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| Chichester District Council logo  |
| Water Neutrality |
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**How should Water Neutrality Statements be presented?**

As a general guide, we would expect a Water Neutrality Statement to cover the following elements:

# Introduction

Explain the purpose of the statement and the reason for its submission.

# Background

Outline the background to the statement. This includes details of the site, including its existing or most recent use, any extant permissions, and details of the current proposal.

# Baseline Calculations

It is critical that the statement clearly establishes what the baseline water consumption rate is for the existing or most recent use. Where historic water bills for the site are not available, alternative data using the Building Regulations Part G or BREAM water calculators should be used, along with appropriate occupancy rates and consumption data for any industrial processes being undertake at the site. The data should be presented in litres per person per day. Further information is set out separately below.  It is critical that existing baseline consumption is fully evidence to give certainty of the actual mains water being use at a site. Metered water bills are the best way to achieve this certainty.

# Proposal Demand

This section will calculate what the water demands will be from the proposed development. The data should be presented in litres per person per day and reflect the average occupancy of the development.  For business uses, the proposed consumption data must include consumption used for any proposed industrial processes

# Water Reduction Measures

Where the proposed water consumption is higher than the baseline consumption, you must first consider reducing water consumption in the proposed development through installing more water efficient fixtures and appliances. Completion of the Part G or BREEAM water calculators will help demonstrate the savings to be made. Where highly efficient appliances are to be installed, details of an appliance that meets that high standard of water consumption should be submitted to demonstrate the efficiencies are achievable.

Once all efficiency opportunities have been exhausted, water re-use through rainwater harvesting and/or greywater/blackwater recycling should be then considered. Further details below.

# Offsetting measures

The use of efficiencies and rain/grey water harvesting technologies alone will be unlikely to make some developments water neutral. In most such cases, such as new build on greenfield sites, offsetting measures to reduce water consumption on other land and property will be required in order to achieve water neutrality.  Where offsetting on third party land, full details and evidence of the third party landowner’s existing water consumption must be submitted, along with the full details of the efficiencies to be implemented and how the efficiencies will be maintained in future (this could be through a maintenance contribution to the landowner for instance). This can include existing water bills and evidence of the efficiency of the existing fixtures and appliances. Where offsetting is to be carried out on third party land, that landowner will be required to enter into a legal agreement to install and retain the measures in perpetuity.

Offsetting cannot be carried out on third party land that does not take its water from the same North West Sussex Supply Zone.

# Conclusion

It is important the conclusion summarises the water figures in a clear manner and sets out clearly the detail of any mitigation strategy necessary to achieve neutrality.

# How to evidence existing/baseline water consumption

## Residential uses

For residential schemes, we will expect to see water consumption calculations for any existing use of the site, and the proposed use. These must be set out in litres per person per day (l/p/d).  Where an existing residential dwelling is to be demolished/replaced, copies of recent metered water bills within the last three years is the best evidence of existing consumption.

Where water bills are not available, a survey of all existing fixtures and fittings that evidences their current water consumption rate should be provided within a Building Regulations Part G water calculator or equivalent. The calculator should be supported with photographs of the fixtures and fittings, and an explanation of the methodology used to calculate the flow rates etc. The resultant per person water consumption figure should then be multiplied by 2.4 (the average number of occupants per dwelling across the District).

In order to demonstrate future consumption rates, you are advised to complete a Building Regulations Part G water calculator or equivalent, and use average occupancy rates for the size of dwelling being proposed to calculate the overall site water consumption. The data used to complete the Part G calculator should be realistic based on fixtures and fittings available on the market, and be reflective of the proposed use. It should be noted that achieving water reductions to under 85 l/p/d is understood to be challenging unless rainwater harvesting and/or greywater recycling is included. Please be mindful of applying the standard 5lpd for external consumption if that dwelling does not have outside space.   Where no washing machines are proposed in a dwelling, we would expect the standard washing machine consumption rates to be used in the Part G calculator as any occupant would still need to wash their clothes.

### Worked example

The proposal is to replace 1x2-bed house with 1x 3-bed house and 1x4-bed house.

### Existing baseline consumption:

The house is vacant. Based on population data it would have an average occupancy of 2.4 persons. The existing fixtures and fittings have been surveyed and a Building Regulations Part G water calculator completed. This details water consumption of 127.4 litres per person per day. The existing water consumption would therefore be 2.4 x 127.4 l/p/d = 305.8 litres per day in total.

### Proposed consumption

The proposed development would have an average occupancy of 4.8. To be water neutral, the occupants of the new development must not consume more than 305.8 litres per day in total.  This works out at consumption of 63.7 l/p/d (305.8 / 4.8)

Mitigation through improved water efficient fixtures and appliances and/or rainwater harvesting within the new dwellings would be required, and/or offsetting on another property. This mitigation would require the Council to undertake an Appropriate Assessment to pass HRA.

## Commercial uses

The best way to evidence existing mains water consumption is via copies of metered water bills from within the last three years. The bills should cover the period before Covid as well as after as the lockdowns will have affected consumption at many sites.  Unmetered water bills will not be accepted. Where there are other uses on a site, or the use is shared across multiple other buildings and land, it will be difficult to evidence with certainty the actual water use from a building unless separately metered. This is particularly the case for agricultural buildings. In such scenarios we will likely only be able to consider existing water consumption as nil.  In cases where you are evidencing water consumption from agricultural uses, it will need to be clear that the water consumed is coming from the mains supply, and not watercourses or other rain collecting means.

When evidencing proposed consumption, we recommend you complete a BREEAM Wat 1 water calculator or an appropriate equivalent industry standard water calculator to estimate proposed employee water usage. Where necessary OffPAT employment density figures can be used to calculate average employee numbers a site and use could employ

Water consumption data for commercial uses must also include water consumed in any industrial or cooking process carried out on the site.

We will need to assess each case on its merits. We will also need to consider alternative permitted uses within Class E, or industrial occupiers under class B2, for instance, which could vary considerably in their water consumption, when assessing proposed consumption rates. Conditions may be applied to restrict alternative uses if there is concern they may breach the water neutrality strategy.

Please note this advice may evolve in future as we receive and examine more water neutrality strategies.