ESW Response:** The population and property section (4.3 to 4.5) of our draft Final WRMP has been expanded to include an explanation for the scenario we have used.

**Change:** No Change

Given the fact that the local plans produced by local authorities are also based on population and household projections (sometimes from the same source) and form the only basis to make a judgement on the future spatial pattern of development relating to the water resource zones, all water companies should reflect the content of local plans in WRMPs. The uncertainty of development being completed may be a valid reason for not basing the WRMPs on local plans, but the very function of the planning system is a valid reason for using these in forming scenarios.

**ESW Response:** The method we have used to forecast population is inline with the Water Resource Planning Guideline which we are obliged to follow. Additionally, we also agree that the uncertainty around development being completed may be a valid reason for not basing our WRMP on local plans. Population forecasts do vary over time and this has been demonstrated in section 4.3.1 where we have included a graph showing forecast population for 2025 for each of our previous WRMPs. There is variation although importantly, our Water Resources Management Plan and population forecasts are subject to a full review every 5 years allowing best available information to be used.

**Change:** Section 4.3.1 has been updated.

Suffolk County Council contributes to the production of the [East of England Forecasting Model](#) (EEFM), which also informs the production of local plans. This model could be used more widely by water companies as a demographic tool and to relate economic prospects to likely demand. By way of example, the WRMP forecasts a decline in consumption from the large food and drink customers in Suffolk from 3.9 to 3.4 million litres per day. The latest run of the EEFM indicates that, in terms of value (GVA), food and drink manufacturing will continue to grow in Suffolk, but particularly in Mid Suffolk which includes a cluster of such firms in the Hartismere water resource zone.

**ESW Response:** We acknowledge your comments although we have found that forecasting from our trend is the most appropriate method as this provides the closest forecast to out-turn data.

**Change:** No Change

The WRMP indicates a declining consumption trend for the sector. This might be influenced by demand management measures promoted by Essex and Suffolk Water and could be correct. But the WRMP is not clear on the linkage between sectoral trends and trends in consumption. Suffolk County Council is available to assist Essex and Suffolk Water with regard to key sectors and to incorporate the issues identified in the Suffolk Growth Strategy.

**ESW Response:** We thank you for your offer of assistance which we will be pleased to accept for future updates.

**Change:** No change

### **3.8 Uttlesford District Council**

Uttlesford District Council had no comments to make on the WRMP.

**No Change.**