

Michael Burrell  
Norwich City Council  
City Hall  
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Letter by E-Mail only

28th January 2010

Dear Michael

**Greater Norwich Development Partnership Water Cycle Study Stage 2b Reports  
(Technical and Non Technical)**

**Anglian Water Services Position Statement**

**General**

Anglian Water has been an active member of the Steering Group for the duration of the Greater Norwich Development Partnership (GNDP) WCS and has provided input to all the stages (Stage 1 – Outline and Stages 2a and 2b – Detail). The purpose of this study should be to inform the relevant stage in the planning process and as such be viewed as supporting information to the Joint Core Strategy.

The purpose of this Position Statement is to provide Anglian Water Services viewpoint regarding the content and findings of the WCS Stage 2b Draft Final Report and its relation to the policies set out in the Joint Core Strategy and also the process through which it has been carried out.

Anglian Water confirms that the process by which Scott Wilson (Authoring Consultants of the WCS) carried out the study was done in such a manner that at the key milestones they have reviewed and re-evaluated what should be regarded as the best information available provided at the time. Following on from this, they have identified a range of levels of uncertainty relating to different aspects of the study, and have explored various options to mitigate the identified constraints which are based upon different levels of sensitivity in relation to these uncertainties. To this end the study, when completely signed off by all the members of the Steering Group, having made the appropriate modifications required, should be regarded as a key document that can be utilised to inform the various Local Authorities within the GNDP, and all other relevant agencies on preparing and implementing policies that go to satisfy the requirements of the East of England Plan.

However, in providing this Position Statement, Anglian Water would like to draw attention to some of the content within the report which it considers to have differences in the interpretation of said content. Details of these will be provided on completion of AWS' internal process of checking the WCS Report.

**Water Supply Strategy**

As it stands the WCS provides some useful perspectives on the availability of water supplies to meet planned development in Greater Norwich. It uses a range of alternative assumption and scenarios that test the WRMP. It does not challenge the conclusion of the WRMP that sufficient water supplies can be made available to meet planned growth.

## Wastewater Strategy Development

The assumptions stated at the beginning of the report set out quite succinctly the tone of the report and whilst ideally it would have been preferable for some of these assumptions not to have been required Scott Wilson have endeavoured to overcome some of the constraints these have presented.

Understanding the existing wastewater network systems and treatment facilities and the impact that the proposed growth has on these assets and their ability to meet the constraints imposed upon them by the various legislative requirements i.e Habitats Directive, Water Framework Directive, has been the main challenge facing Scott Wilson in the undertaking of this study. Within these constraints they have gone a long way to identify how and where the proposed growth may be accommodated.

Because of there having been no detailed information available regarding exact location of the various developments within each Potential Growth Areas (PGA), mitigation measures demonstrating clear viable and sustainable solutions have not been identified for all constraints and as such further work would be required to identify these. Complex and innovative measures may be required to address the constraints however these will need to be tested to ensure sustainability and compliability.

Detailed checking is not complete but AWS does not expect to find any serious objections to the WCS report. It may prove necessary that some minor modifications to the Core Strategy will be required due to the potential impact on Habitats particularly Reepham and Acle.

Sewerage provision will be challenging and a potential strategy has been outlined. This will of course be developed when detailed site locations are available. It should be pointed out that though provision to accommodate the full allocation upto 2026 may be demonstrated the longer term issues of continued growth beyond this date will have significant challenges to overcome.

Rob Morris  
Strategic Planning Engineer  
Anglian Water Services Ltd



## POSITION STATEMENT BY THE BROADS AUTHORITY

### WATER ISSUES RELATING TO THE GREATER NORWICH JOINT CORE STRATEGY

8<sup>th</sup> February 2010

Produced for Members of the GNDP

#### **1.0 Background**

1.1 The Broads Authority submitted objections during the public consultation period on the publication version of the Joint Core Strategy (JCS) in December 2009. The objections were made on the grounds that the document was unsound. The Broads Authority believed that the document did not meet the tests of soundness in that it was not “justified” or “effective” largely on the basis of water issues. Evidence to support the JCS in the form of the emerging Water Cycle Study (WCS) indicated that there were serious issues with water supply, with the quality of water returning to the rivers (and ultimately the Broads) once it had been treated by Waste Water treatment Works (WWTW) and that there would be difficulties in meeting targets for water quality set by the Water Framework Directive (WFD). The Broads Authority considered that the JCS would not be able to prove that its strategy once implemented would have “no effect” on European Designated Wildlife Sites as required by the Habitats Regulations. At the time of the publication of the JCS, the Water Cycle Study had not been completed and therefore the Appropriate Assessment was still outstanding. The fact that the evidence produced to date did not support the JCS and that doubt remained over its deliverability led the Broads Authority to raise objection.

#### **2.0 Water Cycle Study Stage 2b**

2.1 Further work has been undertaken by the consultants working on the Water Cycle Study since the publication of the JCS in November 2009 and clarification of the scale, nature and resolvability of some of the specific issues around the Waste Water Treatment Works has been completed.

2.2 Whilst the further work undertaken on the WCS is welcomed and the fact that a number of the uncertainties that existed in December 2009 have been clarified, the severity of the issue is now much clearer. The Water Cycle Study considers the scenario of “planned deterioration” i.e that the quality of the receiving water courses will deteriorate over the life of the plan. Even with that scenario in mind the WCS highlights that to keep the deterioration to an absolute minimum there is a need for very innovative and potentially very expensive solutions to be included at a

number of the Waste Water treatment Works around the system and that any move to improve the situation from that of “planned deterioration” would require solutions that are currently beyond Best Available Technology (BAT).

### 3.0 Broads Authority Specific Concerns

3.1 The Broads Authority recognises that considerable effort has been put into the completion of the Water Cycle Study and to resolve the outstanding concerns. The Environment Agency have confirmed that whilst the East of England remains in general a water stressed area that there should be no loss to the overall quantity of supply in the area. The only water related issue that remains of concern to the Broads Authority is that of water quality and specifically the capacity of the WWTWs at Acle, Reepham, and Belaugh . By the Water Cycle Study’s own admission there are some difficulties associated with meeting the requirements of the Water Framework Directive and the Habitats Regulations.

3.2 This process highlights the need for the Environment Agency to consider at a national level whether it agrees to “planned deterioration” and if so to what level. Even if the Environment Agency agrees to this the Broads Authority remains concerned about the issue of quality and the acceptability of decline in water quality over the plan period. Over the last 20 years the Broads Authority (and its partners) has worked hard to make considerable and tangible improvements to the water quality of the Broads. It should be noted that whilst the Broads Authority has concerns over the impacts on water quality that may fall within existing consent regimes that these consents could be tightened in the future within the plan period and therefore this could have implications for the delivery of the proposed growth. The scenario of “planned deterioration” that the JCS presents would appear to fly in the face of these sustained efforts to improve water quality and therefore is considered unacceptable.

3.3 Specific concerns include:

- **Acle WWTW** – The WCS indicates that compliance with WFD phosphorous targets cannot be achieved as the mechanism to do this is currently beyond Best Available Technology Not Entailing Excessive Cost (BATNEEC). There is also a need for the Environment Agency to agree to a planned deterioration level of 4% beyond WFD targets levels which require no deterioration and which the Broads Authority consider to be unacceptable. There is also no certainty that the Habitats Regulations can be complied with over a more significant portion of the Broads because It is not only downstream of Acle that will be affected, as each tide takes water further upstream on the Bure (Bure Broads & Marshes SSSI/SAC impacted) and Thurne.
- **Reepham WWTW** – This discharges directly into the Wensum SAC however additional nutrient inputs here will have an in-combination effect on the Yare Broads & Marshes SSSI/SAC not just the immediate Wensum SSSI/SAC.
- **Belaugh WWTW** – The WCS consultants believe that WFD and Habitats Regulations can be met but there is a need for a new strategic main and significant investment in infrastructure. However, Belaugh WWTW will also take some growth in the North Norfolk LDF planned for

Hoveton (100-150 dwellings) which is factored into the GNDP WCS, however, the Broads Authority believes that there is still no certainty that there will not be an effect on the Broads Special Area of Conservation and compliance with the Habitats Directive.

#### **4.0 Conclusion**

**4.1** The Broads Authority remains concerned that the direct impact of the JCS would be to lead to deterioration in the water quality of the Broads and that that this would be at the expense of the considerable amount of effort that has gone into improving the water quality of the Broads in the last 20 years.

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**Our ref:** AE/2006/000017/BD-01/SB1-L02  
**Date:** 27 January 2010

Dear Sir/Madam

**Stage 2b Greater Norwich Water Cycle Study (WCS). Environment Agency  
Position Statement.**

We understand that the Greater Norwich Development Partnership (GNDP) wish the Environment Agency to provide a position statement in relation to the current draft stage 2b Water Cycle Study (WCS) as reported at the steering group meeting on 15<sup>th</sup> January 2010. In that respect, we wish to highlight our remaining concerns and outstanding issues as set out below. It should be noted that we are currently also drafting comments on the technical content/wording of the WCS and these will follow in the near future.

**Water Quality**

The WCS as a whole provides a useful and thorough evidence base with which the development growth proposed in the Joint Core Strategy (JCS) can be assessed in terms of water quality issues and impacts. The WCS has demonstrated that the total number of housing allocations for the area can be accommodated (Table 3-2). However, the distribution of dwellings based on the Waste Water Treatment Works (WwTW) consented flow capacity and environmental capacity does not fully align with that presented in the 'Wastewater Strategy' which reflects the areas of greatest housing need, as set out in the Greater Norwich Joint Core Strategy (JCS). Please see further comments below.

It should also be noted that the 'Wastewater Strategy', summarised in Table 3-4 of the non-technical report presents an optimistic representation of the waste water issues and possible solutions, and cannot therefore be supported in its entirety. Suggested amendments are set out in the detailed comments to follow.

In addition, there is uncertainty relating to the housing and employment figures used within the WCS. For example, we note that within the previous WCS draft stage 2b report the provision of 40128 dwellings was considered, whilst within the current version, 39519 have been considered. It is understood that this revision has been made in response to new figures being provided by the GNDP. However, while the total number of dwellings proposed has changed marginally, in some locations the change has been significant e.g. NPA5 – 2503 houses revised to 503 houses. Although we appreciate the further detail forwarded to us on 25<sup>th</sup> January 2010, it is not transparent within the WCS study how the figures used relate to those within the JCS and consequently, whether the WCS represents a supporting document to the JCS. We therefore advise that the GNDP should ensure that they are satisfied the figures are fully reflective of the growth proposed.

There is also disparity between the WCS and the water company assessment of available capacity at WwTW to accommodate projected flows from the proposed development growth. This is partly due to different proposed dwelling figures being used in the calculations. The correct figures should be confirmed and if necessary assessments reviewed.

Notwithstanding the above, the WCS has demonstrated that the majority of the proposed development growth can be accommodated in the catchments of a nine WwTWs - Belaugh, Diss, Swardeston-Common, Harleston, Poringland, Sisland, Whitlingham, Wymondham and Stoke Holy Cross and consequently the proposed development growth associated with these WwTW may at this time, and with the current level of information, be considered to be deliverable.

Nevertheless, it should be understood that this may lead to deterioration in the watercourses to which the WwTWs discharge. In this respect, it should be borne in mind that Environment Agency policy relating to this situation is currently in draft form and is therefore subject to change. Furthermore, current quality consent limits for these WwTW will be reviewed and if appropriate tightened as part of the next review of water company prices. This review and consent changes will come under the requirements of the WFD to prevent deterioration or achieve 'good status' and will apply to all parameters. Consent modifications could be made as early as 2015 and could have implications for the long term deliverability of the proposed growth. Further information on this issue is unavailable at this time.

We wish to make clear at this point that some of the terminology used within the WCS is misrepresentative. In particular referring to modelling scenario A as the

'planned deterioration' scenario is misleading. The term planned deterioration applies only to WwTW where the projected flows for development growth can be wholly accommodated within existing volumetric flow consents. The term is referring to the potential deterioration in water quality as the existing capacity in the consent is used up. As the consent has been issued, the potential deterioration is deemed 'planned'. Indeed the potential impacts of this on Habitats Directive sites has already been assessed as part of the Review of Consents, which considered the fully consented situation.

In relation to the above comments, it should be noted that the implications for Belaugh WwTW have been assessed based on the GNDP growth strategy only. The North Norfolk growth strategy also incorporates projected flows for the Belaugh works. The deliverability of both growth strategies should be considered in combination. As a minimum the Appropriate Assessment for the GNDP JCS should consider the 'in combination' effects of other plans and projects including the North Norfolk JCS. To date, we have not been consulted on the amended Appropriate Assessment of the GNDP JCS.

The WCS has demonstrated that there are three locations – Long Stratton, Reepham and to a lesser degree Acle - where the level of proposed growth is compromised by the water quality requirements of the Water Framework Directive (WFD) and Habitats Directive (HD). Development growth in these locations could proceed if technologically advanced techniques were employed to reduce/treat the waste water from the dwellings, the WwTW discharge points could be moved to an alternative receiving environment or other sewage works in the catchment could be improved to compensate for the increased loads. Unfortunately, it is currently considered unlikely that any of these options would appear to offer a sustainable or economically viable solution due largely to the constraints of technology and geography. Accordingly, at this time, we do not consider that the proposed level of growth in these locations is deliverable.

We also have concerns regarding development at Aylsham. There is disparity in the figures used by both the WCS and the water company assessment. Therefore, there is uncertainty over whether there is sufficient capacity at the works to accommodate the projected flows. Further consideration needs to be given on which set of figures represent the more realistic situation. If it is confirmed that the projected flows cannot be accommodated at the works within the existing consent then development growth in Aylsham will be in a similar position to that at Long Stratton, Reepham and Acle.

If it is confirmed that the projected flows could be accommodated within the existing consent the development growth would not be immediately constrained by the 'no deterioration' requirements of the WFD. However, as stated above, it should be borne in mind that the quality consent limits could be tightened as part of the next review of water company prices which could have implications for the long term deliverability of the proposed growth.



We provide further detail on the situation at each WwTW in the table below.

Water quality constraints aside, a great deal of the proposed development growth is contingent on the provision of a mains interceptor sewer being provided. The deliverability and phasing implications of this sewer is understood to remain unclear.

#### Further work suggested

- Clarity on the different housing figures presented in the WCS and the water company assessment and consideration of the impact this may have on the WCS assessment.
- Clarity on whether the housing figures now presented in the WCS reflect those in the JCS.
- Further consideration could be given to whether there are technologically advanced techniques to reduce/ treat the waste water, opportunities to relocate the discharge points or improve other sewage works in the catchments of Long Stratton, Reepham, to a lesser degree Acle and if necessary, Aylsham. However, it is currently considered unlikely that any of these options would appear to offer a technically feasible/sustainable/economically viable solution.
- Further consideration could be given to the proposed distribution of housing allocations across the Greater Norwich area and whether the JCS has the flexibility to deliver the total number of dwellings proposed.

#### Water Resources

We note that the Environment Agency Habitats Directive Review of Consents (RoC) has been discussed within the WCS.

The RoC investigations for the Wensum SAC are ongoing and we are in discussion with Anglian Water and Natural England over the need for reductions in abstraction in the catchment. It is possible that a solution will be identified that does not lead to an actual reduction in the Anglian Water abstractions that are affecting the river. However, should the preferred solution require an actual reduction to Anglian Water's abstraction licences, then the company will be given the time and funding to replace the reduction and there will be no loss to its overall quantity of supply in this area. The existing abstractions would not be stopped before a replacement was in place. For the above reasons, we do not currently consider the RoC and water resources to be a risk to development in the Greater Norwich area.

However, the WCS states that the East of England is, in general, a water stressed area. Therefore, future development should aim to be as water efficient as possible.

It should be noted that Anglian Water's latest water resources management plan (WRMP) is forecasting to meet the planned RSS14 growth, so should have made provisions to supply the housing included in this WCS. We consider that a review of the WCS should be undertaken once Anglian Water's final WRMP is published. In particular, we understand that the company has revised its forecasts on the phasing of growth over the next 5 years due of the recent economic climate. This should be considered in relation to the expectations on phasing of growth between the local authority and the water company.

In addition, the WCS may need to be re-visited once the RoC solution is identified to ensure that it does not affect the timing of infrastructure provision.

I hope the above comments are helpful. Should you have any questions, please do not hesitate in contacting me.

Yours faithfully

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## Detailed Water Quality Comments, by Waste Water Treatment Works

Town/ Waste Water Treatment Works	Comments	Recommendations for further work
Long Stratton	<p><b>The full development growth proposed for Long Stratton should be avoided unless alternative waste water reduction/ disposal mechanisms can be found. 1430 of the proposed 1927 dwellings (74%) can be accommodated within the constraints of water quality.</b></p> <p>The Water Cycle Study (WCS) has demonstrated that the projected flows from 1430 of the proposed 1927 dwellings (74%) can be accommodated within the existing flow consent of the Long Stratton Waste Water Treatment Works.</p> <p>Considering the full development growth proposed, although not directly modelled it is possible to infer from the existing consent limits and the WCS modelling that consent limits to prevent deterioration from current Water Framework Directive (WFD) status (BOD &amp; NH4 – ‘high’, and P – ‘poor’) would need to be tighter than what is currently regarded as ‘Best Available Technology’ (BAT) for ammonia and phosphorus. The modelling has also demonstrated that it would not be possible to maintain the existing load of phosphorus within BAT. The full proposed development growth in Long Stratton is therefore constrained by the ‘no deterioration’ objectives of the WFD and the requirements of the Habitats Directive. Development growth in Long Stratton could proceed if technologically advanced techniques were employed to reduce/ treat the waste water, the discharge point were moved to an alternative receiving environment or other sewage works in the catchment were improved to compensate for the increased loads from Long Stratton. Unfortunately, it is currently considered unlikely that any of these options would appear to offer a technically feasible/ sustainable/ economically viable solution.</p> <p>If the proposed dwelling figures for Long Stratton were revised so that the projected flows could be accommodated within the existing consent, the development growth would not be immediately constrained by the ‘no deterioration’ requirements of the WFD. However, it should be borne in mind that the quality consent limits could be tightened (as described above) as part of the next review of water company prices which could have implications for the long term deliverability of the proposed growth<sup>1</sup>.</p>	<p>It may be appropriate to consider alternative disposal options for the waste water arising from the proposed growth at Long Stratton, however it currently appears unlikely that a technically feasible/ sustainable/ economically viable solution will be found.</p>
Reepham	<p><b>Development growth in Reepham should be avoided unless alternative waste water reduction/ disposal mechanisms can be found.</b></p> <p>The flow consent for Reepham has recently been amended to better reflect the current flow situation; this amended consent does not provide capacity to accommodate growth. The works should be considered to be ‘at capacity’ in terms of consented flow and it is not appropriate to regard these proposed flows as providing future capacity. This is stated in the water company Business Plan.</p> <p>Based on the GNDP growth strategy, the projected flow through the works would exceed the current consented flow.</p> <p>The Water Cycle Study (WCS) modelling has demonstrated that in order to comply with the ‘no deterioration’ objectives of the Water Framework Directive (WFD), the increased flow consent would require the quality consent limits to be tightened beyond what is currently regarded as Best Available Technology (BAT) for BOD, ammonia and phosphorus at Reepham. Any development growth in Reepham is constrained by the ‘no deterioration’ objectives of the WFD. Development growth in could proceed if technologically advanced techniques were employed to reduce/ treat the waste water, the discharge point were moved to an alternative receiving environment or other sewage works in the catchments were improved to compensate for the increased loads from these works. Unfortunately, it is currently considered unlikely that any of these options would appear to offer a technically feasible/ sustainable/ economically viable solution.</p> <p>The water company have indicated that the projected flows could be accommodated within the existing consent. This assessment is based on reduction in water use, lower occupancy rates and lower proposed dwelling numbers. If the projected flows could be accommodated within the existing consent, the development growth would not be immediately constrained by the ‘no deterioration’ requirements of the WFD. However, it should be borne in mind that the quality consent limits could be tightened (as described above) as part of the next review of water company prices which could have implications for the long term deliverability of the proposed growth<sup>1</sup>.</p> <p>Further information and work is required to confirm if the dwelling numbers and flow rates used by the water company are a more realistic representation of the future growth scenario.</p> <p>The WCS modelling has demonstrated that it would be possible to maintain the current fully consented loads within BAT, this would meet the requirements of the Habitats Directive.</p>	<p>The dwelling figures used in the WCS assessments and water company assessment are different. The correct dwelling figures and associated flow figures should be confirmed, and the indicative consent modelling re-run if necessary.</p>
Acle	<p><b>Development growth in Acle should be avoided unless alternative waste water reduction/ disposal mechanisms can be found.</b></p> <p>The flow consent for Acle has recently been amended to better reflect the current flow situation; this amended consent does not provide capacity to accommodate growth. The works should be considered to be ‘at capacity’ in terms of consented flow and it is not appropriate to regard these proposed flows as providing future capacity. This is stated in the water company Business Plan.</p> <p>Based on the GNDP growth strategy, the projected flows through the works would marginally exceed the current consented flow.</p> <p>The Water Cycle Study (WCS) modelling has demonstrated that in order to comply with the ‘no deterioration’ objectives of the Water Framework Directive (WFD), the increased flow consent would require the quality consent limits to be tightened beyond what is currently regarded as Best Available Technology (BAT) for phosphorus.</p> <p>Any development growth in Acle is constrained by the ‘no deterioration’ objectives of the WFD. Development growth in Acle could proceed if technologically advanced techniques were employed to reduce/ treat the waste water, the discharge point were moved to an alternative receiving environment or other sewage works in the catchments were improved to</p>	<p>The dwelling figures used in the WCS assessments and water company assessment are different. The correct dwelling figures and associated flow figures should be confirmed, and the indicative consent modelling re-run if</p>

	<p>compensate for the increased loads from these works. Unfortunately, it is currently considered unlikely that any of these options would appear to offer a technically feasible/ sustainable/ economically viable solution.</p> <p>The water company have indicated that the projected flows could be accommodated within the existing consent. This assessment is based on reduction in water use, lower occupancy rates and lower proposed dwelling numbers. If the projected flows could be accommodated within the existing consent, the development growth would not be immediately constrained by the 'no deterioration' requirements of the WFD. However, it should be borne in mind that the quality consent limits could be tightened (as described above) as part of the next review of water company prices which could have implications for the long term deliverability of the proposed growth<sup>1</sup>.</p> <p>Further information and work is required to confirm if the dwelling numbers and flow rates used by the water company are a more realistic representation of the future growth scenario, and to confirm whether the proposed development growth would make achievement of the WFD 'good status' substantially more difficult than it would be with the existing discharge consent.</p> <p>The WCS modelling has demonstrated that it would be possible to maintain the current fully consented loads within BAT, this would meet the requirements of the Habitats Directive.</p>	<p>necessary. It should also be confirmed whether the proposed growth would make achievement of the WFD 'good status' more difficult.</p>
<b>Aylsham</b>	<p><b>Development growth in Aylsham should ideally be avoided unless alternative waste water reduction/ disposal mechanisms can be found.</b></p> <p>The water company assessment indicates that there is limited volumetric capacity within the Aylsham flow consent (based on 763 proposed dwellings), whilst the WCS has concluded that the proposed number of dwellings (600) can be accommodated. This disparity in housing figures used, and whether there is sufficient capacity at the works to accommodate the flows needs to be clarified.</p> <p>If the projected flows would require an increase in flow consent then any development growth in Aylsham would be constrained by the 'no deterioration' objectives of the WFD, as quality consent limits would need to be tightened beyond what is currently regarded as Best Available Technology (BAT). In this situation, development growth in Aylsham could proceed if technologically advanced techniques were employed to reduce/ treat the waste water, the discharge point were moved to an alternative receiving environment or other sewage works in the catchments were improved to compensate for the increased loads from these works. Unfortunately, it is currently considered unlikely that any of these options appear to offer a technically feasible/ sustainable/ economically viable solution.</p> <p>If the projected flows could be accommodated within the existing consent, as suggested by the WCS assessment, the development growth would not be immediately constrained by the 'no deterioration' requirements of the WFD. However, it should be borne in mind that the quality consent limits could be tightened as part of the next review of water company prices which could have implications for the long term deliverability of the proposed growth<sup>1</sup>.</p> <p>Further information and work is required to confirm if the dwelling numbers and flow rates used by the water company are a more realistic representation of the future growth scenario, and to confirm whether the proposed development growth would make achievement of the WFD 'good status' substantially more difficult than it would be with the existing discharge consent.</p>	<p>The dwelling figures used in the WCS and water company assessments are different. The correct dwelling and associated flow figures need to be confirmed, the modelling re-run if necessary. If the projected flows are greater than the current consented flows it will be necessary to consider the implications under the Habitats Directive.</p>
<b>Belaugh, Diss, Swardeston-Common, Harleston, Poringland, Sisland, Whitlingham Wymondham</b>	<p><b>Development growth in these locations is not currently constrained by the requirements of the Water Framework Directive or Habitats Directive.</b></p> <p>Both the GNDP Water Cycle Study (WCS) and water company assessments concur that the projected flows to these waste water treatment works is within the existing volumetric consent. This is with the exception of Diss, the water company assessment did not include Diss.</p> <p>It should be borne in mind that the quality consent limits could be tightened beyond what is current considered to be Best Available Technology as part of the next review of water company prices which could have implications for the long term deliverability of the proposed growth<sup>1</sup>.</p> <p>The implications for Belaugh waste water treatment works have been assessed based on the GNDP growth strategy only. The North Norfolk growth strategy also incorporates projected flows for the Belaugh works. The deliverability of both growth strategies should be considered in combination.</p>	<p>In combination consideration should be given to the GNDP and North Norfolk growth strategies that influence the Belaugh works.</p>
<b>Stoke Holy Cross</b>	<p><b>Development growth in Stoke Holy Cross is not currently constrained by the requirements of the Water Framework Directive or Habitats Directive.</b></p> <p>The WCS has demonstrated that a new volumetric consent would be required. However, it has currently been demonstrated that it will be possible to meet the requirements of the Water Framework Directive and Habitats Directive within the confines of Best Available Technology.</p>	
<p><sup>1</sup>It should be borne in mind that even where the projected flow figures are within the existing consented flow of the waste water treatment works, the current quality consent limits will be reviewed and if appropriate tightened as part of the next review of water company prices. This review and consent changes will come under the requirements of the Water Framework Directive to prevent deterioration or achieve 'good status' and will apply to all parameters. Consent modifications could be made as early as 2015 and could have implications for the long term deliverability of the proposed growth. Further information on this issue is unavailable at this time.</p>		

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26 January 2010



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Dear Michael

## **Greater Norwich Water Cycle Study – Stage 2b Reports Natural England Position Statement**

Natural England has been represented on the Steering Group for the development of the Greater Norwich Water Cycle Study (GNWCS) and has provided input to Stage 1, Stage 2a and Stage 2b. The study should be viewed as supporting information, to the Norwich Joint Core Strategy.

The purpose of this Position Statement is to provide Natural England's endorsement of the process which has been undertaken in delivering the two key draft documents which represent the conclusion of Stage 2b:

- Non Technical Planning Report - Draft Final - January 2010
- Technical Report - Draft Final - January 2010

Natural England can confirm that in developing Stage 2b, Scott Wilson have ensured that at all points in the process, they have reviewed, and re-evaluated what should be regarded as the best information available at all points along the time line. Following on from this, they have captured the various levels of uncertainty relating to different aspects of the study, and have explored a range of options, each based upon different levels of sensitivity in relation to these uncertainties. The study can therefore be regarded as a key document to inform Local Authorities and Agencies in order that they satisfy the East of England Plan (Revision of the Regional Spatial Strategy, May 2008) – Policy WAT3 – Integrated Water Management.

However, in providing this Position Statement, Natural England also wish to provide advice with regard to the interpretation of the options that have been presented, and the need to take a precautionary approach in decision making in relation to these options. As levels of

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uncertainty are resolved, the options presented in the report will be narrowed down, and decision makers must adopt options which are compatible with the requirements of both the Water Framework Directive, and the Conservation (Natural Habitats &c.) Regulations 1994. This reflects the East of England Plan (Revision of the Regional Spatial Strategy, May 2008 - Policy ENV C – Biodiversity and Earth Heritage).

At present, the two greatest areas of uncertainty which relate to environmental protection are:

- The Environment Agency's Review of Consents under Regulation 50 of the Conservation (Natural Habitats &c.) Regulations 1994, and in particular, the implications in relation to the availability of water resources.
- Whether the Environment Agency concept of 'Planned Deterioration' is found to be a legitimate interpretation of the Water Framework Directive, and what the implications of adoption or rejection of this might be, particularly in relation to the phosphate targets.

With regard to water resources, the Environment Agency have refined their estimates in relation to the non compliance of flows in the River Wensum Special Area of Conservation (SAC), when compared with flow targets expressed in terms of the Habitats Directive Ecological River Flows objectives. If the Site Action Plan for the River Wensum SAC (which will conclude Stage 4 of the Environment Agency's Review of Consents for the River Wensum SAC), concludes that sustainability reductions are indeed necessary, then this would require that water resource surpluses elsewhere in the vicinity of Norwich would have to be used to balance current environmental concerns, rather than to supply additional growth. This might also mean that plans for a Whittlingham Effluent Flow Compensation Scheme would need to be brought forward within Anglian Water's Asset Management Planning timetable. This reflects East of England (Revision of the Regional Spatial Strategy, May 2008) – Policy WAT2 – Water Infrastructure.

In relation to 'Planned Deterioration', there are significant uncertainties as to the acceptability of this approach, and the development of an Environment Agency national policy will dictate whether the relaxations in targets might be regarded as legitimate. The development of Environment Agency policy will involve consultation and deliberations with Defra and Natural England. However, it should be noted that following a recent review of Biodiversity Action Plan Habitats, all rivers have been afforded recognition as Priority BAP habitat. Prior to this review, a number of the water courses including tributaries of the rivers Bure and Wensum are Chalk rivers, a habitat which already had the status of Priority BAP habitat. If Environment Agency national policy concludes that 'Planned Deterioration' is not compliant with the Water Framework Directive, then this would have significant implications for the acceptability of further growth in a number of the Norwich Policy Areas.

The implications of scenarios where significant issues need to be addressed are expressed in the Non-technical Summary, Policy Recommendation 1: Development Phasing, which states that, "New homes should not be built until agreement has been reached with the water and wastewater provider that sufficient capacity in existing or future water services infrastructure is available in accordance with the GNWCS." Natural England strongly endorses this policy recommendation.

If the Environment Agency conclude that significant levels of sustainability reduction will be required to satisfy the conclusion of the Review of Consents on the River Wensum SAC, then this will focus attention onto how the opportunity for development hinges on

mechanisms to achieve water efficiency savings, and Water Neutrality. Water Neutrality is discussed in the Non-technical Summary, and it is Natural England's long term view that this is likely to become an increasingly important element underpinning sustainable development in the East of England.

When the Greater Norwich Water Cycle Study was initiated, it had been envisaged that other key areas of work, such as the Environment Agency Review of Consents for the River Wensum SAC, and Anglian Water's Water Resources Management Plan would have been completed, and would feed into the development of the study prior to completion. However, this has not been the case, and as reflected in the Stage 2b reports, the consequence of this is that future funding will need to be in place to ensure that the Water Cycle Study can be updated as required. It is Natural England's view that this will be essential so that the study continues to reflect the best information available at future points in time, and will be fit for the purpose of informing the Joint Core Strategy for Norwich.

Yours sincerely

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**Water Cycle Study - Stakeholder Position Statements on key issues**

<b>Issue</b>	<b>Organisation</b>	<b>Stakeholder comment</b>	<b>Implications for strategy</b>
<b>Water Supply</b>	Environment Agency	Water resources not a risk to proposed development.  As a water stressed area development should be as water efficient as possible, requiring further strengthening of JCS policy.	Subject to confirmation by the AW Water Resources Management Plan, groundwater resources are available to meet water supply need in the short to medium term. Long term need for an effluent transfer scheme is believed to be dependent on the success of JCS water efficiency policies. Consideration of strengthening of these policies to require water neutrality on major development, as recommended by Natural England, the Environment Agency and the final version of the WCS, will take place through the Examination in Public of the JCS.
	Anglian Water	Sufficient water supplies can be made available to meet planned growth.	
	Natural England	Uncertainty remains concerning water supplies and the ongoing Environment Agency Review of Consents. Water Neutrality should be promoted through strategy.	
<b>Water Quality</b>	Anglian Water	Minor modifications to JCS may be required due to potential impact on habitats at Reepham and Acle.	Growth strategy is reliant on a more flexible interpretation of EU Water Framework and Habitats Directives, allowing for “planned deterioration”. This issue is currently being discussed at the national level and indications are that the interpretation will enable growth. Policies 1 and 3 of the JCS require all development to have no significant adverse impacts on water quality on protected sites and to provide infrastructure to enable this. If innovative solutions to wastewater treatment do not prove practicable locally, sufficient flexibility exists within the Joint Core Strategy
	Environment Agency	Growth on present evidence is deliverable but may lead to deterioration in the watercourses to which the WwTWs discharge. Environment Agency policy to allow “planned deterioration” is currently in draft form and is therefore subject to change.  Doubts concerning potential for “innovative solutions” to waste water treatment to enable	



		growth at Reepham and Acle, final 500 dwellings at Long Stratton and possibly at Aylsham. Also concern that capacity at Belaugh has not taken account of growth in North Norfolk.	through over allocation of housing land to enable growth at Reepham and Acle and 500 dwellings at Long Stratton, to be relocated. Consultants have confirmed that growth in North Norfolk has been taken account of in relation to Belaugh and that there will be no water quality problems at the WwTW.
	Natural England	Uncertainty over whether the Environment Agency allowance of 'Planned Deterioration' is found to be a legitimate interpretation of the Water Framework Directive.	
	Broads Authority	Concern over water quality, relating to "planned deterioration", which is considered unacceptable in the light of long term success in increasing water quality in the Broads. Specific concerns over the capacity of the WwTWs at Acle, Reepham, and Belaugh .	
<b>New Strategic Sewers</b>	Anglian Water	Sewerage provision challenging. Potential strategy outlined to be developed when detailed site locations available.	Policy 3 requires new development to meet its water infrastructure needs. Need to work closely with Anglian Water to ensure strategic sewers provided ahead of dates set out in Water Cycle Study, which would delay strategic sewer provision until 2020 and therefore jeopardise timely housing delivery.
<b>Growth beyond 2026</b>	Anglian Water	Continued growth beyond 2026 will have significant challenges to overcome.	Doubts concerning longer term environmental capacity for growth being fed into RSS review process.