Examination of the Basingstoke and Deane Local Plan (2011 to 2029)

STATEMENT OF COMMON GROUND

between

Environment Agency, Thames Water and Basingstoke and Deane Borough Council (Local Planning Authority)

Local Plan Policies: SS4 - Ensuring a supply of deliverable sites
EM6 - Water Quality

August 2015

1. Introduction

1.1. This Statement of Common Ground has been drafted to assist in the understanding of the current position in relation to water quality for the purposes of examination of the Basingstoke and Deane Submission Local plan (plan period 2011-2029). It has been prepared collaboratively and sets out the confirmed points of agreement between Basingstoke and Deane Borough Council (BDBC), the Environment Agency (EA) and Thames Water (TW). It will assist the Inspector during the Examination of the Local Plan.

1.2. Managing the interaction between the built and natural environment is a critical component of sustainable development. Under the Water Framework Directive (WFD), it is a requirement to take measures to prevent the deterioration of water bodies from one status class to a lower one. There is a finite capacity within the environment to manage water. This capacity includes the ability of aquifers and reservoirs to refill themselves, land to drain surface water into watercourses, and the amount and quality of wastewater that can safely be returned to rivers without having a detrimental impact on water quality.

1.3. The Water Cycle Study (WCS) is an integral element of delivering sustainable development. The original Phase 1 WCS was produced in 2007 and the second phase in 2009. The WCS considered three growth scenarios, 14,800 dwellings (740 dpa), 16,500 dwellings (825 dpa) and 19,800 dwellings (990 dpa) and covered the proposed plan period at the time of 2006-2026. At the time (and as is the case in the Submission Local Plan (2011-2029)), the majority of development was to be focussed within Basingstoke and would be served by Basingstoke STW (also sometimes referred to as Chineham STW) which discharges into the River Loddon. The WCS demonstrated that each of the tested development levels could be accommodated, although the Environmental Permit may need to be tightened as phosphate levels are already high in the river.

1.4. The Local Plan, which was submitted for examination in October 2014, covered the time period 2011-2029 and proposed 748 dpa or 13,464 dwellings over the plan period. Local stakeholders queried whether the findings of the WCS were still valid because the end date and numbers were different. The EA maintained that because the total number of dwellings proposed was less than considered in the WCS, its conclusions remained valid. However, the EA did undertake additional water quality modelling to assess the impact over the extended plan period. The additional modelling demonstrated that there should not be WFD deterioration from the current class to a lower one (i.e. poor to bad), but that the phosphate limit on the permit may need to be tightened to prevent a deterioration within class (i.e. within poor class).

1.5. The inspector, at his exploratory meeting in December 2014, raised water quality as a concern. He also felt that the proposed housing number of 748 dpa was a potential soundness issue and that 850 dpa (15,300 in total) would be a more appropriate dwelling figure to meet the borough's objectively

assessed housing need. As part of the work to consider the suitability of an increased housing figure for the borough, the EA were asking to undertake additional modelling work to determine whether the 850 dpa would cause water quality problems.

1.6. The EA produced a water quality modelling report (Examination Library Ref: PS/02/14) to accompany and explain the findings of the modelling work. The conclusions and outputs from this report, which were reported to the borough council's Planning and Housing Committee and Cabinet in March 2015, form the basis of the Statement of Common Ground.

2. Water Quality Modeling Report

2.1. Two sets of scenarios were run in the modeling report to assess the potential water quality impacts of new development on the river Loddon. Scenario 1 was 748 dpa and scenario 2 was 850 dpa over the plan period (2011-2029). Taking account of the current shortfall over the first three years of the plan, this was uplifted when modeled to 796 dpa or 918 dpa over the period 2014 -2029.

2.2 Under the Water Framework Directive (WFD), it is a requirement that there is no deterioration in class of any element. For all scenarios and water quality elements, the assessment indicated that there would be no deterioration in WFD classification.

2.3. Environment Agency guidance for water quality planning ensures that there is no deterioration in class boundary (i.e. from poor to bad) by limiting in stream deterioration to 10% from its baseline when assessing impacts downstream from discharges. Ensuring that there is no greater than 10% deterioration in river quality at point of discharge will prevent significant deterioration from taking place[1].

2.4. The results from the modeling of Basingstoke STW indicated that future development for both scenarios would cause less than 10% deterioration in river quality for Ammonia and Biochemical Oxygen Demand (BOD) (a proxy for Dissolved Oxygen) if the STW continues to operate to the same level as it currently does.

[1] When the EA undertake water quality planning work to establish how STWs permits need to change to deal with proposed housing growth, a hierarchy of no deterioration targets can be used. However, a target of preventing deterioration in class boundary (i.e. from poor to bad) could still result in all the environmental headroom in the river being taken up. To stop this from happening, the EA will plan to prevent anything greater than 10% deterioration in current quality. Ensuring no greater than 10% deterioration in the current Ammonia, Biochemical Oxygen Demand (BOD) and phosphate concentrations in the river at point of discharge will help to prevent significant deterioration.

2.5. The assessment also indicated that without upgrades to Basingstoke STW, phosphate concentrations in the Loddon could potentially increase by more than 10% by 2025 for 796 dpa or by 2020 for 918 dpa.

2.6. Based on the model results, a reduction of phosphate load would be needed at the Basingstoke STW to avoid deterioration in the river Loddon. This would require a tighter permit limit than the current limit of 1 mg/l.

2.7 As part of the new round of water company business plans determined by Ofwat in December 2014, it was deemed possible to set permit limits for phosphate at a tighter limit of 0.5 mg/l. It is now considered technically and economically possible with the current technology available to water companies to achieve a limit of 0.5 mg/l. Therefore the technology exists to protect the river Loddon from deterioration, even if it is not currently in place at Basingstoke STW.

2.8. As well as preventing deterioration of water quality under the Water Framework Directive, the EA also has to work with partners to seek to ensure that the water environment will reach Good Ecological Status. For the river Loddon, modeling indicates that to reach Good Ecological Status a phosphate limit of 0.1 mg/l would be needed at Basingstoke STW. This is currently deemed to be technically infeasible.

2.9 However, to evaluate how much below 0.5 mg/l STWs can be operated reliably, water companies are running a national trial into what is technically and economically feasible. This phosphate trial will be completed by March 2017. The outcome of the national trial is likely to be that, subject to cost/benefit assessments, permit limits below 0.5 mg/l can be imposed to achieve improved water quality under the Water Framework Directive.

2.10. To ensure there is no abortive expenditure, the EA has agreed it will not impose phosphate limits in permits below 0.5mg/l until the results from the phosphate trial are available. This would be to avoid water companies installing one set of technology only to remove it to install different technology in the future.

2.11. Future revised effluent limits for phosphate will be identified in the review of the permit limits that will take place as part of the 6 year river basin planning cycle. Actions to ensure that there is no deterioration in current class status will be identified and included in the 2021 River Basin Management Plan (RBMP). Subject to the adoption of revised effluent limits for phosphate, a scheme for improvement work at Basingstoke STW should be put forward by Thames Water in the 2020-2025 business planning period. Therefore it is likely that an enhanced plant will be in place at Basingstoke STW before any deterioration has occurred.

2.12. Whilst the assessment used the best available data, it includes estimates of upstream river flow which can not be verified at this time due to there being no monitoring upstream of the STW. The modeling indicates a worst case scenario of the level of impact the Basingstoke STW has on the

river Loddon, especially as not all of the development taking place in the borough over the plan period will affect the river. However, it is recommended that continuous environmental monitoring is undertaken during the construction of the new developments to ensure there is no significant impact on the water environment. This will include the standard environmental monitoring that the EA undertake as part of their work under the WFD. The EA undertake routine monitoring at an extensive number of river monitoring points along the river Loddon and up to twelve samples a year can be taken. The data are used to classify rivers under the WFD band class and to identify where there is a risk or actual deterioration in WFD band status. BDBC will contact each year the EA to obtain the data from the environmental monitoring. The data will be used to assess if the implementation of draft Policy SS4 is necessary.

3. Policy Development and Support for Policy Approach

3.1. The Submission Local plan contains two policies that relate to water quality and are linked directly to monitoring to ensure that water quality is protected. They would restrict the release of further sites/granting of planning permission if further deterioration is identified.

3.2. Draft Policy EM6 of the Submission Local Plan sets out how water monitoring results will be reported through the borough council's Authority Monitoring Report (AMR).

3.3. Draft Policy SS4 of the Submission Local Plan, used in conjunction with EM6 will ensure that, where there is likely to be deterioration in band class, further allocated sites will not be released or planning permissions granted until measures have been taken to improve water quality. These policies set a suitable framework for monitoring the river Loddon over the plan period.

4. Conclusions

4.1 The results for both the 796 dpa and 918 dpa scenarios indicate that there would not be a deterioration of the river Loddon from its current WFD class to a lower one.

4.2 The modeling report for Ammonia and BOD indicates that the planned growth for Basingstoke can be delivered without causing a significant level of deterioration in water quality in the river Loddon (i.e. less than 10% deterioration and no WFD class deterioration).

4.3. The modeling report also indicates that there would potentially be a greater than 10% deterioration in phosphate concentrations in the river by 2020 if 918 dpa are built from 2014 onwards. However, this does not imply a deterioration in WFD status. Any deterioration in phosphate concentrations can be addressed through a tighter permit regime at Basingstoke STW. Thames Water believes that the tighter permit limit of 0.5 mg/l can be achieved by enhancing the existing plant. If WFD class improvements (including phosphate) are justified for the 2021 RBMP, then a considerably

more stringent permit limit (perhaps approaching 0.1 mg/l) could be anticipated.

4.4 Due to the environmental sensitivity of the river Loddon at Basingstoke, and the caveats on the modeling results, annual environmental monitoring will be undertaken to ensure that there is no deterioration in WFD class in line with Draft Policies EM6 and SS4 of the Basingstoke and Deane Submission Local Plan.

4.5. The EA and Thames water therefore do not consider that any water quality concerns are insurmountable when considering the proposed growth strategy.

Glossary

BDBC	Basingstoke and Deane Borough Council
dpa	dwellings per annum
EA	Environment Agency
OFWAT	Office of Water Services (Water Services Regulation Authority)
STW	Sewage Treatment Works
TW	Thames Water
WCS	Water Cycle Study
WFD	Water Framework Directive