Water Neutrality Statement

& Building Regulations Part G

Slinfold Parish Cottages

Proposed site at:
5 Greenfield Road,
Slinfold,
West Sussex,
RH13 0SF

SRE

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Executive Summary

The Water Neutrality Statement has been developed by SRE for Slinfold Parish Cottages (the Client) c/o DLP Planning Limited to demonstrate that the new residential development at the rear of no. 5 Greenfield Road, Slinfold, West Sussex (Proposed Development), will meet the requirements of Horsham District Council's Planning Policy and other relevant planning requirements.

The assessment forms a part of an ongoing sustainability commitment by the Horsham District Council's and Natural England's to minimise water use in new buildings.

The aim of the assessment is to reduce the water consumption within the Proposed Development by utilising water efficient fittings/fixtures followed by reusing water through a combined rainwater harvesting and grey water recycling system to minimise the per capita consumption. Consequently, this residual water consumption can be offset by delivering retrofit measures to the existing housing stock managed by the client.

In order to establish a baseline for offsetting, a survey was conducted by SRE on 5th July which is evidenced with site visit photographs within this report. The information collected from the survey enabled the determination of the potential water savings from the retrofit and subsequently achieving water neutrality for the Proposed Development.

The summary of the water neutrality calculations can be summarised below:

	l/p/d	Total l/d	Improvement %
Baseline	100	264	
Proposed Development Reduced Water Use	90.10	237.86	9.90%
Proposed Development Reuse Water	57.10	150.74	36.6%
Proposed Development Water Neutrality		150.74	42.9%

Table 1 - Summary water consumption for the Proposed Development

	Total l/d
Proposed Development Water to be offset	150.74
Offsite Offset (Existing Housing Stock)	-186.87
Residual Savings	-36.13

Table 2 - Water Neutrality Summary for the Proposed Development

1.0 Introduction

This Water Neutrality Statement has been written by SRE for Slinfold Parish Cottages (the Client) to demonstrate how the new residential development at the rear of no. 5 Greenfield Road, Slinfold, West Sussex (Proposed Development) will meet the requirements of Horsham District Council's Planning Policy, Natural England's Position Statement for Minimising Water Use[1], as well as Part G of Building Regulations 2013 (as applicable in Table 3).

The statement has been updated in response to comments from Horsham DC[2] and revised the occupancy figures in relation to the Horsham District Council FAQs[3] in relation with Water Neutrality and updated the baseline water consumption by undertaking a survey of the existing housing stock.

Water neutrality is defined as:

"For every new development, total water use in the region after the development must be equal to or less than the total water-use in the region before the new development"[4].

Water neutrality is a concept whereby the total demand for potable mains water supply within a planning area after the development has taken place is the same as (or less than) it was before the development took place. If this can be achieved, the overall balance for water demand is 'neutral', with no net increase in demand considered as a result of the development. To accomplish this, it is necessary for new developments to be subject to planning policy, which aims to ensure that homes and businesses are built to high standards of water efficiency through the use of water-efficient fixtures and fittings, extending in some cases to rainwater harvesting and greywater recycling.

1.1 Proposed Development

The Proposed Development consists of 2 no. one-bedroom homes (1 no. with wheelchair access and 1 no. with general needs) on a greenfield site with no existing water consumption. The Proposed Development will have on-site parking with 2 no. unallocated spaces to the north. The site is accessible via an existing drive from Greenfield Road, which leads into the garage area and Scout Hut to the east of the Cobblers site, with an access within its western boundary as depicted in Figure 1.

[1] Natural England's Position Statement for Applications within the Sussex North Water Supply Zone September 2021 – Interim Approach
[2] Email from Horsham DC to DLP Planning dated 28.06.2024
[3] Water Neutrality and planning applications
[4] Natural England's Advice Note regarding Water Neutrality within the Sussex North Water Supply Zone: February 2022 V2

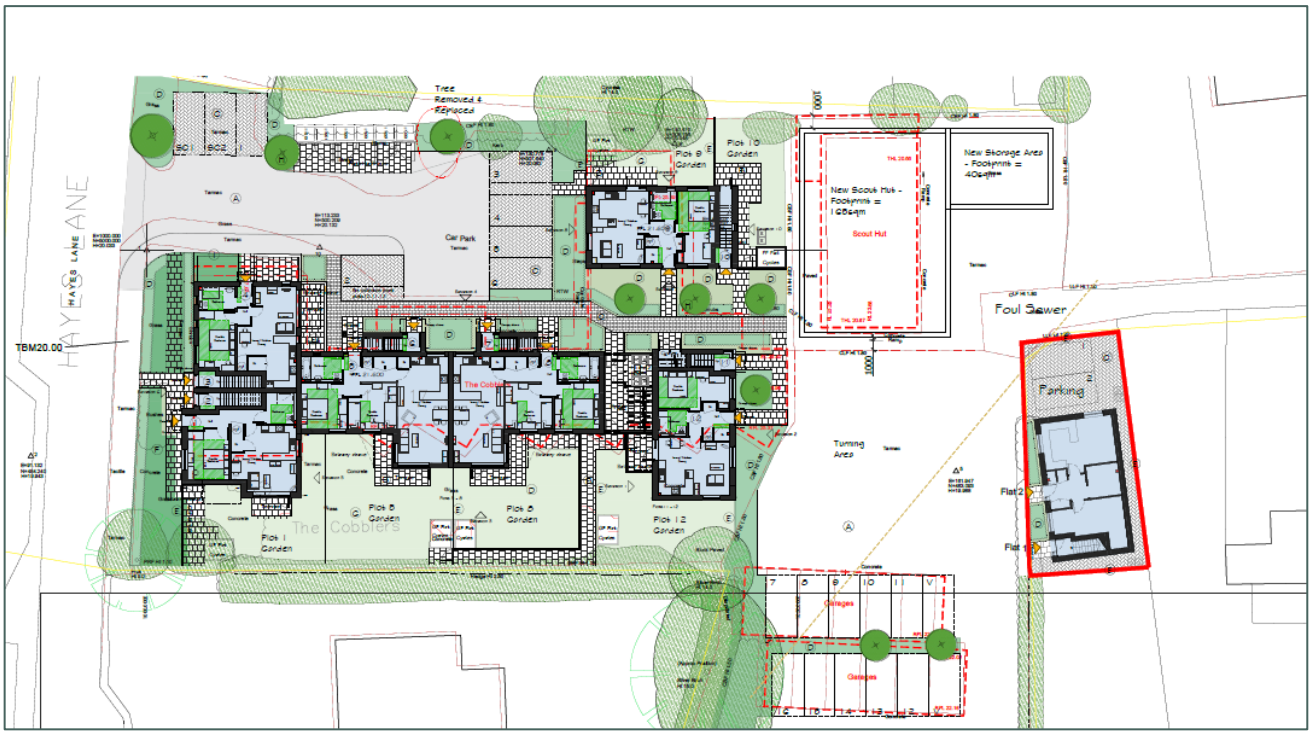


Figure 1 – Proposed site details – Highlighted in red (MH Architects Ltd.)

Please see the architectural drawings and the site plan for further details in Appendix A.

1.2 Policy & Regulations

The Proposed Development is required to meet both local planning policy as well as The National Standards (Part G) requirements in relation to water specification and use on site. These regulations are summarised in Table 3 below:

Regulations, Guidance & Planning Policy	Requirement
Building Regulations Approved Document Part G - Sanitation, hot water safety and water efficiency (2015 edition with 2016 amendments)	<u>Part G2</u> The minimum Part G standard equates to 125 litres/person/day and enhanced standard 110 litres/person /day (both including 5 litres/person/day external water use) and apply to a dwelling formed by: •New construction, •Material change of use where the building is used as a dwelling where previously it was not, or, •Material change of use where the building contains a flat, where previously it did not. "The estimated consumption of wholesome water of a new dwelling should be no more than 125 litres/person/day or 110 litres/person/day where the optional requirement applies. This

	includes a fixed factor of water for outdoor use of 5 litres/ person/day."[5]
Horsham District Local Plan 2021 - 38[6]	<u>Strategic Policy 38: Sustainable Design and Construction</u> "c) New residential development achieves a water efficiency of 100 litres/person/day. Development above 200 homes is expected to achieve 80 litres/person/day and incorporate site wide measures to conserve and reduce water consumption, including grey water recycling; d) New non-domestic buildings to achieve the maximum credits in BREEAM category Wat 01 Water Consumption".
Water Neutrality and planning applications – Horsham District Council	The Water neutrality and planning applications provides an outline of the FAQs which are directed towards anyone considering applying for development in the Horsham District, and explain Horsham District Council's proposed method of dealing with the issue. This document should be read in conjunction with the accompanying Local Plan Water Neutrality FAQs, the Natural England (NE) Position Statement (September 2021), and the Natural England FAQ's (December 2021) for development within the Sussex North Water Supply Zone.
Natural England's Position Statement for Applications within the Sussex North Water Supply Zone (September 2021 – Interim Approach)[1]	The aim of water neutrality is to minimise the impact on existing water resources, infrastructure, and the environment. Natural England has advised that this matter should be resolved in partnership through Local Plans across the affected authorities, where policy and assessment can be agreed and secured to ensure water use is offset for all new developments within Sussex North. Minimising water use of new builds: • Complete a water budget (based on occupancy) • All new builds to demonstrate that they can achieve strict water targets (e.g., 85L/pp/day*) [excluding external water use of 5l/p/d] This can be achieved by measures such as: - Grey water recycling (advantage of being reliable in hot dry weather) - Rainwater harvesting - Water efficient fixings (such as shower aerators) to demonstrably reduce demand-this would need to be suitably certain

[5] <u>Approved Document Part G 2015 edition with 2016 amendments</u>
[6] <u>Horsham District Local Plan 2021 -38</u>

	In addition, water offsetting is required: • One way to achieve this is retrofitting of council owned properties/commercial buildings-located within Sussex North. Examples include: - Grey water recycling - Rainwater harvesting of commercial settings - Installation of water reduction fittings in Council-owned buildings **This is a reasonably achievable figure with the above measures, based on the early data from the strategic solution and may be subject to change as the strategic solution evolves.*
Southern Water WRMP (2019)[7]	Central area strategy Our detailed plans include the following schemes that potentially need to be developed depending on the future sustainability reductions: • Media and engagement water efficiency campaign as part of the first phase of our Target 100 vision. • Increased leakage reduction activity. • A desalination scheme on the tidal River Arun. • Rehabilitation and enhancement of three existing sources in Sussex North. • Catchment management and infrastructure solutions to reduce nitrates and pesticides and increase resilience at a number of sources as part of our Catchment First initiative. • Extend the universal metering programme, and enhance meter reading frequency. Develop trials of customer offerings or propositions to encourage more efficient use of water.

Table 3 - Summary of Regulations, Guidance & Planning Policy Requirement

[7] Water Resource Management Plan 2019: Technical Overview

1.2.1 Natural England - water neutrality

Natural England have defined the North Sussex Water Resource Zone as per Figure 2 – Sussex North Water Resource Zone:

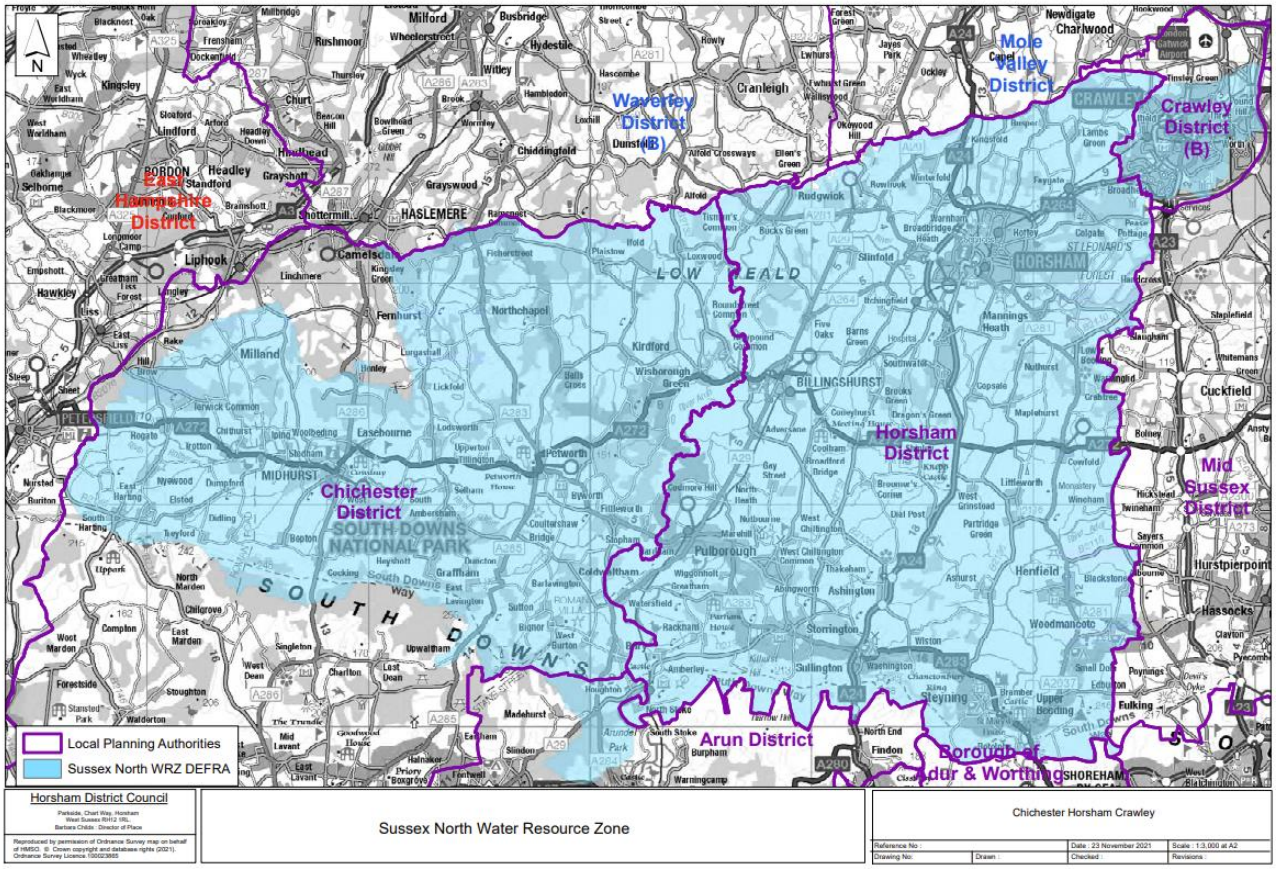


Figure 2 – Sussex North Water Resource Zone (Horsham District Council)

The application site is located in Horsham District Council's jurisdiction within the West Sussex WRZ, which is within the Central sub-regional Southern Water supply area as mentioned in Appendix B.

The Proposed Development will seek to deliver via water efficiency < 85 l/p/day (excluding external water use) requirement on site and then wider water use offset to achieve water neutrality.[8]

1.2.2 Natural England – Nitrate Neutral Area

It should be noted that the Proposed Development does not sit within one of Natural England's 'Nitrate Neutral' areas impacting the Solent and therefore this issue is not applicable to the application. (Refer to Appendix C for the detailed map).

[8] Natural England's Position Statement for Applications within the Sussex North Water Supply Zone

Methodology

2.0 Methodology

The following methodology has been adopted to address the water calculations, the water offset calculations and the occupancy levels.

2.1 Water Neutrality Hierarchy

Water neutrality is achieved by the following 3 Step process: reducing water use, reusing and recycling water onsite, followed by offsetting any remaining water demand in the existing local community, as demonstrated in Figure 3.

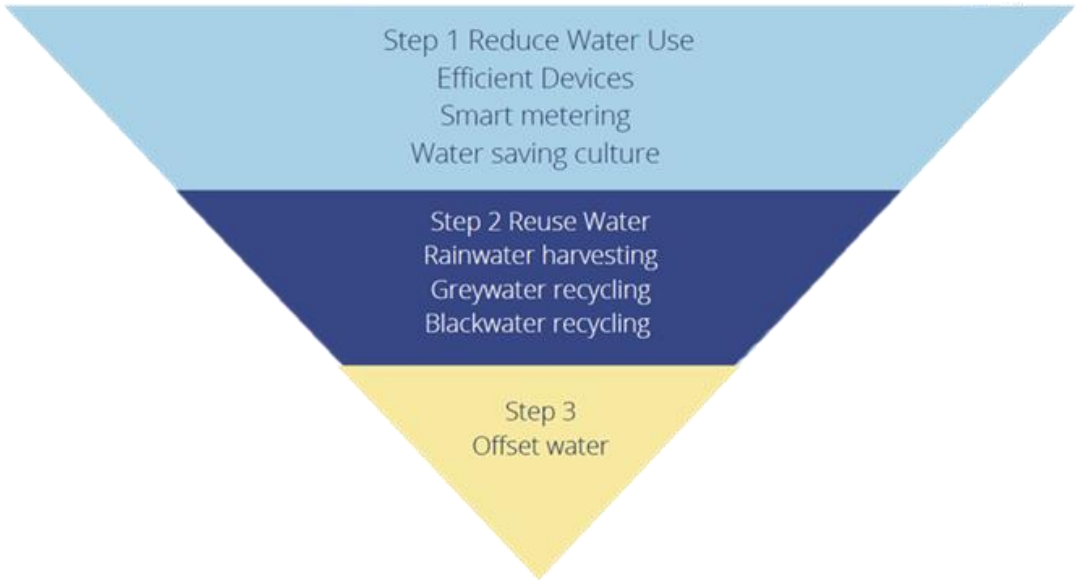


Figure 3 – Water Neutrality Hierarchy

2.2 Water Calculations

In order to accurately calculate the predicted water use within the Proposed Development, along with any water offset calculations from on-site and/or off-site existing dwellings/buildings, the Part G Domestic Water Calculator or the Code for Sustainable Homes (CSH) Water Calculator Tool and/or the BREEAM Wat 01 tool are used.

These calculators provide the results in litres/person/day, while the BREEAM Wat 01 Tool provides the results in m^3/person/year.

2.2.1 Part G Domestic Water Calculator

The Part G Domestic Water Calculator is only applicable for Steps 1 & 3 of the Water Neutrality Hierarchy, where the total consumption of each fitting in litres/ person/ day can be calculated for the dwelling/building.

2.2.2 CSH Water Calculator

The CSH Water Calculator is used in the case of implementing Reuse of Water (Step 2) in the Water Neutrality calculations. Additionally, in case of using multiple fittings of the same type that have various flow rates or capacities, the CSH Water Calculator will determine the average flow rate or capacity and eventually the overall consumption in litres/ person/ day, by deducting the water savings from the Step 2 results.

2.2.3 BREEAM Wat 01 Tool

The BREEAM Wat 01 tool is utilised for non-domestic buildings within the Proposed Development or non-domestic existing buildings, as part of on-site and/or off-site water offset (Steps 2 & 3). The standard BREEAM method determines water efficiency (measured in L/person/day and m^3/person/year) for a building based on the building's actual component specification and default usage patterns for the building type and its activity areas. The output is compared to the baseline performance, based on component specification, where the percentage of improvement is used to determine the number of BREEAM credits achieved.

The minimum water efficient parameters for each component to achieve the particular BREEAM credits can be seen in Appendix D.

2.2.4 Existing Dwelling Water Usage

If an existing dwelling/building is being replaced as part of a development, this existing water use can contribute to water offsetting calculations. In this instance the 'Per Capita Consumption' (PCC) figure is used as a measure of water used by one person in one day and measured in litres/ person/ day (l/p/d).

Within the Southern Water's 'Sussex North' WRZ, three water usage figures are provided:

- Average PCC - 135 l/p/d.
- For a home without a water meter - 160 l/p/d
- For a home with a water meter - 131 l/p/d[9].

As part of the screening assessment to support the Horsham Local Plan, a survey was conducted for the existing housing stock to establish the baseline water consumption and occupancy figures, in order to facilitate off-site offset through retrofit measures. This approach can be explained in detailed within Section 3.3.2.

2.3 Occupancy

When calculating water use and water offset, each building's occupancy must be taken into consideration as part of the overall calculations, so an accurate 'Total litres per day' water use figure can be produced.

There are two approaches to determining the occupancy rates, as shown in the following sections.

2.3.1 Occupancy – Part G

Water use and water offset calculations are based on Building Regulations Approved Document Part G guidance for an occupancy rate of 2 people for the main bedroom and 1 person for each additional bedroom thereafter[10].

2.3.2 Occupancy – Southern Water

Water use and water offset calculations are based on extrapolated 2011 census data for Horsham District's average occupancy data, which is listed in their FAQs[3] as follows:

- One-bedroom dwellings: 1.32 occupants
- Two-bedroom dwellings: 1.88 occupants
- Three-bedroom dwellings: 2.47 occupants
- Four-bedroom dwellings: 2.86 occupants
- Five-bedroom dwellings: 3.09 occupants

[9] Water Neutrality Study: Part A – Individual Local Authority Areas (Final Report), July 2021
[10] Approved Document Part G 2015 edition with 2016 amendments

Wherever the information on the occupancy of the development is unavailable, the water calculations within this Water Neutrality Statement will calculate the water consumption of each dwelling based on the Horsham DC occupancy approach.

Assessment

3.0 Assessment

The following assessment has been undertaken in order to calculate the water offset requirements for the Proposed Development.

3.1 Step 1 – Reduce water use

The first step of water neutrality is reducing water usage compared to Part G and planning policy. This includes water efficient devices, smart metering and promoting water saving culture.

3.1.1 Water efficient devices

Water efficient devices will be installed to the toilets, lavatory taps, kitchen sink taps, showers and other household appliances to reduce water use.

Water appliances would be specified as products that are certified with a high rating from the European Water Label to ensure water efficiency. It's also important to regularly check toilets and taps for leaks, as these can waste between 200-400 litres/day[11].

Further details of the proposed fitting and flow rates are provided in Section 4.0 (Water Fittings Specification) and Appendix E.

3.1.2 Smart meters

The Proposed Development will use Smart Meters which will allow the consumers to monitor how much water they are using and how this affects their water bills. This can help consumers reduce water usage, identify leaks and meet water saving targets recommended by water companies, achieving incentives of reduced bills.

3.1.3 Water saving culture

The application site can implement good water saving culture and behaviours to reduce water use and ensure that other measures put in place are effective. Education and self-awareness are therefore important components of achieving water neutrality. The contractor and local water authority can help encourage water saving behaviour by providing a water saving information pack for the residents upon completion of the Proposed Development. This would include information about the newly installed water fittings and technologies and how the overall water consumption can be reduced to encourage water saving behaviour.

3.1.4 Proposed water savings at the Proposed Development

As part of the water reduction measures at the Proposed Development, the proposed water saving fittings in the Appendix E should be used to achieve the water use reduction target. In this assessment, Horsham DC's requirement for estimating consumption of wholesome water of a new dwelling is used as the baseline. Accordingly, a significant improvement (%) has been found, and the reduced water usage is calculated in litres/person/day for the Proposed Development.

Based on the above specification, the following baseline in litres/ day (l/d) has been calculated for both the house types as litres/person/day (l/p/d).

[11] Southern Water – Water saving tips

	Horsham DC	House 1 1 bed	House 2 1 bed	Total
Reduce Water Use l/p/d	100	90.10	90.10	
Improvement %		9.90%	9.90%	
Occupancy		1.32	1.32	
Total l/d/unit		**118.93**	**118.93**	**237.86**

Table 4 - Water Efficiency - Reduce for Proposed Development

3.2 Step 2 - Reuse water

Since the internal water use is reduced to this ambitious level, water reuse should be considered for the site. Water reuse systems provide an alternative water supply for non-potable uses (e.g. flushing toilets, outdoor use, irrigation and laundry facilities). There are different options available including rainwater (and surface water) harvesting, greywater recycling and black water recycling.

It is worth noting that these proposed systems will require the use of treatment systems and electric pumps to treat and distribute the non-potable water supply. The savings in water use its associated environmental impacts are partially offset by the use of mains electricity and associated CO_2 emissions to operate the system.

3.2.1 Rainwater Harvesting

Rainwater harvesting (RWH) systems capture and reuse the rainfall collected from building surfaces such as rooftops and balconies. They also include the capture of surface water runoff from site hardscape surfaces. RWH can range from a simple gravity fed system serving a single household, with an aboveground tank used for irrigation, to more a complex system which can treat and pump water to multiple homes or buildings for non-potable uses.

The Proposed Development will benefit from the pitched roof design of the house and have their surface water drainage connected to a single underground rainwater harvesting tank, located below the existing parking space. Tank sizing information is detailed later in this section.

3.2.2 Greywater Harvesting

Greywater recycling (GWR) systems capture and recycle the wastewater from showers, baths and basins. The plumbing services in most buildings discharge wastewater to the underground sewage system. However, GWR systems require separate plumbing networks and connections for greywater to be captured, treated and recycled, instead of being directly discharged to the wastewater municipality network.

Since this is a new build development, the infrastructure for a new mechanical system to collect and reuse greywater can be easily integrated. It is worth noting that these systems are normally suited for large buildings, where both high volume of produced greywater and high demand for non-potable water exist, which makes it more feasible for this system to be utilized.

3.2.3 Combined Rainwater and Greywater Harvesting System

Combined systems blend the constantly available greywater with the intermittently available rainwater collected from building surfaces. The process requires a GWR system with a secondary storage tank and filter

for treating the collected water. The non-potable water system in the Proposed Development will run on greywater primarily. Once the greywater supply has been exhausted, the treated greywater will be topped up from the rainwater tank giving a secondary recycled supply to the point of usage.

The combined systems have significant benefits, such as:

- Significantly reduce water costs
- Less mains water consumption
- Reduced environmental impact

The Proposed Development plans to integrate both Rainwater and Greywater Harvesting system in the design to reduce the PCC. The collected/treated water shall only be used for non-potable purposes, such as flushing toilets, laundry facilities, and outdoor use including irrigation and bike washdown, as per BS8515:2009 and Environment Agency guidance[12].

Average rainfall data had initially been taken from historical mapping. However, it has now been calculated using the latest MET office data[13] . The MET Office provides a regional figure of 808 mm/yr for Southern England, while taking the average from three local weather stations (all within 19 m of the site). A robust figure of 798 mm/yr has been used for the Rain Water Harvesting calculations (Appendix F).

	North Heath (6 miles)	Shoreham (17miles)	Charlwood (9 Miles)	Average for Site
mm/annum	858.70	752.61	783.27	798.19

Table 5 - Average annual rainfall for the site

House	Details	Comments
Rain water collection Area	72.04m^2	Pitch Roof catchment area – Main House
Yield co-efficient (pitch roof)	0.80	The total roof area is being used.
Hydraulic Filter Efficiency	0.90	Default figure – filter efficiency
Average Rainfall	798mm	Based on MET Office Data

Table 6 - Rainwater Harvesting Inputs

The above figures take into account system efficiencies from the collection process through the Yield co-efficient and the Hydraulic Filter Efficiencies. To avoid rainwater being unnecessarily discharged to the surface water drain (soakaway), the sizing of the RWH tank will accommodate capacity for a 35 day 'drought' period[14].

Accordingly, the annual rainwater collection can be calculated as follow:

[12] Environment Agency Harvesting rainwater for domestic uses: an information guide (October 2010)
[13] MET Office - UK climate averages
[14] RWH sizing provides capacity for minimum 18, standard 21, 'drought' days as per BS EN 16941-1:2018. SRE have proposed 35 days to accommodate local planning application challenges.

Unit	Building Footprint (roof area) m^2	Yield Co-eff	Hydraulic Filter	Average Rainfall M/yr	Collected Rain Water m^3/yr	Litres/d
Main Roof	72.04	0.80	0.90	0.798	41.39	113.40

Table 7 - Rainwater collected

Unit	Rainwater Collection (m^3/yr)	Rainwater Collection (l/yr)	Water Demand (l/p/d)	Drought days coverage (l/p)	Drought Days Total (l)	RWH Minimum Tank Size (m^3)
Main Roof	41.39	41,391	30.69	1,074	4,297	5.0

Table 8 - Rainwater water harvesting Minimum tank sizing

Additionally, by designing the plumbing system of the Proposed Development to integrate the greywater recycling system, it is assumed that 40% of the wastewater from the wash basin taps, baths, showers can be recycled for reuse. As a result, the total water collected and treated by the combined rainwater and greywater harvesting system will potentially result in excess non-potable water. Table 9 depicts the residual water collected from the system after being used for non-potable purposes. Excess water will be stored in a tank for external use, and any remaining surplus will be discharged to the municipal wastewater network.

	l/p/d
Rainwater Collected (a)	37.80
Greywater Collected (b)	18.64
Non-potable Consumption (offset) (c)	30.69
Residual water collected (if negative mains water tops up the system) = c-(a+b)	**25.75**

Table 9 - Water Reuse Calculations - Combined Rainwater & Greywater Harvesting

	l/p/d	Total l/d[15]	Improvement %
Baseline	100	264	
Proposed Development Reduced Water Use	90.10	237.86	9.90%
Proposed Development after Reuse Water	57.10[16]	150.74	36.6%

Table 10 - Reduce & Reuse scenario water consumption for the Proposed Development

Please see Appendix G for detailed Water Reuse Calculations.

3.3 Step 3 - Offset Water

The final step to achieving water neutrality (as required) is offsetting any residual demand by making savings in the existing local community. Importantly, these savings must be made within the same water resource zone as managed by the local water authority.

Options for offsetting schemes are as follows:

- Water efficiency audits and retrofits for existing homes
- Offsetting by fixing leaks over and above planned work by water companies
- Retrofitting properties to improve water efficiency
- Retrofitting water reuse schemes
- The installation of smart meters can also help encourage water saving behaviours and provide information on how much water is being used
- Leak detection system

The inclusion of water meters is being proposed, with further offset required to achieve water neutrality.

3.3.1 On-site Offset

By removing the water usage within the existing buildings on-site, the overall water usage could be reduced further.

There are no retained on-site buildings to reduce the overall water use via offset.

3.3.2 Off-site Offset

In order for the Proposed Development to be water neutral, off-site water consumption offset needs to be undertaken and contractually agreed by the end Client and the Local Authority. As already stated in Section 3.3, this offset could be delivered via a number of measures including upgrades to the existing housing stock managed by the client in the North Sussex WRZ.

[15] The CSH water calculator requires a whole number for occupancy. Since Horsham District Council uses an average occupancy of 1.32 people per one-bedroom dwelling, we must round this number up to 3 to use it in the calculator.

[16] The additional non-potable water use of 5 liters per person per day is expected to be supplied by the residual water collected from the combined rainwater harvesting/greywater recycling (RWH/GWR) system. It is important to note that this external water use should only be appliable for non-potable purpose

As per Horsham DC's guidance on Water neutrality and planning applications, in order to evidence the baseline of the existing housing stock managed by the Slinfold Parish Cottages, SRE carried out a site survey of 3 no. properties. The survey included measuring the flow rates, by a flow cup, and water pressure, by a water pressure gauge, for the water fittings and fixtures found within those properties. Accordingly, bespoke Part G calculators are developed for those properties. It is worth noting that all the properties surveyed do not have water meter installed. As a result, there is no historical data on the water consumption. Based on the information collected during the site visit, the details of the three properties surveyed and their baseline water consumption are listed in the following table:

Property Address	Bedrooms	Per capita consumption (l/p/d)	Current Occupancy	Current Total consumption (l/d)
1 Stone Cottages, Hayes Lane. Slinfold, West Sussex, RH14 0SA	2	153.57	1	153.57
17 Lowfield Road, Slinfold, West Sussex, RH13 0SG	3	121.36	5	606.80
Willow Cottage, Hayes Lane, Slinfold, West Sussex, RH13 0SQ	2	195.54	2	391.08
Total				**1,151.45**

Table 11 - Existing properties baseline water consumption

The photographs from the site visit and the detailed bespoke Part G calculators of each property can be found in Appendix I.

Following the survey, the water systems of the above-mentioned existing properties will integrate inline flow restrictors and regulators that will result in reduced flow rates for the showers, kitchen taps and wash hand basin taps, reducing the PCC and achieve water neutrality for the Proposed Development. The specifications of the regulator can be used for the properties as part of the retrofit measures can be found in Appendix J.

The predicted post retrofit water consumption is shown below.

Property	Reduced Per capita consumption (l/p/d)	Current Occupancy	Proposed Total consumption (l/d)
1 Stone Cottages	129.27	1	129.27
17 Lowfield Road	111.37	5	556.85
Willow Cottage	139.23	2	278.46
Total			**964.58**

Table 12 - Existing properties predicted post retrofit water consumption

The water offsetting calculations can be seen below.

Address	No. of Bedrooms	Current Occupancy	Existing Water Usage (l/d)	Reduced Water Usage (l/d)
1 Stone Cottages, Hayes Lane, Slinfold, West Sussex, RH13 0SA	2 bed	1	153.57	129.27
17 Lowfield Road, Slinfold, West Sussex, RH13 0SG	3 bed	5	606.80	556.85
Willow Cottage, Hayes Lane, Slinfold, West Sussex, RH13 0SQ	2 bed	2	391.08	278.46
Total			1,151.45	964.58
Residual Offset (l/d)			= 1,151.45 - 964.58 = **186.87**	

Table 13 - Offsite offset water calculations for the existing housing stock

According to Table 13, the off-site water consumption offset measures will result in residual savings of 186.87 l/d greater than the Proposed Development's water consumption of 150.74 l/d. As a result, the Proposed Development can achieve water neutrality by implementing the above measures.

The detailed Part G calculators for the reduced consumption of the existing properties is provided in Appendix I.

4.0 Water Fittings Specification

Where known, the flow rates and capacities have been selected in order to achieve the requirements for reducing water use and specifying water efficient devices in line with natural England's water neutrality requirements.

Where fittings and appliances have not yet been specified, the flow rates and capacities listed in the Water Efficiency Calculation are the maximum allowable flow rates and capacities and have been used to inform the specification and purchasing of the fittings.

4.1 Building Specification

The Water Efficiency Calculation follows the specifications in Appendix E to achieve significant water savings beyond the baseline consumption, before considering on-site reuse and offsetting strategies.

The manufacturer manual and fitting types provide performance specifications in support to the calculations to achieve the desired flow rates.

The main contractor/sub-contractor shall select similar/equivalent performing products in order to achieve the water reduction targets for the Proposed Development (Appendix E).

5.0 Summary

Water neutrality has the potential to deliver high levels of water savings and reduction in associated carbon emissions across the Proposed Development

In order to reduce and offset the water use across the Proposed Development SRE & the Client propose:

- Reduce water use
  - Provide Water efficient devices, in line with the recommendations in Appendix E.
  - Install Smart meters, to help the owners monitor ongoing water consumption.
  - Provide water saving information pack to influence owner's behaviour.
- Reuse Water
  - Utilise Rainwater Harvesting with storage capacity of up to 35 days.
  - Greywater Recycling is designed to collect and filter the greywater from wash basins, bathroom and showers and top up the RWH tank.
- Offsetting Water
  - Water offset in Client existing property portfolio to address the remaining water use on site.

Consequently, the Proposed Development water use can be significantly reduced considering the water reduction measures undertaken on-site (Section 3.1.4), reduction and reuse (Section 3.2.3), and off-site water offset (Section 3.3.2), exceeding Horsham DC planning policy and in line with Natural England's Position Statement & Water Neutrality Study Final Report Part B.

	l/p/d	Total l/d	Improvement %
Baseline	100	264	
Proposed Development Reduced Water Use	90.10	237.76	9.90%
Proposed Development Reuse Water	57.10	150.74	36.6%
Proposed Development Water Neutrality		150.74	42.9%

Table 14 - Summary water consumption for the Proposed Development

The Proposed Development (2 no. 1 bedroom homes) at the site will have a daily reduced water consumption of 237.76 l/d. By implementing the combined the Rainwater and Greywater Harvesting system will further decrease the total consumption to 150.74 l/d for the Proposed Development.

Accordingly, the residual water consumption must be offset by implementing water saving fittings to the existing housing stock managed by the client. The water saving fittings within the properties surveyed will result in reduced water usage as shown in Table 13. These savings will be allocated as part of the water neutrality for the Proposed Development.

	Total l/d
Proposed Development Water to be offset	150.74
Offsite Offset (Existing Housing Stock)	-186.87
Residual Savings	-36.13

Table 15 - Water Neutrality Summary for the Proposed Development

As seen in Table 15, the Proposed Development can achieve water neutrality. A schedule specifying the details of properties managed by the Client with respect to the address and no. of bed spaces can be seen in Appendix H. Additionally, as part of the survey of 3 no. existing properties, the photographs of their water fixtures/fittings and bespoke Part G calculator can be seen in Appendix I.

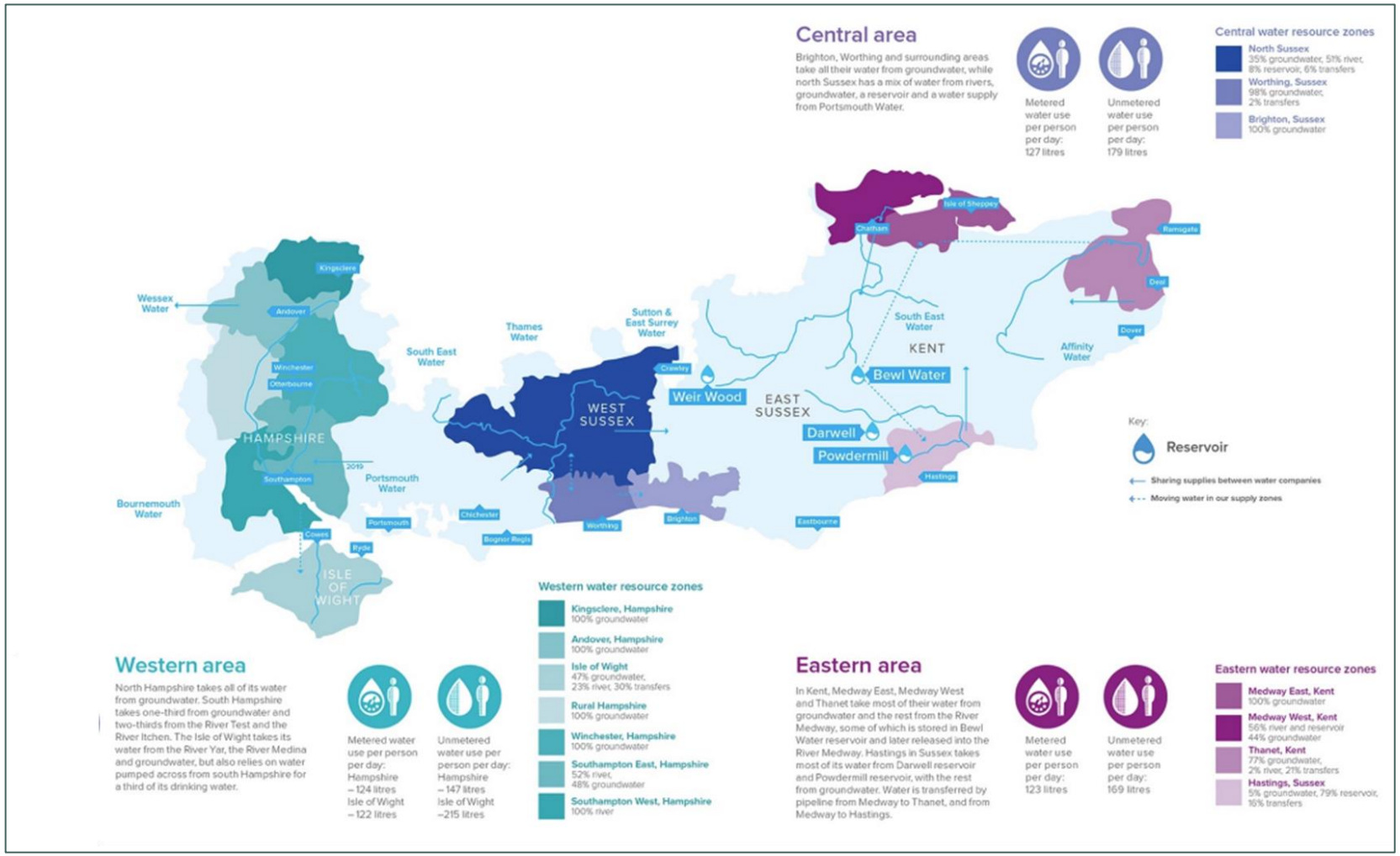
In conclusion, the Proposed Development addresses the Horsham DC Planning Policy requirements for reducing water use to <100/p/d and the target of <85l/p/d (excluding external water use) requirements set out by Natural England, as well as identifying the required additional off-site water offset needed to satisfy the Natural England requirement to be technically 'Water Neutral'.

Appendices

Appendix A Proposed Site Plan (MH Architects)

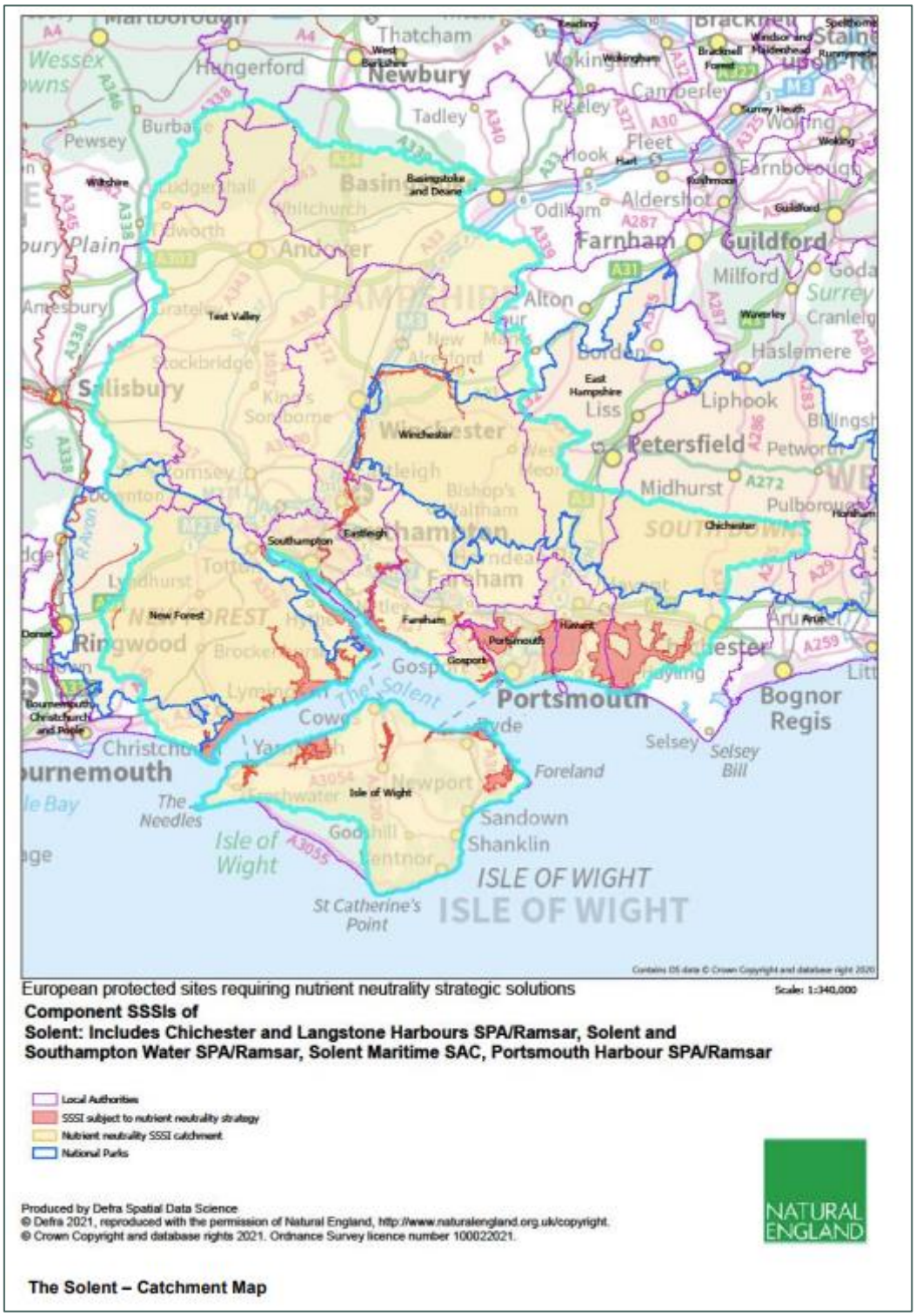


Appendix B Southern Water supply area and water resource zone[17]



[17] Water Resource Management Plan 2019

Appendix C The Solent Catchment Map[18]



[18] The Solent Catchment Map

Appendix D BREEAM Wat 01 - Water efficient consumption levels

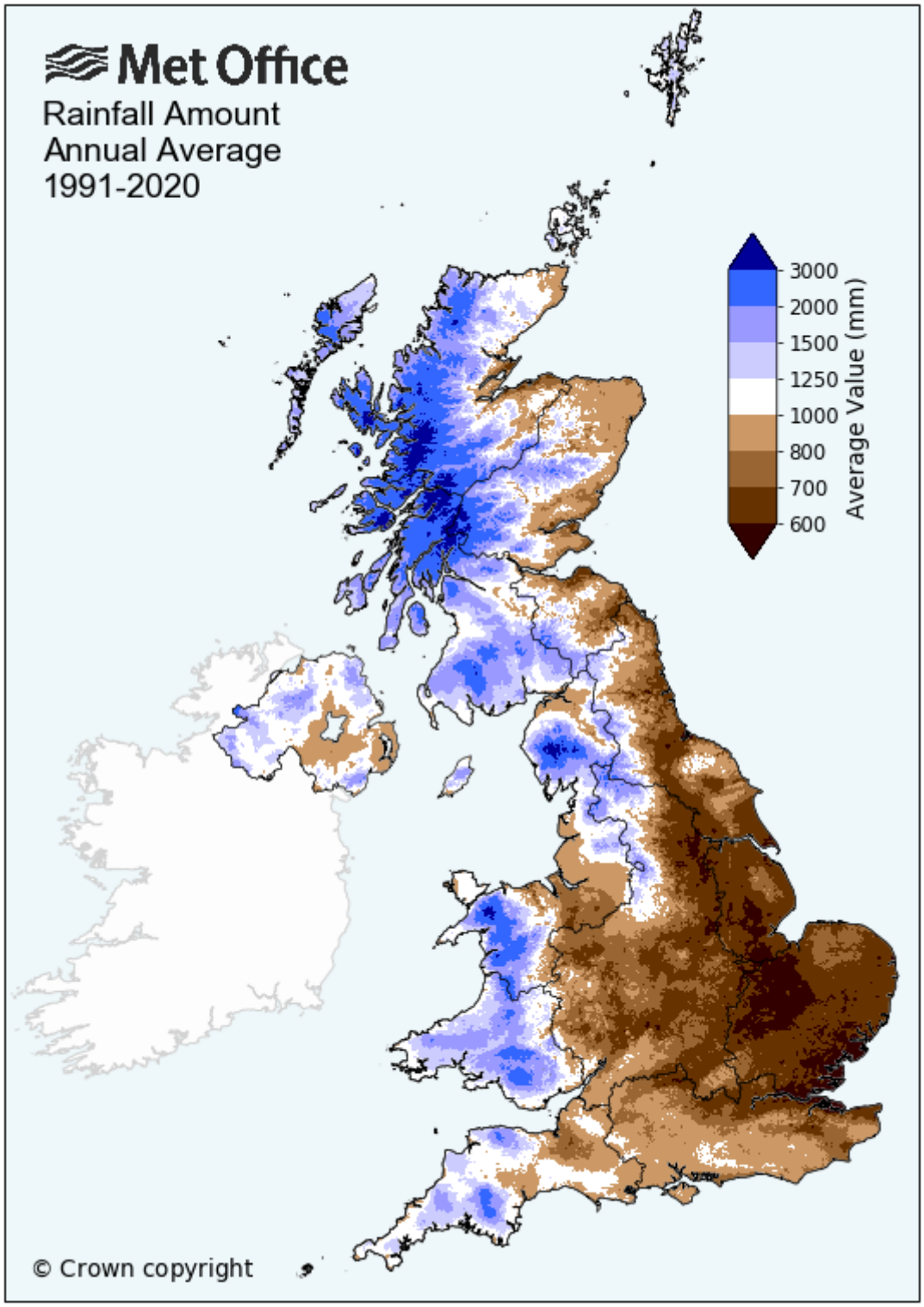
Component	Performance Levels						
	Baseline	1 Credit	2 Credits	3 Credits	4 Credits	5 Credits	Unit
WC	6	5	4.50	4	3.75	3	Effective flush volume (litres)
Wash Hand Basin Taps	12	9	7.50	4.50	3.75	3	litres/min
Showers	14	10	8	6	4	3.50	litres/min
Baths	200	180	160	140	120	100	litres
Urinals (2 or More)	7.50	6	3	1.5	0.75	0	litres/bowl/hour
Urinals (1 only)	10	8	4	2	1	0	litres/bowl/hour
Greywater/ rainwater system	0%	0%	0%	25%	50%	75%	% of WC/urinal flushing demand met using recycled non-potable water
Kitchen Tap/Kitchenette	12	10	7.50	5	5	5	litres/min
Kitchen taps: Restaurant	10.30	9	8.30	7.30	6.30	6	litres/min
Domestic Dishwasher	17	13	13	12	11	10	litres/cycle
Domestic Washing Machine	90	60	50	40	35	30	litres/use
Waste Disposal Unit	17	17	0	0	0	0	litres/min
Commercial Dishwasher	8	7	6	5	4	3	litres/rack
Commercial/ Industrial Washing Machine	14	12	10	7.50	5	4.50	litres/kg

The above figures are taken from BREEAM New Construction 2018 methodology.

Appendix E Water fittings specification - Proposed Development

Fitting	Measure	Capacity / flow rate	Manufacturer's Details (make & model)
Kitchenette Tap	Flow rate (litres/ minute)	3	CP961 Inline Flow Regulator
Shower	Flow rate (litres/ minute)	6	EcoVand Style Air 6 l/min shower head
WC (dual flush)	Flush volume (litres)	4	Lecico l/l Lever Cistern Fittings CPKSALL
	Part flush volume (litres)	2.6	Lecico l/l Lever Cistern Fittings CPKSALL
Bath	Capacity to overflow (litres)	135	Twyford Celtic
Washing machine	Litres/kg dry load	8.17	Default
Wash hand basin taps	Flow rate (litres/ minute)	2.5	CP961 Inline Flow Regulator
Dishwasher	Litres/place setting	1.25	Default
Waste disposal unit	Litres/use	n/a	-
Water softener	Litres/person/day	n/a	-

Appendix F Rainfall Annual Average (MET Office)



Appendix G Detailed Water Calculations (Proposed- With Combined RWH & GHW)

CSH Wat tool May 09

breglobal

Job no:	MHAR-GREE-2876
Date:	13.12.2022
Assessor name:	M.Maclean
Registration no:	MM04
Development name:	Greenfield Road (5)

Dwelling Type:	1	2	3	4	5	6	7	8	9	10
Dwelling type description:	WH & Greywat	Reduced								
WC	13.53	13.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Taps (excluding kitchen taps)	5.53	5.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bath	14.85	14.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shower	26.22	26.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Kitchen sink taps	11.68	11.68	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Washing machine	17.16	17.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dishwasher	4.50	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Waste Disposal Unit	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Softener	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contribution from Greywater										
Contribution from Rainwater										
Contribution from Grey/Rainwater (combined system)	30.69									
Normalisation factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Total Water Consumption	57.1	85.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Code for Sustainable Homes - credits awarded	5	4	0	0	0	0	0	0	0	0
CSH Mandatory Level	Level 5/6	Level 3/4	-	-	-	-	-	-	-	-
External Water Use	5	5	5	5	5	5	5	5	5	5
17. K - Litres/person/day	62.1	90.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Appendix H Schedule of Existing Housing Stock

No of Bedrooms	Address
2 bedroom house	1 Stone Cottages, Hayes Lane, Slinfold, West Sussex, RH13 0SA
2 bedroom house	2 Stone Cottages, Hayes Lane, Slinfold, West Sussex, RH13 0SA
3 bedroom house	5 Hayes Lane, Slinfold, West Sussex, RH13 0SQ
2 bedroom house	13 Hayes Lane, Slinfold, West Sussex, RH13 0SQ
3 bedroom house	17 Lowfield Road, Slinfold, West Sussex, RH13 0SG
2 bedroom house	19 Lowfield Road, Slinfold, West Sussex, RH13 0SG
2 bedroom house	Willow Cottage, Hayes Lane, Slinfold, West Sussex, RH13 0SQ
3 bedroom house	5 Greenfield Road, Slinfold, West Sussex RH13 0SF
2 bedroom house	Mascot, Park Road, Slinfold RH13 0SD

Clerk to the Trustees Details:		
Sally O'Brien	0774 2874672	sally@sallyobrien.co.uk

Appendix I Site survey Photographs and Bespoke Part G calculations

1 Stone Cottages, Hayes Lane, Slinfold, West Sussex, RH13 0SA







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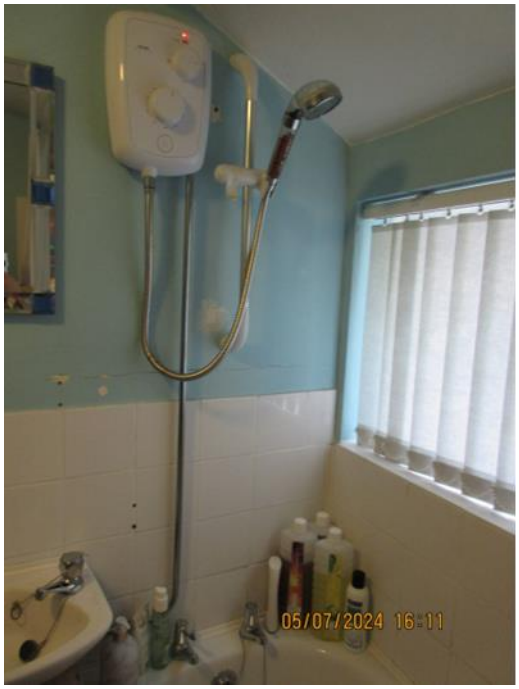
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Existing property Part G calculations:

Building Regulations 2015 Part G	Existing building - 1 Stone Cottage				
		Capacity / flow rate	Use factor	Fixed use (litres/ person/ day)	Litres/ person/ day
WC (single flush)	Flush volume (litres)	8.00	4.42	0.00	35.36
WC (dual flush)	Flush volume (litres)	0.00	1.46	0.00	0.00
	Part flush volume (litres)	0.00	2.96	0.00	0.00
WCs (multiple fittings)	Average flush volume (litres)	0.00	4.42	0.00	0.00
Taps (excluding kitchen / utility)	Flow rate (litres/minute)	10.00	1.58	1.58	17.38
Bath (where shower also present)	Capacity to overflow (litres)	170.00	0.11	0.00	18.70
Shower (where bath also present)	Flow rate (litres/minute)	12.00	4.37	0.00	52.44
Bath only	Capacity to overflow (litres)	0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)	0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)	8.00	0.44	10.36	13.88
Washing machine	Litres/kg dry load	10.00	2.10	0.00	21.00
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	0.00	1.00	0.00	0.00
				Total calculated use	163.26
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total water consumption	148.57
				External water use	5.00
				Total water consumption	**153.57**

Existing property post retrofit Part G calculations:

Building Regulations 2015 Part G	Existing building Post retrofit - 1 Stone Cottage				
		Capacity / flow rate	Use factor	Fixed use (litres/ person/ day)	Litres/ person/ day
WC (single flush)	Flush volume (litres)	8.00	4.42	0.00	35.36
WC (dual flush)	Flush volume (litres)	0.00	1.46	0.00	0.00
	Part flush volume (litres)	0.00	2.96	0.00	0.00
WCs (multiple fittings)	Average flush volume (litres)	0.00	4.42	0.00	0.00
Taps (excluding kitchen / utility)	Flow rate (litres/minute)	5.00	1.58	1.58	9.48
Bath (where shower also present)	Capacity to overflow (litres)	170.00	0.11	0.00	18.70
Shower (where bath also present)	Flow rate (litres/minute)	8.00	4.37	0.00	34.96
Bath only	Capacity to overflow (litres)	0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)	0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)	5.00	0.44	10.36	12.56
Washing machine	Litres/kg dry load	10.00	2.10	0.00	21.00
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	0.00	1.00	0.00	0.00
				Total calculated use	136.56
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total water consumption	124.27
				External water use	5.00
				Total water consumption	**129.27**

Willow Cottage, Hayes Lane, Slinfold, West Sussex, RH13 0SQ














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LITRES PER MINUTE
GALLS PER MINUTE
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05/07


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Existing property Part G calculations:

Building Regulations 2015 Part G	Existing building - Willow Cottage				
		Capacity / flow rate	Use factor	Fixed use (litres/ person/ day)	Litres/ person/ day
WC (single flush)	Flush volume (litres)	0.00	4.42	0.00	0.00
WC (dual flush)	Flush volume (litres)	6.00	1.46	0.00	8.76
	Part flush volume (litres)	4.50	2.96	0.00	13.32
WCs (multiple fittings)	Average flush volume (litres)	0.00	4.42	0.00	0.00
Taps (excluding kitchen / utility)	Flow rate (litres/minute)	14.00	1.58	1.58	23.70
Bath (where shower also present)	Capacity to overflow (litres)	220.00	0.11	0.00	24.20
Shower (where bath also present)	Flow rate (litres/minute)	24.00	4.37	0.00	104.88
Bath only	Capacity to overflow (litres)	0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)	0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)	14.00	0.44	10.36	16.52
Washing machine	Litres/kg dry load	6.43	2.10	0.00	13.50
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	0.00	1.00	0.00	0.00
				Total calculated use	209.38
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total water consumption	190.54
				External water use	5.00
				Total water consumption	**195.54**

Existing property post retrofit Part G calculations:

Building Regulations 2015 Part G	Existing building Post retrofit - Willow Cottage				
		Capacity / flow rate	Use factor	Fixed use (litres/ person/ day)	Litres/ person/ day
WC (single flush)	Flush volume (litres)	0.00	4.42	0.00	0.00
WC (dual flush)	Flush volume (litres)	6.00	1.46	0.00	8.76
	Part flush volume (litres)	4.50	2.96	0.00	13.32
WCs (multiple fittings)	Average flush volume (litres)	0.00	4.42	0.00	0.00
Taps (excluding kitchen / utility)	Flow rate (litres/minute)	5.00	1.58	1.58	9.48
Bath (where shower also present)	Capacity to overflow (litres)	220.00	0.11	0.00	24.20
Shower (where bath also present)	Flow rate (litres/minute)	14.00	4.37	0.00	61.18
Bath only	Capacity to overflow (litres)	0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)	0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)	5.00	0.44	10.36	12.56
Washing machine	Litres/kg dry load	6.43	2.10	0.00	13.50
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	0.00	1.00	0.00	0.00
				Total calculated use	147.50
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total water consumption	134.23
				External water use	5.00
				Total water consumption	**139.23**

17 Lowfield Road, Slinfold, West Sussex, RH13 0SG














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Existing property Part G calculations:

Building Regulations 2015 Part G	Existing building - 17 Lowfield Rd				
		Capacity / flow rate	Use factor	Fixed use (litres/ person/ day)	Litres/ person/ day
WC (single flush)	Flush volume (litres)	0.00	4.42	0.00	0.00
WC (dual flush)	Flush volume (litres)	6.00	1.46	0.00	8.76
	Part flush volume (litres)	4.50	2.96	0.00	13.32
WCs (multiple fittings)	Average flush volume (litres)	0.00	4.42	0.00	0.00
Taps (excluding kitchen / utility)	Flow rate (litres/minute)	10.00	1.58	1.58	17.38
Bath (where shower also present)	Capacity to overflow (litres)	220.00	0.11	0.00	24.20
Shower (where bath also present)	Flow rate (litres/minute)	6.00	4.37	0.00	26.22
Bath only	Capacity to overflow (litres)	0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)	0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)	12.00	0.44	10.36	15.64
Washing machine	Litres/kg dry load	8.50	2.10	0.00	17.85
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	0.00	1.00	0.00	0.00
				Total calculated use	127.87
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total water consumption	116.36
				External water use	5.00
				Total water consumption	**121.36**

Existing property post retrofit Part G calculations:

Building Regulations 2015 Part G	Existing building Post Retrofit- 17 Lowfield Rd				
		Capacity / flow rate	Use factor	Fixed use (litres/ person/ day)	Litres/ person/ day
WC (single flush)	Flush volume (litres)	0.00	4.42	0.00	0.00
WC (dual flush)	Flush volume (litres)	6.00	1.46	0.00	8.76
	Part flush volume (litres)	4.50	2.96	0.00	13.32
WCs (multiple fittings)	Average flush volume (litres)	0.00	4.42	0.00	0.00
Taps (excluding kitchen / utility)	Flow rate (litres/minute)	5.00	1.58	1.58	9.48
Bath (where shower also present)	Capacity to overflow (litres)	220.00	0.11	0.00	24.20
Shower (where bath also present)	Flow rate (litres/minute)	6.00	4.37	0.00	26.22
Bath only	Capacity to overflow (litres)	0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)	0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)	5.00	0.44	10.36	12.56
Washing machine	Litres/kg dry load	8.50	2.10	0.00	17.85
Dishwasher	Litres/place setting	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	0.00	1.00	0.00	0.00
				Total calculated use	116.89
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total water consumption	106.37
				External water use	5.00
				Total water consumption	**111.37**

Appendix J Specification of flow regulators

ECO Range

Accessories
Flow Limited Aerators



Features:

- Aerates water for softer non splashing flow
- All flow limiters accurate by +/-10%

Product Certifications:

WRAS APPROVED PRODUCT

WRAS Certificate No: 2007800
WRAS Expiry Date: 31/07/2025

For more products, visit our website:
http://www.bristan.com

Specification

Product Code	Limited To (lpm)	Minimum Dynamic Pressure (bar)	Connection Inlet	Fitted To	What's in the Box?
ECO BAS3.5	3.5	0.2	M24 Male Thread	Tap Spout	1x 3.5lpm Blue Aerator, 1x M24 Chrome Housing, 1x Washer
ECO BAS4.5	4.5	0.2	M24 Male Thread	Tap Spout	1x 4.5lpm Pink Aerator, 1x M24 Chrome Housing, 1x Washer
ECO BAS6	6	0.2	M24 Male Thread	Tap Spout	1x 6lpm Black Aerator, 1x M24 Chrome Housing, 1x Washer
ECO FBAS3.5	3.5	0.2	M22 Female Thread	Tap Spout	1x 3.5lpm Blue Aerator, 1x M22 Female Chrome Housing, 1x Washer
ECO SMBAS3.5	3.5	0.2	M20 Male Thread	Tap Spout	1x 3.5lpm Blue Aerator, 1x M20 Chrome Housing, 1x Washer
ECO SMBAS4.5	4.5	0.2	M20 Male Thread	Tap Spout	1x 4.5lpm Pink Aerator, 1x M20 Chrome Housing, 1x Washer
ECO SPBAS 1.8	1.8	1	M24 Male Thread	Tap Spout	1x 1.8lpm Lime Green Spray Aerator, 1x M24 Chrome Housing, 1x Washer
ECO SPBAS 3.5	3.5	1	M24 Male Thread	Tap Spout	1x 3.5lpm Dark Blue Spray Aerator, 1x M24 Chrome Housing, 1x Washer

Bristan, Birch Coppice Business Park, Dordon, Tamworth, B78 1SG. Web Site: www.bristan.com Telephone: 0330 026 6273. Email: enquire@bristan.com.
See www.bristan.com/guarantees for more information. The information contained on this page was correct at date of issue. Fitting Dimensions are provided as a guide only. Some variation may occur due to manufacturing tolerances. Bristan pursues a policy of continuous improvement in design and performance of its products and so reserves the right to change specifications without prior notice.

ECO Range

Accessories
Shower Outlet Flow Regulators



Features:

- Suitable for all bristan showers
- Between shower hose and handset
- All limiters accurate +/-10%
- Operating pressure range min 1.0 bar; max 5.0 bar
- Simply screw in place

Product Certifications:

WRAS APPROVED PRODUCT

WRAS Certificate No: 2007800
WRAS Expiry Date: 31/07/2025

For more products, visit our website:
http://www.bristan.com

Specification

Product Code	Limited To (lpm)	Minimum Dynamic Pressure (bar)	Connection Inlet	Fitted To	What's in the Box?
ECO SHW 04	4	1	G1/2"	Shower Outlet	1x Screw-in Chrome housing with integral Grey 4lpm flow limiter
ECO SHW 05	5	1	G1/2"	Shower Outlet	1x Screw-in Chrome housing with integral Yellow 5lpm flow limiter
ECO SHW 06	6	1	G1/2"	Shower Outlet	1x Screw-in Chrome housing with integral Black 6lpm flow limiter
ECO SHW 07	7	1	G1/2"	Shower Outlet	1x Screw-in Chrome housing with integral Green 7lpm flow limiter
ECO SHW 08	8	1	G1/2"	Shower Outlet	1x Screw-in Chrome housing with integral White 8lpm flow limiter
ECO SHW 10	10	1	G1/2"	Shower Outlet	1x Screw-in Chrome housing with integral Blue 10lpm flow limiter
ECO SHW 14	14	1	G1/2"	Shower Outlet	1x Screw-in Chrome housing with integral Pink 14lpm flow limiter

TECHNICAL DATA SHEET

TOP QUALITY 5 YEARS GUARANTEED *

BRISTAN

Bristan, Birch Coppice Business Park, Dordon, Tamworth, B78 1SG. Web Site: www.bristan.com Telephone: 0330 026 6273. Email: enquire@bristan.com.
See www.bristan.com/guarantees for more information. The information contained on this page was correct at date of issue. Fitting Dimensions are provided as a guide only. Some variation may occur due to manufacturing tolerances. Bristan pursues a policy of continuous improvement in design and performance of its products and so reserves the right to change specifications without prior notice.

ECO Range

Accessories
Flow Regulators



Features:

- Limiters can be fitted within tap or shower inlet tails
- All flow limiters accurate by +/-10%
- Limiters suitable to work on a minimum pressure of 0.2bar

Product Certifications:

WRAS APPROVED PRODUCT

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Specification

Product Code	Limited To (lpm)	Minimum Dynamic Pressure (bar)	Connection Inlet	Fitted To	What's in the Box?
ECO TAP1	1	0.2	Ø15mm	Tap Tail; Shower Inlet	1x 1lpm Pink Flow Limiter
ECO TAP2	2	0.2	Ø15mm	Tap Tail; Shower Inlet	1x 2lpm Olive Flow Limiter
ECO TAP3	3	0.2	Ø15mm	Tap Tail; Shower Inlet	1x 3lpm Brown Flow Limiter
ECO TAP4	4	0.2	Ø15mm	Tap Tail; Shower Inlet	1x 4lpm Grey Flow Limiter
ECO TAP5	5	0.2	Ø15mm	Tap Tail; Shower Inlet	1x 5lpm Yellow Flow Limiter
ECO TAP6	6	0.2	Ø15mm	Tap Tail; Shower Inlet	1x 6lpm Black Flow Limiter
ECO TAP7	7	0.2	Ø15mm	Tap Tail; Shower Inlet	1x 7lpm Green Flow Limiter

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