



**Northumbrian Water
Draft Water Resources Management Plan 2008
Statement of Response to Consultation**

January 2009

Northumbrian Water
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1.0 Background

The requirement for water companies to produce a Water Resources Management Plan is formally set out in the Water Resources Management Plan Regulations, 2007 and the Water Resources Management Plan Direction, 2007. The 2009 Periodic Review (PR09) water resources planning process is effectively regulated by the Secretary of State and the Environment Agency.

Organisations consulted before and/or during production of the draft Water Resources Management Plan (dWRMP) document included Defra, the Environment Agency and Ofwat,

Statutory consultees of the published draft version of this document as required under the Water Resources Management Plan Regulations 2007, were:

- Ofwat
- Environment Agency
- Secretary of State (c/o Defra)
- Regional Development Agencies covered by the area of the Plan
- Any elected Regional Assembly covered by the area of the Plan
- All Local Authorities in the area of the Plan
- Natural England
- The Historic Buildings and Monuments Commission for England
- Navigation authorities operating in the area of the Plan
- The Consumer Council for Water

In addition Northumbrian Water welcomed comments and representations from the wider community, including customers and other interest groups.

Written representations on this dWRMP were sent to the Secretary of State (c/o Defra's Water Supply & Regulation Division) and were then forwarded to Northumbrian Water at the end of the consultation period.

The consultation period on Northumbrian Water's dWRMP was 12 weeks long, commenced on 2 May 2008 and closed on 25 July 2008. During this period the plan was available on the Company's website.

Section 4 of the Water Resources Management Plan Regulations, 2007 indicates that Northumbrian Water must produce a consultation statement (ie. this document) detailing:

- (a) the consideration that it has given to representations
- (b) any changes that it has made to the dWRMP as a result of its consideration of those representations and its reasons for doing so; and
- (c) where no change has been made to the dWRMP as a result of its consideration of any representation, the reason for this.

The Statement of Consultation (ie this document) has to be produced by Northumbrian Water, by the 30th January 2009, and will be made available on our website.

2.0 List of Respondents

Comments on Northumbrian's draft WRMP were received by Defra by the end of the consultation period from the following organisations; as listed in alphabetical order:

- Consumer Council for Water (Northern)
- English Heritage North East Region
- Environment Agency
- Natural England
- Northumberland County Council
- Ofwat
- One NorthEast
- Tyne Rivers Trust
- Waterwise
- Woodland Trust

No responses were received from individuals (neither customers, nor the general public).

A summary of the responses received and Northumbrian Water's consideration of each is indicated in the following section.

3.0 Summary of Representations and Consideration Given

CONSUMER COUNCIL FOR WATER (NORTHERN)

CC Water's comments were generally complimentary and considered that Northumbrian Water (NW) had "undertaken an extremely detailed plan considering it has water resources far in excess of current or predicted future demand" and questioned the absolute need for NW to have prepared a dWRMP to this level of detail, suggesting it would be "more cost effective to undertake an initial screening to identify customers with resource issues that could then be submitted to extensive enquiry to identify solutions"

CC water shared the concerns expressed in the dWRMP regarding the discrepancies between the population forecasts of the Office of National Statistics (ONS) and the company's own predictions suggesting that with the excess resources in NW's area this is not as great an issue as it may be for other companies.

CC Water expressed an interest in the potential for NW to supply greater quantities of water outside its geographical area.

NW Consideration

We thank CC Water for its positive comments on the detailed modelling and commentary within the dWRMP.

Regarding the issue of the necessity to produce such a detailed plan, NW is obliged to follow the Defra Regulations and EA Guidelines which are set out for all companies irrespective of their overall resources position. In doing so we were able to demonstrate the strength and resilience of our resources network with respect to current and future demands. NW has resisted doing extensive analysis where there appeared to be little benefit.

New population figures have now been used for the draft WRMP, based on the ONS revision of populations carried out in June 2008. Whilst there are still some doubts about how accurate population and property growth figures are, we are now more comfortable with the revised numbers.

As part of the process of producing the dWRMP we held discussions with neighbouring water companies to ascertain their needs regarding availability of raw water particularly in times of drought, from NW. These companies did not consider this to be an economic solution to any shortfalls they may have forecast and therefore we could not include any such water export in our plan.

NW Conclusion

We will continue to comply with Defra guidelines and requirements but ensure additional expense is not encountered where it is not cost beneficial.

New property and population numbers have now been used in the draft plan.

Currently no additional exports are required by neighbouring companies but we will remain responsive to any requests.

ENGLISH HERITAGE NORTH EAST REGION

English Heritage note that there is no major resource development proposed within the draft WRMP but would expect the company to seek their advice, as they state Northumbrian Water does before all construction, in association with the construction required to pipe out the 2 small spring sources.

NW Consideration

We note EH's comments and assure them our aim is to continue following good practice in all of our construction activity.

NW Conclusion

No change required.

ENVIRONMENT AGENCY (EA)

The EA states that "NW needs to review the integrity of its water resource planning zones in order to take account of infrastructural limitations which reduce its ability to transfer water within zones. This concern applies to both zones"

The EA states that the company should revise the Deployable Output (DO) assessment of its surface water sources and describe the work done to update the i-Think water resource system model. The updated Ground water yields assessment should also be included as well as a comparison between the DO figures from 2004 and the current values. They also state NW must ensure that DO figures correspond to the annual licence limits and demonstrate the methodology used in deriving them.

Regarding Headroom the EA states that NW should review its headroom calculations and that the company should "provide justification for including one of the lowest headroom allowances in the country" providing evidence of all the components it has taken into account in its headroom calculation, particularly in respect to the impact of climate change scenarios.

The EA recommends that NW should include further details of climate change on supply and DO including uncertainties to the calculation of headroom.

The EA expects NW to justify why it cannot achieve a higher meter penetration during the planning period and recommend NW consider whether the application of selective metering in 2020/21 is genuinely at the expense of meter optants. The EA state they are disappointed that "the company has not appraised the full range of viable metering options available especially in relation to change of occupancy" and "expect the company to present all the details surrounding metering options, including costs and economic appraisal".

The EA believes NW should set out a strategy to show how it will reduce pcc towards the governments aim of 130 l/person/day and expect NW to increase its programme of water efficiency with non-household customers.

The EA states that NW has "chosen not to complete a Strategic Environmental Assessment (SEA) as it have no options to rectify a supply demand issue. We encouraged the company to complete an SEA when they consulted us before making this decision."

NW Consideration

Internal Integrity of Water resource zones

We fail to understand how this conclusion has been reached. A schematic of our raw water network was made available to the EA which clearly shows the connectivity throughout both zones and was discussed with the EA. The Kielder WRZ is a very robust system which utilises the Kielder Transfer Scheme to ensure water is available to our treatment works in excess of their licensed DO and therefore maintaining the healthy surplus within the zone. The Ofwat Reporter, who carried out a full audit of the zones reached the following conclusion :-

“It is also noted that the following decisions have been made to strengthen the resilience of the two RZs to improve their overall operational robustness:

For Kielder RZ, this means pipe connections to areas supplied by springs to enable future supply from surface water treatment works within the RZ; and

For Berwick & Fowberry RZ, studies are already underway by NW to establish how best to link Berwick and Fowberry areas within the RZ together with a temporary license increase for supply into Fowberry. It is the intention of NW that the link between Berwick and Fowberry would be completed within the early part of AMP5 period.

In summary the key conclusions and outputs with respect to the forecast supply demand balance highlights no significant issues at a resource zone level in either Kielder or Berwick & Fowberry”

We would also refute the statement that there is not a secure supply of water to the Berwick and Fowberry zone. The draft WRMP states that work will be undertaken in AMP5 to improve the connectivity of supplies within this zone. This work is currently the subject of a feasibility study within NWL but will be based on taking advantage of the excess licensed capacity in the Berwick zone and laying a new pipeline to transfer the water into the Fowberry zone. This will leave comfortable headroom in both areas of the Berwick / Fowberry WRZ. Funding for this work has been submitted in the company’s draft Business Plan. These proposals have been discussed on numerous occasions with the EA

Studies to enhance the understanding of the resilience of the supply system has been carried out over the last couple of years to ensure sufficient supplies available to meet the demands in the various Kielder WRZ sub zones. Data from these studies have been used to enhance the NW submission and the output from the studies was openly discussed with the EA. We believe the EA’s comment has been based on their previous understanding of the zone and does not reflect the current position.

For the above reasons we do not agree with the EA Recommendation that “there are resource zone integrity problems that leave pockets of people at higher risk of supply failure”

Deployable output

The comment on revising the deployable output for the surface waters is in stark contrast to the comments from Ofwat and the Ofwat Reporter:-

OFWAT also agreed with Atkins that NW had reassessed its Deployable Output in line with EA guidelines and had changed values as a result of better application of the methodology showing greater understanding and confidence in the current figures in comparison to WRMP04.

One of the problems with the EA's comments is that, as opposed to previous Water Resource Plans, there has been no audit with the company of any of the components of supply and demand and its conclusions are based on reading the plan only and previous knowledge of the company's system from the 2004 WRP process. Whilst this was deliberately done at "arms length" by the Agency to comply with its interpretation of the WRMP Directions, it has led to some confusion that could have been avoided had meaningful dialogue and audit been carried out with the company such as those with the Ofwat Reporter. The company had met with the EA on numerous occasions during the development of the draft WRMP but the meetings were restricted to the company providing details of what we were proposing but no feedback on the proposals being given to us by the EA.

Section 3 of the draft WRMP does give a table comparing the DO of each water treatment works between WRP 2004 and the dWRMP 2008 and also describes why the DO has changed between the 2 plans.

The updated i-Think model has been completed and presented to the EA. A description of the update procedure and effect of climate change has been included in the draft plan.

Headroom

The term "headroom allowance" has been used in the EA response on headroom which we assume relates to our target headroom methodology and result. We disagree with their comments and they are not shared by the Ofwat Reporter who fully audited the method and assumptions used in the methodology and reached the following conclusion :-

Completeness

NW has demonstrated that the application of this methodology has been carried out fully for both of the Kielder and Berwick and Fowberry RZs.

Methodology

As stated above, we confirm that NW has applied the methodology contained in UKWIR document 'A Practical Method for Converting Uncertainty into Headroom' 1998 to generate the target headroom figures for each of the RZs. This methodology is based upon the identification of the principal uncertainties in the supply/demand balance assessment and assigning scores to each of these categories of uncertainty. This total score for each RZ is then converted into a Target Headroom value.

Within the methodology eleven categories of uncertainty are considered, eight of which are supply related and three are demand related. NW provided a summary of the main contributing factors, within the NW RZs, as follows:

Supply-Related

1. *Vulnerable surface water licences – none identified at present;*
2. *Vulnerable ground water licences – none identified at present;*
3. *Time limited licences – none identified at present;*
4. *Bulk transfers – Only small rural transfers across the Company boundary;*
5. *Gradual pollution causing a reduction in abstraction- none identified at present;*
6. *Accuracy of supply side data – assessed as good; accurate records > 81yrs);*
7. *Single source dominance – Kielder Res. - critical period > single season.*
8. *Uncertainty of Climate Change on Yield - a case 2 best estimate.*

Demand-Related

1. *Accuracy of sub-component data – reliability class mostly A, reconciliation item from initial water balance – good.*
2. *Demand forecast variation – Demand falling - case 1; WAFU spread < 15%.*
3. *Impact of Climate Change on demand – low*

This document provides a methodology with Proformas requiring completion in order to derive 'Target Headroom' figures for each RZ under investigation.

Given this conclusion was reached as a result of a very full audit undertaken with the company and all documentation was available for the audit, we do not accept that the method of calculation requires any revision.

The effects of climate change on demand has been included in the pcc used for the demand forecasts, and the effects of the other different climate change scenarios has been forecast in the micro-component models, as detailed in the draft WRMP. With this information we do not believe that the target headroom demand component iii should be changed from "low".

The statement that we should justify having one of the lowest target headrooms of all the water industry is we believe self explanatory. NW operates in one of the most water resource rich areas of the Country, it is shown to be the least affected area by climate change predictions, the presence of Kielder Water and the Tyne/Tees transfer allows exceptionally large movements of water across the region and we have declining followed by almost stable demand over the planning period. The available headroom at the end of the planning period is over 160MI/d without requiring any resource development. The target headroom is 46MI/d, giving a positive supply demand balance of 114MI/d. Given this large surplus in 25 years time, and an even larger surplus today, it is difficult to understand your comment that *"We are concerned that this (low target headroom sic) might represent an unacceptable level of risk to the security of supply to customers"* We cannot agree with this view nor understand how it has been reached.

Metering

The company, with available headroom of over 160 MI/d at the end of the planning horizon (2035) has no economic case for selectively metering to aid its supply demand balance. As a company, in an area of low water stress we have to judge where the greatest benefits come from investing our customers' money, whilst ensuring water bills remain affordable. Our judgement is that water metering, beyond optant metering, is not our highest priority over the next 10 years. Metering is expensive in terms of capital investment for installation and significant additional operating costs involved with reading and billing. These additional costs are borne by the whole customer base and cannot be imposed without rigorous justification, which we do not have. Our plan to stimulate optant numbers to maintain a 1.5% increase in meter penetration per annum already goes beyond a passive response to customers opting of their own accord.

The statement that "a number of similar water companies have demonstrated that higher levels of metering are possible and appropriate" is difficult to reconcile as the Agency has made the same comment for Yorkshire Water, Severn Trent and United Utilities. These being the Northern based water and sewage companies in areas not seriously water stressed are the only similar companies to NW therefore, we do not understand which companies the EA is referring to.

Post 2020/21 the number of optants will decrease due to the households most likely to opt having already done so and previous optants moving to another unmetered property would form the bulk of "new" optants. However, under a change of occupancy metering policy, they will now have their new property metered selectively rather than having to opt. As such a selective policy depresses the number of Optants as we have found in our Essex area.

Per capita consumption

In 2030 the average weighted per capita consumption in the draft plan (normal year) was 149.65 l/h/d. At the time of constructing the pcc forecasts for the draft plan the Ofwat consultation on water efficiency targets was not published nor was the consultation on Part G of the Building Regulations dealing with the water efficiency of new homes. We used a

sophisticated micro-component model as we were required to do under the planning guidelines. The pcc forecasts came from this model that was populated with the best information available at the time including the effects of climate change on demand.

The draft plan has now been changed so that the micro-component figures are still used but reduced each year by the effects of Ofwat's water efficiency target and from April 2010 all new homes will be assumed to have a normal year pcc of 125 l/h/d, in accordance with the amendments to Part G of the Building regulations. This will reduce the normal year weighted average pcc in the revised draft WRMP from 146.15 l/h/d in 2007/08 to 133.59 l/h/d in 2030/31. It is very unlikely to reach 130 l/h/d until some mechanism is introduced by Government to fund and carry out the large scale retrofitting of water use in existing properties necessary to get near the 130 l/h/d aspirational figure.

The level of water efficiency carried out on non-households has now been set at 0.32Ml/d/annum following Ofwat's final Water Efficiency Targets.

Our plan does not contain any development proposals over the whole of the planning horizon, beyond those carried out within the normal operation of a water company. As such our interpretation of the Strategic Environmental Assessment regulations remains that this plan does not require a SEA.

NW Conclusion

NW will not change their water resource zones from the current 2 in the draft WRMP.

Description of climate change work on models has been included in the revised draft plan.

Target headroom remains unchanged.

The metering proposals have not been changed.

In the draft WRMP the per capita consumptions have been reduced from April 2010 in line with Ofwat's water efficiency target for existing properties and new homes pcc has been reduced from April 2010 in line with the amendments proposed to Part G of the Building Regulations.

A SEA will not be prepared

NATURAL ENGLAND

In Natural England's view there are no European sites that are likely to be significantly affected by proposals outlined in the dWRMP but in order to address the need for a Habitats Regulations Assessment (HRA) they advise NW to include reference to consideration of this issue and to provide a clear statement of the conclusions drawn as to impacts on European sites. Similarly they recommend a statement on the decision to not include a Strategic Environmental Assessment.

Natural England asked for clarification on the nature of the work proposed in the Berwick and Fowberry zone and that if this will involve new boreholes since this could have implications for European sites and SSSI and would require further assessment.

Natural England would welcome inclusion in the plan of potential opportunities for biodiversity and how biodiversity enhancements might arise out of the plan through for example the maintenance of river flows to benefit habitats.

Regarding supply/demand balance Natural England strongly recommends the WRMP should demonstrate evidence to further water conservation and that this should be pursued as far as possible through demand management rather than increasing supply. They also advise that water efficiency should be a key driver behind the whole philosophy of the plan and that Natural England supports water efficiency measures and a pcc that is at an average of 130 litres/person/day by 2030 or below in line with Defra's strategy 'Future Water'

Natural England also asks that in light of the considerations on greenhouse gas emissions from water supply made in the WRMP will energy efficiency measures over the plan period allow NWL to reduce its costs and emissions?

The recently published North East Strategy for the Environment (NESE) recognises the importance of the regions water resources and the need for their protection, sustainable use and management. Natural England state that the WRMP has a significant role to play in delivering this objective and recommend inclusion of this in the final plan.

Finally Natural England overall found the document difficult to work through and recommend a shorter final version with some of the detailed analysis presented as annexes.

NW Consideration

There is no resource development proposed in the plan therefore new possible effects on Habitat sites from development are not an issue. Any effects on current sites would be included in the National Environment Programme investigations but again none are required. We do not see this planning process as being relevant to potential opportunities for biodiversity enhancements as there are no drivers that could be used to consider them under. The draft plan now sees demand reducing towards 130 l/h/d, although not reaching it, by 2030 as the Ofwat water efficiency target and the amendments to Part G of the Building Regulations are included in the demand forecasts.

The company is continually striving to reduce energy consumption, or increase green energy generation, but these areas are contained in its draft Business Plan to Ofwat rather than in the draft WRMP.

The NESE outputs are more for consideration within the National Environment Programme or abstraction licensing regimes than the draft WRMP but have not appeared in either, as yet.

NW Conclusion

New demand forecasts in the draft WRMP now show a declining domestic pcc.

NORTHUMBERLAND COUNTY COUNCIL (NCC)

NCC commented on the reduction of leakage target by 2014/15 of over 14 MI/day being significantly less than the decrease from the current actual level.

NCC welcomed the ability to manage and assess water demand in the Berwick water resource zone and also the proposed ground water model for the Fell Sandstone aquifer in that area. There was also a suggestion that reference is made in the final plan to the potential risk of pollution in that area.

The Council expressed concerns that the dWRMP “fails to provide an appropriate context as part of the assessment of water demand “ based on the text and information in Appendix 1 and that population information should be based on ONS population statistics.

The conclusion in section 4.4.7 Overall Household Demand is also questioned by NCC in that if demand is constant but occupancy levels fall then the amount of water used per person will increase by around 10 l/hd/day.

NCC suggests the inclusion of a statement identifying the problems caused by macerated food from sink waste disposal units.

NW Consideration

NCC is correct that the new leakage targets for 2010 onwards, whilst being 14MI/d less than previous targets is not such a large decrease from our current leakage level. This is to do with changes to the Economic Level of Leakage (ELL) methodologies between the Water Resource Plans of 2004 and 2009. However leakage targets for the 5 year periods are set on the ELL calculated prior to the 5 years beginning. In effect Northumbrian Water could have allowed the leakage to rise to our current target until 2010 and then reduced it to our new target post 2010. However this would not have made economic or environmental sense, therefore we strive to get leakage as low as possible within an economic framework.

Work on the groundwater model is due to start in October 2008 and will be carried out in partnership with the EA. It is not anticipated that that this model will result in any reduction in the licenced volumes available to NWL and will therefore not impact on our Deployable Output in the area. Regarding the risk of pollution whilst it will form part of the proposed conceptual model it is considered to be no higher in this aquifer than any other from which NW abstract. Monitoring of raw water quality is undertaken as a matter of routine operation and in the event of any issue an individual borehole can be shut down for a period without detriment to our overall ability to maintain supply.

Appendix 1 was the source document for the conclusions on population that were reached in Section 4.2.1 of the plan. The reports in the Appendix referred to Northumbrian Water, Essex and Suffolk as they all form part of NWL and it was thought of interest to compare and contrast what was detailed in each area to help to put the results in some form of context. The guidelines do require populations to be based on ONS data and they were, albeit we decided to continue with the 2004 data because of our concerns with the 2007 update. In the event we were correct to doubt the figures presented to us from 2007 as the 2008 Experian update, based on the ONS 2008 revision, look more realistic. The 2008 figures have now been used in the draft WRMP. New property growth is now based on the latest Regional Spatial Strategy housing allocations for the North East.

Post the construction of demand forecasts for the draft WRMP, Ofwat have issued a consultation document on water efficiency targets for all water companies and a consultation on amendments to Part G of the Building Regulations was also issued. The effects of these on pcc has now been incorporated into our demand forecasts in the draft WRMP which now results in a gradually declining pcc over the planning horizon.

A policy on food macerators is not appropriate for a water resource plan, although the use of macerators could be included in the micro-component modelling for pcc. However, discussion is ongoing in the water industry with various stakeholders as to the appropriateness or not of food macerators being used as opposed to food matter going into the solid waste stream.

NW Conclusion

No change

No Change. We do not consider it necessary to refer to the potential for a pollution incident regarding the aquifer.

The revised 2008 figures have now been used in the draft plan.

The water efficiency and Building Regulation changes have been included in the demand forecasts

No change

OFWAT

OFWAT stated that NW should “consider more carefully the security of supplies in local areas within the Berwick & Fowberry zone” and to provide more information on feasibility studies on “infrastructure improvements to improve connectivity between Berwick and Fowberry” and how this will improve its resilience of supply in the final WRMP.

OFWAT expects that NW should consider the impact of climate change in more detail in both zones.

OFWAT expects NW to refer to the “ final Regional Spatial Strategy for the North East (where available) for its population/property assumptions in the final WRMP”

NW should factor into its final plan the base service water efficiency targets that will be set in Autumn 2008.

OFWAT expressed concern that NW expects pcc to remain constant and expects water efficiency initiatives to be taken into account in the final plan.

OFWAT also agreed with Atkins that NW had reassessed its Deployable Output in line with EA guidelines and had changed values as a result of better application of the methodology showing greater understanding and confidence in the current figures in comparison to WRMP04.

There is an expectation for an allowance to be made in the final plan for the potential impact of flooding for each zone in the outage assessment.

OFWAT expects NW to do more work on population data uncertainty in time for the final plan.

For the final plan OFWAT expects NW to “disaggregate non-household demand forecasts at the resource zone level to comply with EA guidelines.”

OFWAT thinks NW should quantify the costs and benefits of additional metering in order to determine an appropriate metering strategy, although they acknowledge NW “does not need to pursue a more active approach to metering in order to address an imbalance between supply and demand.”

The proposed water efficiency in new homes when finalised should be taken into account in the final plan.

OFWAT is concerned that NW has not clearly justified its demand scenario choices and expect more information in the final plan and also expects more detail on the impact of climate change on non household demand.

OFWAT believes that although NW has not considered an option appraisal process it still needs to “ consider whether or not the benefits of additional demand management would outweigh the costs taking into account all of the financial, social and environmental costs and benefits.

NW Consideration

Water Resource Zone Integrity

We do not agree that there is any issue with the security of supply at a local area within either water resource zone. A proposal for AMP5 to enhance the cross linking within the Berwick zone to deal with future growth areas of the zone is currently undergoing a feasibility study, but this is a general part of planning for growth. Similarly work undertaken during AMP4 has identified and rectified areas within the Kielder zone where growth has required investment to build in resilience and ensure continued security of supply. The Ofwat Reporter thoroughly audited the integrity of our water resource zones and his report contained the following statement:-

It is also noted that the following decisions have been made to strengthen the resilience of the two RZs to improve their overall operational robustness:

For Kielder RZ, this means pipe connections to areas supplied by springs to enable future supply from surface water treatment works within the RZ; and

For Berwick & Fowberry RZ, studies are already underway by NW to establish how best to link Berwick and Fowberry areas within the RZ together with a temporary license increase for supply into Fowberry. It is the intention of NW that the link between Berwick and Fowberry would be completed within the early part of AMP5 period.

In summary the key conclusions and outputs with respect to the forecast supply demand balance highlights no significant issues at a resource zone level in either Kielder or Berwick & Fowberry.

Climate Change

The impacts of climate change on the i-Think model and the Magnesian Limestone aquifer model have now been included in the draft plan. Work on the conceptual model of the Fell-sandstone aquifer supplying Berwick and Fowberry will commence in October in partnership with the EA and should be available for the final plan.

Population/property assumptions

The population numbers have now been revised in the draft plan with the base year based on the ONS June 2008 population revision. Similarly the new projected housing growth incorporated in the RSS has been used as the base for future housing. The current economic conditions in the housing market have been considered and an appropriate reduction in forecast housing growth over the next few years has been included in the plan.

Water efficiency targets and pcc

In 2030 the average weighted per capita consumption in the draft plan (normal year) was 149.65 l/h/d. At the time of constructing the pcc forecasts for the draft plan the Ofwat consultation on water efficiency targets was not published nor was the consultation on Part G of the Building Regulations dealing with the water efficiency of new homes. We used a sophisticated micro-component model as we were required to do under the planning guidelines. The pcc forecasts came from this model that was populated with the best information available at the time including the effects of climate change on demand.

The draft plan has now been changed so that the micro-component figures are still used but reduced each year by the effects of Ofwat's water efficiency target and from April 2010 all new homes will be assumed to have a normal year pcc of 125 l/h/d, in accordance with the amendments to Part G of the Building regulations. This will reduce the normal year weighted average pcc in the revised draft WRMP from 146.15 l/h/d in 2007/08 to 133.59 l/h/d in 2030/31. It is very unlikely to reach 130l/h/d until some mechanism is introduced by Government to fund and carry out the large scale retrofitting of water use in existing properties necessary to get near the 130 l/h/d aspirational figure.

Deployable output

We welcome the recognition of our improved DO figures.

Flooding

Our outage calculation is based on outage events in the preceding years, taking account of the frequency of occurrence, loss of volume and duration of the event, and looking at the likelihood and probability of the event re-occurring in the future. In the context of flooding, outage events associated with severe rainfall / flooding are recorded when the raw water quality from the sources impairs or restricts our ability to treat the water or reduces the volume we can treat. As such this element of flooding is already included in the outage figures. Flooding that would cause the inundation of our assets such as abstraction points or water treatment works has so far not been recorded. Studies into the effects of fluvial flooding on NW assets have shown the vast majority to be resilient against such events. It is proposed to carry out maintenance work on 2 intakes in AMP5 to ensure they would not be affected by severe fluvial floods. We do not intend to include any further allowance in outage for flood related events.

Disaggregate non household demand

The non household demand has now been disaggregated according to the guidance and has also been updated by NERA to reflect the latest available information. These changes are included in the draft WRMP.

We do not see any evidence that our non-household customers demand is influenced by the normal variation in weather between a wet year and a dry year. Similarly we cannot envisage that their demand will be influenced to any significant extent by climate change. The largest cause of variation in non household demand is global economic activity and the uncertainty this causes in our forecasts would totally overwhelm any subtle change to demand from climate change.

Options appraisal

Ofwat recognises, as we do, that in an area where there will still be available headroom of over 160MI/d by 2035 there is no supply demand consideration that would drive metering beyond the currently proposed optant scheme. It suggests that we should look at the social, environmental and financial costs and benefits. This was done but will now be included in the draft plan. However, the area being classed as low water stress does not allow compulsory metering to be included, therefore it is only moving to selective metering that can be considered. This does not result in lower installation costs than optant metering, indeed all selective installations being external gives a higher average cost per meter than optant metering, but does result in a greater demand saving. From a finance point of view this extra saving of water from selectives' in terms of the marginal cost of production and distribution does not compensate for the higher and additional installation costs. With minimal adverse environmental impacts from our abstractions, no environmental case for additional metering can be made. This leaves social benefit. Although metering is undoubtedly the most equitable method of paying for water, if the huge cost of metering everybody just to achieve a fair payment method results in all customers having to pay higher bills to cover the meter costs, then this being a social benefit is debatable. We can see no case for going beyond the optant metering currently proposed. When in the future the number of Optants decrease to too low a level, then a case for selective metering can be made.

In undertaking any additional work we have to remain mindful of CCWater's comments that NW should not be required to undertake work that only adds to the cost of producing the WRMP without any benefit to our customers who already enjoy the greatest surplus of supply over demand in the whole water industry of England and Wales.

Demand scenarios

The draft plan now contains the water efficiency targets, leakage will not be reduced beyond the previous lower ELL and for the reasons given under metering above, metering beyond the currently proposed optant metering will not be pursued. As such the draft plan final planning scenario remains the same as the base scenario.

NW Conclusion**Water Resource zone integrity**

The 2 WRZs will remain as in the original draft.

Population/Property assumptions

New property and population numbers have been used based on the latest NE RSS and on the ONS June 2008 population revisions.

Water efficiency targets and pcc

Ofwat's water efficiency target for NW, based on their consultation document, has been incorporated into the demand forecast along with the 125 l/h/d from Part G of the amendments to the Building Regulations. These both have the effect of reducing the weighted average pcc over the planning horizon.

Deployable Output

No change

Flooding

No change. Additional risk of assets flooding due to fluvial floods will not be incorporated into the outage calculation.

Disaggregate non household demand / effects of climate change on non household demand

The draft plan now contains non household demand disaggregated in accordance with the Guidance. No impact of climate change on non household demand will be included.

Options appraisal

Costs and benefits of moving to selective metering has been included in the text but the final planning scenario remains with only optant metering.

Demand scenarios

No change. The final planning scenario remains the same as the base scenario.

ONE NORTHEAST

The agency is fully supportive of the latest review of the WRMP and welcomes NW's plan to ensure that water resources/demand planning issues are appropriately addressed and regularly monitored and reviewed.

NW Consideration

We thank the Agency for its positive response to our draft Plan.

NW Conclusion

No change.

TYNE RIVERS TRUST (TRT)

The TRT is principally involved with the strategies and operations of NW through the company's deployment of the Kielder Reservoir water resource with releases into the North Tyne and ultimately into the Tyne. The Trust is "vitaly concerned that this water follows a regime generally labelled 'environmentally acceptable flows' and that this issue is has been avoided in the dWRMP."

The TRT anticipate in a dry year demands for releases from Kielder to support energy generation, water quality problems and migratory fish and state that the multiple benefits become restricted if large volumes of water are then abstracted at Riding Mill and that there would be competition for the volumes and timings of the releases as well as the water level within Kielder itself under dry weather conditions.

Under dry year and severe drought conditions TRT anticipates a “strong local clamour for stakeholder debate beyond the views of NW’s customers and beyond the formal regulatory roles of NWL and EA” and unless this is addressed they believe the “confidence so evident in the Draft Plan is misplaced in operational terms and we would seek NWL’s reaction to this rather less environmental/social scenario.

NW Consideration

The points raised from TRT are not part of the draftWRMP as we do not propose any changes to the abstraction licences or the Kielder Operating Agreement within the draft WRMP.

There is a minimum constant release of water from Kielder (compensation flow) which has been determined by the EA with regard to the environmental impacts on the river. In addition to this the Tyne is a minimum maintained flow river in which a minimum flow has to be maintained beyond NW’s last abstraction point, again this flow was determined by the EA. NW must operate within this regime which is implicit in the descriptions contained in the dWRMP.

The various demands for releases are also considered within the Kielder Operating Agreement and are often complementary for example a request for increased flow to improve water quality would provide additional generation and also may encourage more fish up river. The amount of water abstracted at Riding Mill is taken into account in releases from Kielder with due regard to the minimum maintained flow.

As the TRT acknowledged, the issue of a wider debate is beyond the scope of the dWRMP but may be worth consideration in the future.

NW Conclusion

No change

No change

No change

Waterwise

Much of Waterwise’s response is generic as the body of the response is aimed at 6 water companies. 3 points are raised with respect to the NW draft WRMP. Whilst it found our approach to water efficiency was creative it was disappointed that things such as aerated showerheads were overlooked. It also found it difficult to find absolute figures for pcc and details of its projection. It found our metering to be relatively good, but thought the pace was disappointing whilst recognising it was suitable for the level of water stress.

NW consideration

The adoption of Ofwat’s water efficiency target will require more use of things such as aerated shower heads. The tables accompanying the draft report contained full pcc values for every year of the planning horizon.

NW Conclusion

The draft WRMP now includes the Ofwat targets for water efficiency that will require the installation of a range of water efficient fittings to be distributed to customers.

Woodland Trust

The Woodland Trust is concerned that developments of water resources could impact upon ancient woodland and other semi-natural habitats and that more emphasis on protecting habitats should be made in WRMP's when considering options. This includes both direct loss from development and indirect impacts through increased pollution, changing water table or disturbance.

NW Consideration

Whilst NW is not proposing any additional resource development we do take full account of the effects of our work on natural habitats and take seriously our commitment to the wider environment.

NW Conclusion

No change.