Wealden District Council
(incorporating part of the South Downs National Park)

Core Strategy
Examination in Public

Further Written Evidence from Southern Water

Matter 14. The Environment, Climate Change and Sustainable Construction (WCS12)

f) *Is the limit on the quantity of residential development that might connect to the mains sewers relating to Hailsham North and South Waste Water Treatment Works (WWTWs), aimed at protecting water quality in the Pevensey Levels candidate Special Area of Conservation (cSAC), justified by the evidence base? Have water metering and water efficiency measures been fully taken into account?*

Southern Water considers that the limit on the quantity of residential development connecting to Hailsham North and South Waste Water Treatment Works (WTWs) is justified.

The limit is justified on the basis of the Environment Agency's report *Creating a Better Place: Planning for Water Quality and Growth in the South East.* This report was prepared for the South East Plan, and identified that a limit should be placed on additional housing in Hailsham North and South. The reason for the constraint is the environmental sensitivity of the Pevensey Levels, which receive the treated effluent from Hailsham North and South WTWs.

The Environment Agency (EA) has set a maximum value on the volume[1] of treated effluent that can be released from the works to the receiving water, in accordance with environmental permitting procedures. Hailsham North WTW currently has a maximum permitted flow of 3,162 m^3/d and Hailsham South 7,120 m^3/d. The EA has indicated in face to face discussions that it would not permit flow values above those currently permitted.

Southern Water must comply with the flow values (and quality standards) set by the EA in environmental permits. If the volumes of flow released to the Pevensey Levels exceed these values, the EA has the power to prosecute Southern Water for breach of permit and for causing harm to the environment.

[1] The volumetric limit is measured in terms of "dry weather flow", which is intended to represent foul flow which is not mixed or diluted with surface water following rainfall.

Limiting additional flows to the works within the environmental permit parameters is therefore essential to Southern Water, including those arising from new development. Measurement of flows (in terms of dry weather flow, see footnote 1) has recently been defined by the Environment Agency for planning purposes as the 20 percentile flow over the year. The assessed flow measurements from 2004 to 2010 are shown in the table below.

Year	Hailsham North m^3/d	Hailsham South m^3/d
2010	1571	5850
2009	1586	6090
2008	1707	6610
2007	1459	5670
2006	1538	5550
2005	1577	5708
2004	1680	5890

This data demonstrates that flow measurements have a high level of variability which is not a simple function of new development connections. Weather conditions are highly influential due to infiltration in sustained wet weather. 2008 was a wet year which is reflected in high flow values, whilst 2010 was a dry year with relatively low flow values. Estimating headroom for new development and growth is therefore not an exact science, and risk assessment is an important element of the process. Southern Water must comply with the environmental permit issued by the EA in wet as well as dry years.

In 2006, Southern Water estimated the headroom at Hailsham North and South WTWs as 2,900 and 2,400 homes respectively. This was based on the maximum recorded 20 percentile for each works from the years 2004-2006 (1,680 m^3/d and 5,890 m^3/d for Hailsham North and South respectively), maximum permitted flows (3,162 m^3/d and 7,120 m^3/d for Hailsham North and South respectively), and assuming that each new home will return 500 litres (0.5 m^3) per day to the sewerage system. This includes an allowance for infiltration which tends to increase over time as the conditions of sewers deteriorate, as well as an allowance for commercial/trade activity associated with new development.

Southern Water is aware that developers have challenged the parameter of 500 litres per property per day. We understand the argument to be that measures to reduce water usage in new homes will also reduce the volume of wastewater returned to the sewers. However, there is insufficient evidence available to quantify the impact of water metering and water efficiency measures on the sewer return rate in the long term. Property owners may replace water efficient fixtures and fittings installed by housebuilders with less efficient ones over time. Furthermore, people who wish to save water may choose to cut back on certain uses which are

not returned to sewer, for example watering of gardens, rather than use within the dwelling. Savings on uses which do not return water to sewers will not convert to reduced sewer return rates.

Southern Water bears the risk of prosecution for environmental damage resulting from breaching of the environmental permit if reduced sewer return rates advocated by some commentators do not materialise. The risk lies with Southern Water alone, not with developers or any other party. For this reason Southern Water must take a precautionary approach until sound evidence is available to assess with certainty the impact of metering and water efficiency measures on the sewer return rate. 500 litres per property per day is an empirical number based on our experience as a statutory sewerage undertaker, and has historically proved to be a reasonable basis on which to assess capacity and demand from new development.

g) If the headroom level at the two WWTWs has been justified, has it been demonstrated that all alternative options that would permit growth beyond this are being explored? Has it been shown that these options could not be delivered and that the headroom limit could not be removed during the plan period?

Southern Water is currently undertaking a study to explore alternative options for providing additional wastewater treatment capacity in the south Wealden area. The study will identify a preferred option to overcome the constraint, and will be completed by 2015.

Delivery of the solution would be possible in the investment period 2015 to 2020, subject to (a) funding approval by Ofwat through the price setting mechanism, (b) necessary environmental permits from the Environment Agency, (c) planning permissions from relevant planning authorities if required, and (d) land being available if required.

In our experience, delivery of significant wastewater treatment infrastructure can be subject to delays beyond Southern Water's control, particularly if there are objections to the proposals from the public or other bodies.

h) Should the Core Strategy give more guidance on the approach to water efficiency in new development?

Southern Water is not the water supply company in Wealden. However, it has been suggested that implementation of water efficiency measures could be the solution to overcome wastewater treatment constraints.

There is insufficient evidence available to assess the impact of water metering and water efficiency measures on the sewer return rate in the long term. As referred to above, property owners may replace water efficient fixtures and fittings by less efficient ones over time. Furthermore, people who wish to save water may choose to cut back on uses which are

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j) Should the Core Strategy make provision for the potential need to enlarge Bewl reservoir?

Yes it should. Southern Water will rely on previous representations as there is no new information to add.