Water Neutrality Statement

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Version	Revision	Date	Author	Reviewer	Project Manager
1	A	01.11.2024	Jiale Li	Adam Tucker	Jiale Li
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Executive Summary

This Water Neutrality Statement has been prepared by SRE Ltd on behalf of Mrs Tracey Miles (the Client) to demonstrate that the measures incorporated into the design of the new residential development at Grouse Road, Colgate (the Proposed Development) will meet the requirements of the Natural England Position Statement, Part G of the Building Regulations, and the Horsham District Council planning policies.

The Proposed Development involves the construction of a new single-storey residential dwelling upon a greenfield site for a family of four. The dwelling will include three bedrooms, two bathrooms, one kitchen, and a utility room. On the other side of the road from the Proposed Development is the expansive Lower Grouse farmyard and cattle field, which is owned by the Client.

This report demonstrates that the Proposed Development will not increase pressure on water resources and will be designed to achieve water neutrality. Water consumption within the development will be reduced through the use of efficient fixtures and fittings, while water reuse will be maximized via a rainwater harvesting system to minimize per capita usage. Any residual water consumption will be offset by saving water usage to the existing properties managed by the Client.

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

	Water Consumption (l/p/d)	Total water consumption (l/d)	Improvement %
Part G	110	440	-
Proposed Development Reduce	74.86	299.44	31.90%
Proposed Development Reuse	44.89	179.56	59.20%
Proposed Development Offset	-	-2.93	100.67%

Table 1 – Summary of the Water Neutrality Calculation of the Proposed Development

Introduction

1.0 Introduction

Natural England has advised in a Position Statement[1] that existing abstraction within the Sussex North Water Supply Zone may be having a negative impact on the Arun Valley sites. Developments within Sussex North must therefore must not add to this impact and one way of achieving this is to demonstrate water neutrality.

Water Neutrality is not currently defined in legislation, but is drawn from the Gatwick Sub regional Water Cycle Study (2020)[2].

"For every new development, total water use in the Sussex North Water Supply Zone after the development must be equal to or less than the total water-use in the region before the new development."

Horsham District is supplied with water by Southern Water from its Sussex North Water Resource Zone and is situated in an area of serious water stress, as identified by the Environment Agency's Water Stressed Areas Classification.

The Proposed Development is located in the middle of greenfield farmland in Colgate, Horsham. Access to the site is via Grouse Road, which connects Pease Pottage and Mannings Heath. Figure 1 below illustrates the Sussex North Water Resource Zone[3], within which the Proposed Development is situated. The water for this zone is sourced from abstraction points in the Arun Valley.

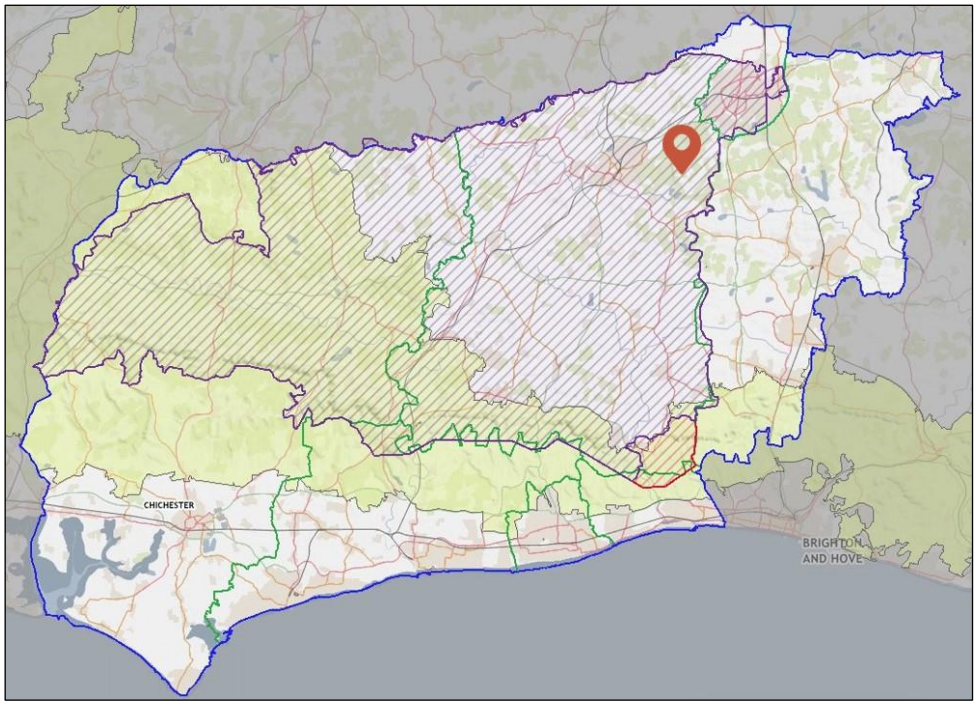

Figure 1 – View map of Sussex North Water Resource Zone (West Sussex County Council)

[1] Natural England's Position Statement for Applications within the Sussex North Water Supply Zone
[2] Gatwick Sub-Region Water Cycle Study, Final Report (August 2020) JBA Consulting
[3] Sussex North Water Supply Zone

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The Proposed Development involves the construction of a new single-storey residential dwelling upon a greenfield site for a family of four. The dwelling will include three bedrooms, two bathrooms, one kitchen, and a utility room. On the other side of the road from the Proposed Development is Lower Grouse farmyard and field, which is also owned by the Client. Figure 2 shows the proposed floor plan of the Proposed Development.

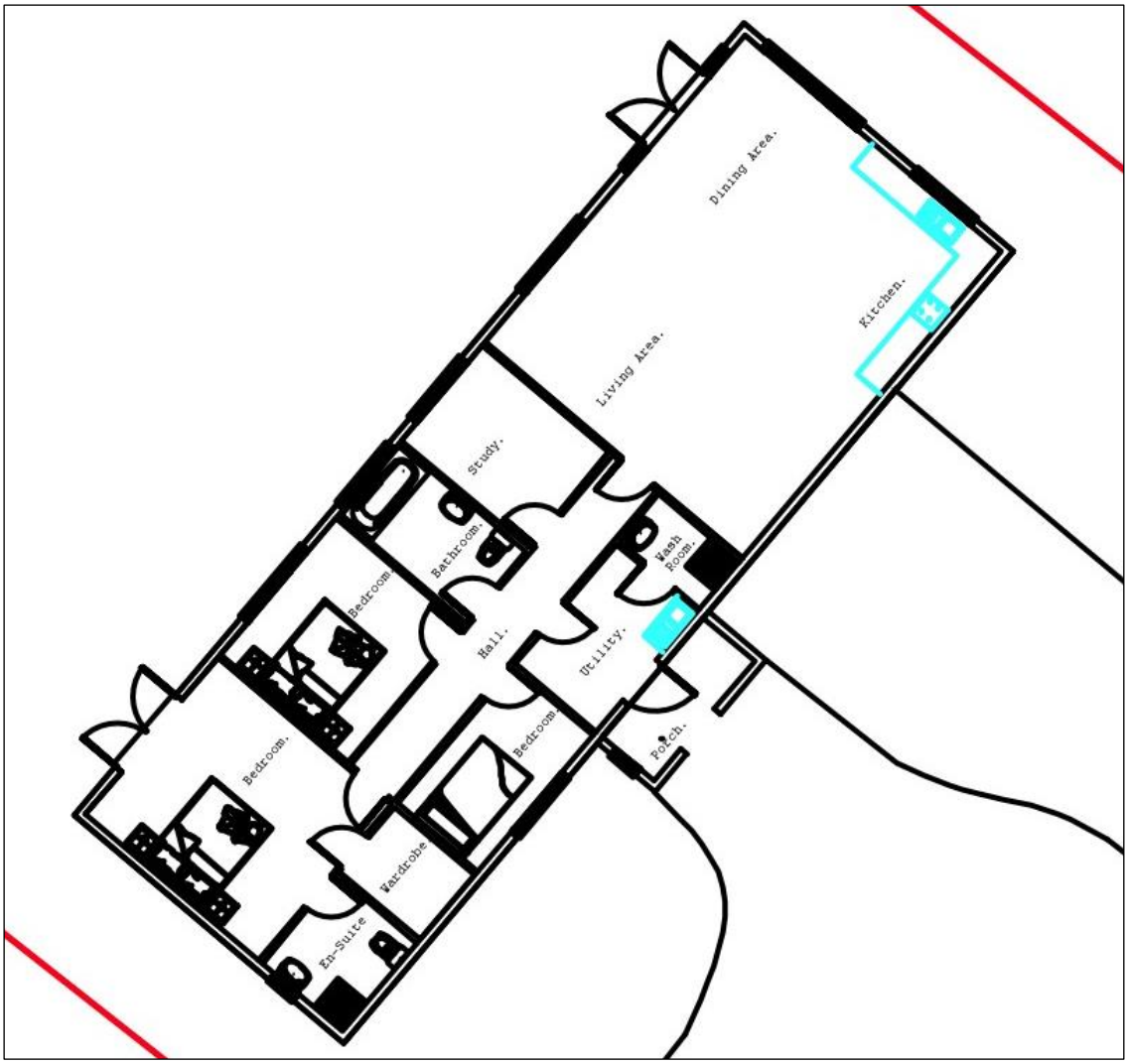

Figure 2 – Proposed first floor plan (Turner Associates)

1.1 Planning Context

The Proposed Development is required to meet the local planning policies and the National Standard (Part G) requirements in relation to water specification and the use on site. Table 2 below summaries the relevant regulations, guidance & planning policy requirements.

Planning Policy	Policy Summary
The Building Regulations Approved Document Part G - Sanitation, hot water safety and water efficiency (2015 edition with 2016 amendments)[4]	**Water efficiency of new dwellings** 1) The potential consumption of wholesome water by persons occupying a new dwelling must not exceed the requirement in paragraph (2). 2) The requirement referred to in paragraph (1) is either— a) 125 litres per person per day; or b) in a case to which paragraph (3) applies, the optional requirement of 110 litres per person per day, as measured in either case in accordance with a methodology approved by the Secretary of State. 3) This paragraph applies where the planning permission under which the building work is carried out— a) specifies the optional requirement in paragraph (2)(b); and b) makes it a condition that that requirement must be complied with. 4) In this Part, "new dwelling" does not include a dwelling that is formed by a material change of use of a building within the meaning of regulation 5(g). 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.
Natural England's Position Statement for Applications within the Sussex North Water Supply Zone	**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*) 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. **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 (for example there are clear opportunities for commercial properties). - Rainwater harvesting of commercial settings; - Installation of water reduction fittings in Council-owned buildings. These measures need to be implemented until such time as a more sustainable water supply has been secured.

[4] Approved Document Part G 2015 edition with 2016 amendments

Sussex North Water Neutrality Study: Part C – Mitigation Strategy[5]	**Offsetting measures** Four are particularly recommended as part of the Strategy: • Flow restrictors – a device which is retrofitted to existing properties to reduce the volume of water used in the property. This device has been used in a trial by Colgate Homes in 2022, and in trials by Affinity Water elsewhere in the country. • Water efficiency in schools – consisting of water audits, retrofitting water efficient devices, and where practical installing rainwater harvesting. • Non-household rainwater harvesting (RwH) – commercial buildings offer a large potential for RwH due to their extensive roof areas. In a non-household setting, RwH can be used to meet the demand from toilet flushing, as well as other uses such as vehicle washing. • Golf course irrigation –The British and International Golf Greenkeepers Association carried out a survey in 2019 and reported that just under 50% of golf facilities rely on mains potable water supply for irrigation. Assuming these figures are reflective of the golf courses within Sussex North, there is large potential for saving water if an alternative source of water for irrigation could be found. Other recreational uses such as sports grounds, swimming pools and leisure centres should also be investigated.
Horsham District Local Plan 2021-2038[6]	**Strategic Policy 38: Sustainable Design and Construction** 1. Development will be supported where it is demonstrated that sustainable design, including its construction and operation, is integrated into the development from the design stage onwards. To deliver sustainable design, development will only be supported where it meets all of the following requirements that are relevant: 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.

Table 2 - Relevant Planning Policy Summary

[5] Sussex North Water Neutrality Study: Part C – Mitigation Strategy
[6] Horsham District Local Plan 2021-2038

Methodology

2.0 Methodology

The following methodology has been adopted in line with the Natural England Position Statement to conduct water neutrality assessment.

2.1 Water Neutrality Hierarchy

Water neutrality is achieved by the following 3 steps: 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.

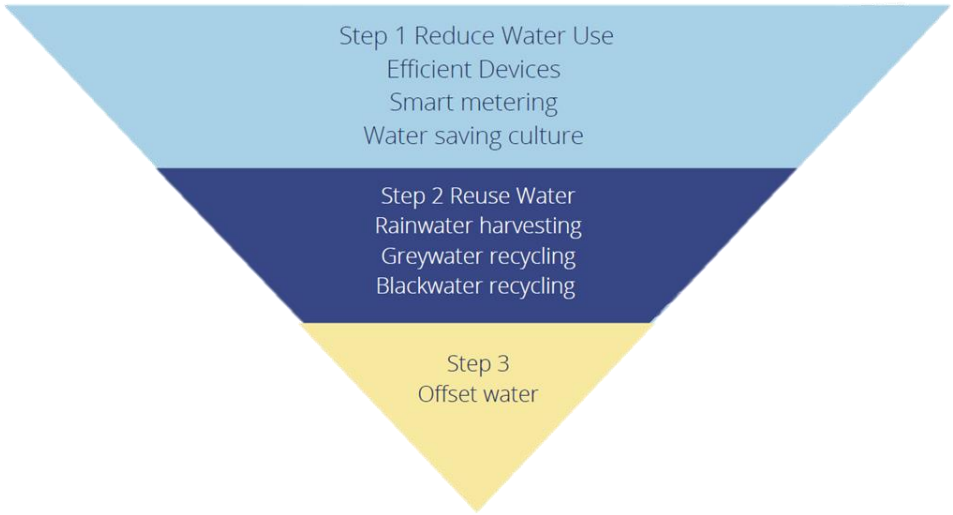

Figure 3 - Water Neutrality Hierarchy

2.2 Water Calculations – Part G

To accurately calculate the predicted water usage for the proposed development, the Part G Domestic Water Calculator has been used, incorporating the rainwater harvesting system and any water offset calculations from both on-site and/or off-site existing dwellings/buildings.

2.3 Occupancy

When calculating water use, 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. The accommodation schedule for the Proposed Development, provided by the architects, specifies that four people will reside in the development. However, in instances where this information is unavailable, alternative methods may be employed. The following sections outline two approaches to determining occupancy rates.

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.

2.3.2 Occupancy – Sussex North

Occupancy rates and per capita consumption values from the Water Resource Management Plans are utilized to calculate water demand. For Southern Water, an occupancy rate of 2.5 persons per dwelling and a per capita consumption of 0.134 have been applied.

2.4 Water Fittings Specification

The flow rates and capacities have been chosen to meet the requirements for reducing water use and specifying water-efficient devices, in line with Natural England's water neutrality standards. Given that the Proposed Development is a simple single-story family home, the use of water-efficient devices represents a cost-effective approach. Consequently, more restrictive water fittings have been selected for the Part G calculation to further minimize water consumption. Table 3 lists the water fittings specification provided by the client.

Water Fitting	Maximum Consumption
WC	4/2.6 litres dual flush
Shower	4 l/min
Bath	109 litres
Basin taps	3.5 l/min
Sink taps	3.5 l/min
Washing machine	5.44 l/kilogram
Dishwasher	0.92 l/place setting

Table 3 – Water fittings specification

Water Neutrality Assessment

3.0 Water Neutrality Assessment

The water neutrality assessment has been conducted in accordance with the principles outlined in section 2.1. The subsequent sections will detail the measures implemented at each step for the Proposed Development.

3.1 Proposed Development Baseline Water Consumption

The Approved Document G requires a water efficiency standard of 125 litres per person per day (l/p/d) or an optional standard of 110 l/p/d for new dwellings. Local Planning Authorities (LPAs) have adopted Local Plan policies mandating that new homes comply with the Building Regulations' optional standard of 110 l/p/d. The Horsham District Local Plan further stipulates that new residential developments must achieve a water efficiency target of 100 l/p/d. Additionally, the Sussex North Water Neutrality Study (Part C), which recommends a more ambitious target of 85 l/p/d, has been adopted for all new housing developments within the Water Resource Zone (WRZ).

3.2 Step 1 - Reduce Water

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.

3.2.1 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.

3.2.2 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.

3.2.3 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.

3.2.4 Water savings by reducing water use

As discussed previously in section 2.2, the Part G Domestic Water Calculator has been used to accurately estimate the predicted water use within the Proposed Development. This calculator determines the total consumption of each fitting in litres per person per day for the building. By implementing the water-efficient devices outlined in Section 2.4, the Part G Domestic Water Calculator indicates a total water consumption of 74.86 l/p/d for the Proposed Development. The complete results are provided in Appendix A.

The result was then compared to the Building Regulations Optional Standard of 110 l/p/d to calculate the water savings achieved by the recommended water fittings. A summary of this comparison is provided in Table 4. The Proposed Development will achieve an improvement of approximately 31.90% compared to the enhanced requirements of Part G.

	Total consumption per person per day (l/p/d)	Improvement %
Part G – Enhanced	110	-
Proposed Development Water Use - Baseline	74.86	31.90%

Table 4 – Improvements from the water efficient devices

3.3 Step 2 - Reuse Water

The next step is water reuse. 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.

Water reuse technologies have the potential to save significant amounts of water. For example, 24% of water in the home is used for flushing the toilet and 4% externally in the garden meaning a water reuse system could save at least a quarter of demand if it was installed for these purposes. Depending on its quality and the system installed it could also be used for an additional 12% of water for washing clothes.

It is worth noting that these proposed systems will require treatment systems and electric pumps to process and distribute the non-potable water supply. Therefore, the selection of a particular system depends on the requirements and characteristics of the development.

3.3.1 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. As the surface water drainage design can be modified as part of the future installation of the constructed development, rainwater recycling will be installed for the Proposed Development.

Average rainfall data has been calculated using the latest MET office data[7]. For the Rainwater Harvesting calculations, a regional average of 829.95 mm/year for Charlwood in Southern England (the closest site to Colgate) has been used. Since the roof is a pitched design with a smooth surface, a yield coefficient of 0.9 has been applied in the calculation for rainwater harvesting, in accordance with BS EN 16941-1: 2024[8]. Table 5 outlines the inputs for calculating the quantity of rainwater to be collected, and the calculator is attached in Appendix B.

Rainwater Harvesting Inputs	
Rainwater Collection Area	66 m^2
Yield Co-efficient and Hydraulic Filter Efficiency[9]	0.9
Average Rainfall	829.95

Table 5 – Rainwater Harvesting Inputs

Based on rainwater being used for non-potable consumption within all the WCs, the washing machine and external usage, the following water reuse calculations are achieved on site based on BS 8515: 2009 and Environment Agency guidance[10]. The results of the rainwater calculation are presented in Table 6.

	l/p/d
Daily Rainwater Collection	33.77
Non-potable Water Demand	24.97
External Water Use	5.00
Excess Rainwater not Currently Used	3.80
Water Savings from Rainwater Use	29.97

Table 6 – Rainwater Harvesting Results

Furthermore, tank sizing information is detailed in this section. A simplified approach for projects with constant rainwater demand is used, employing simple formulas to calculate a more accurate estimation of storage capacity. The usable storage capacity should be based on the lesser of the annual rainwater yield or the annual non-potable water demand. BS

[7] MET Office - UK climate averages
[8] BS EN 16941-1:2024
[9] The hydraulic treatment efficiency coefficient is the ratio of outcoming flow of the treated water to incoming flow of the collected rainwater
[10] Environment Agency Harvesting rainwater for domestic uses: an information guide (October 2010)

16941-1: 2024 recommends a rainwater harvesting solution should account for minimum 18, standard 21 drought days in UK. SRE have proposed 35 days to accommodate local planning application challenges.

As can be seen below in Table 7, the total non-potable water demand per annum is the lesser volume, the size of the usable storage capacity should be calculated based on the annual non-potable water demand. In conclusion, it is recommended that a 4,500L size tank is implemented to account for the 4,196 L usable capacity of rainwater. Therefore, the minimum tank size required to accommodate drought capacity is 4,500L, which would be implemented in the development. As the design develops, it is requested that a specialist engineer with experience in sizing such systems is involved, to more accurately assure an appropriate system is taken forward.

	Rainwater collection (l/yr)	Non-potable water demand (l/yr)	Usable capacity of the rainwater storage volume (l)	Minimum RWH tank size (l)
Total	49,299.03	43,756.20	4,195.80	4,500

Table 7 – Rainwater Water Harvesting Minimum Tank Sizing

The main functional elements of any harvesting system include collection, treatment, storage, and distribution. Rainwater harvesting systems shall not cause local flooding and therefore must include potential bypasses and/or properly dimensioned overflows.

Collection

Collection piping systems should allow the rainwater to flow from the collection surface to the storage device by gravity or siphonic action. Access for inspection, maintenance, and cleaning must be planned and installed. Collection pipework from the roof within the rainwater harvesting system should not discharge into open gullies, as additional contamination could occur.

Treatment

The harvested rainwater shall be treated to a quality suitable for the intended use. Rainwater harvested from roofs can contain various contaminants including:

- Roof Debris: Leaves, twigs, dust, and other debris that may accumulate on the roof.
- Bird Droppings: Waste from birds that can accumulate on the roof and contaminate the water.
- Pollen and Plant Matter: Pollen from trees and plants can mix with rainwater, especially during certain seasons.
- Bacteria and Microorganisms: Rainwater can pick up bacteria from the atmosphere, roof surface, and gutters.
- Heavy Metals: If the roof is metal or if there's pollution in the area, rainwater may contain traces of heavy metals such as lead or zinc.
- Sediment: Fine particles from the air, dust, and contaminants on the roof can settle in the water.
- Chemical Residues: Chemicals from roof coatings, cleaning agents, or nearby industrial areas.

Treatment shall be done upstream, within, and potentially downstream of the storage device. Treatment should involve the removal of coarse particles upstream of the storage, retention

of fine particles by sedimentation and flotation in the storage device, and filtering downstream of the storage device, depending on the intended use.

- Pre-Filtration: A mesh filter or first flush diverter will be installed to remove large debris, such as leaves, twigs, and dust, before the water enters the storage tank. This system will direct the initial flow of rainwater, which may be heavily contaminated, away from the storage tank.
- Primary Filtration: A coarse filter will be used to remove medium-sized particles, such as sediment and smaller debris.
- Secondary Filtration: A finer filtration system (e.g., cartridge or sand filter) will be used to further clean the water, removing finer particles and suspended solids.
- Disinfection: UV (ultraviolet) disinfection will be installed to eliminate bacteria, viruses, and other microorganisms from the rainwater, ensuring it is safe for non-potable uses.
- Optional Treatment: For additional safety, activated carbon filters can be used to remove any potential chemical contaminants or odors.

Preliminary treatment

Preliminary treatment (e.g. separators, filters) shall be designed and located upstream of the storage device. The type and dimensioning of preliminary treatment shall be selected according to the nature and size of the collection surface. The maximum particle size entering the storage device shall be equal or less than 1 mm for in-house use. If solids are retained, they shall be removed regularly or during a manual intervention. The preliminary treatment system shall have a hydraulic treatment coefficient of at least 0.9.

Treatment in storage device

The incoming rainwater is then treated in the storage device by the separation of coarse particles from the incoming water (sedimentation and/or flotation processes). The rainwater harvesting system shall, at a minimum, include one storage device, which may be positioned either above or below ground. The storage device shall be protected against frost, extreme temperatures, and direct sunlight, for instance, by being buried underground.

Sampling and testing regime

When sampling is required to test water quality, a dip sample should be taken from the tank or cistern in accordance with BS 7592:2022. When reviewing sample results, they should be measured in relation to the guideline values given in Appendix D for parameters relating to health risk and system operation. These values provide an indication of the water quality that a well-designed and maintained system is expected to achieve for the majority of operating conditions. The results of bacteriological monitoring and general system monitoring should be interpreted with reference to tables in Appendix D.

Maintenance, servicing, and cleaning of the system

To ensure the effective and safe operation of the RWHS over its lifetime, the following maintenance, servicing, and cleaning procedures will be implemented:

- **Tank Cleaning:** The storage tanks will be cleaned at least annually to remove sediment build-up, biofilm, and other contaminants.
    - Cleaning Method: A non-toxic, eco-friendly cleaner will be used to scrub the inside of the tanks, and the tanks will be rinsed thoroughly to remove any residual cleaning agents.
- **Pre-Filtration and First Flush Diverter Maintenance:** The pre-filtration system and first flush diverter will be checked every 6 months for debris and cleaned as necessary to maintain efficient operation.

- **Filters:** The primary filtration system (mesh or coarse filter) will be cleaned or replaced every 6 months. And the finer filters (cartridge or sand) will need to be replaced or cleaned according to the manufacturer's recommendations, typically every 12 months.
- **UV Disinfection System:** The UV system will be serviced every 12 months, including replacing the UV lamp (typically once a year) and checking the lamp's intensity.
- **Pumps and Pipework:**
    - Pump Servicing: The water pump(s) will be checked and serviced annually to ensure it is operating efficiently. Any wear parts, such as seals, will be replaced as needed.
    - Pipework Inspection: The entire system of pipes, from the collection points to the storage tanks and distribution points, will be inspected every year for leaks, blockages, or corrosion, particularly in areas that are difficult to access.
- **System Documentation:** Maintenance logs will be kept for all servicing, inspections, and repairs.

Measures for ensuring continuity of supply

To ensure a reliable and continuous supply of water, several measures will be incorporated:

- **Backup Water Supply**: If the rainwater supply is insufficient, a backup system (e.g., connection to mains water) will be installed. This will ensure that the water supply remains uninterrupted, particularly during dry periods or times of low rainfall.
- **Automatic Switching System**: An automatic valve will be installed to switch between harvested rainwater and the mains water supply, depending on the level of rainwater in the storage tanks.
- **Water Level Monitoring**: The rainwater tank(s) will be equipped with an automatic water level monitoring system to ensure that tanks do not overflow or run dry. If the tank reaches a certain low level, the system will automatically switch to mains water or issue an alert for manual intervention.
- **Overflow Management**: In case of heavy rainfall or tank overflow, the system will be designed to direct excess water away from the building and surrounding area to prevent waterlogging or damage.

3.3.2 Greywater recycling

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.

It is important to note that these systems are typically better suited for large buildings, where the high volume of greywater produced and the significant demand for non-potable water make their use more feasible. Therefore, due to the nature of the building being a sing-story domestic house, there will not be a high volume of greywater produced, meaning this will not be a cost-effective option compared to other water recycling systems available.

3.3.3 Blackwater recycling

Blackwater is any wastewater that is contaminated with water discharged from a toilet, so this can, and usually does, contain greywater. Blackwater recycling requires treatment before it can be reused. This usually involves aerobic screening, biological treatment, ultrafiltration, ultraviolet disinfection, TDS (total dissolved solids) and nutrient removal and chlorination.

Blackwater recycling systems are typically much more complex and a larger scale than other water reuse and recycling systems.

With its complexity, blackwater recycling is not likely to be a feasible option due to the expense involved. Generally, the process is only adopted on larger sites, or for multi-home developments.

3.4 Conclusion

The water consumption for the Proposed Development has been calculated and is summarized in Table 8 below. By implementing Step 1 "Water Reduction," and Step 2 "Water Reuse," a water saving of 59.20% has been achieved. However, there remains approximately 179.56 l/d of residual water that still needs to be offset to achieve water neutrality for the Proposed Development.

	Water Consumption (l/p/d)	Improvement %	Total water consumption (l/d)	Total Water Savings (l/d)
Part G – Enhanced	110	-	-	-
Proposed Development Reduce	74.86	31.90%	299.44	-
Proposed Development Reuse	44.89	59.20%	179.56	-260.44

Table 8 – Summary of the Proposed Development Water Consumption

3.5 Step 3 - Offset Water

The final step to achieving water neutrality 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 detailed 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.
- In addition to these, offsetting activities should also be supported by awareness campaigns and promoting water saving behaviours.
- 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

3.5.1 On-site offset

By removing and reducing water usage within existing buildings on-site, overall water usage for the site can be further reduced. The client also owns another property, Lower Grouse farmyard and field, which is located just across the road. As a result, on-site offsets can be

achieved by replacing the existing traditional high-flow water fittings with more efficient, water-saving fixtures.

The client has provided water bills from April 2022 to August 2024, included as Appendix C. These documents detail the water consumption for the Lower Grouse farmyard and the field used for cattle. The water bills indicate an average consumption of approximately 16 m^3 over 60 days, equating to 8 m^3 per month (8,000 Liters per 30 days). This translates to a daily usage rate of 267 Liters per day.

Removal

The removal of any existing water fittings at Lower Grouse farmyard and field is not currently planned, and as a result, there will be no removal in existing water usage on-site that could be offset against the Proposed Development's water usage.

Replacement

The existing Lower Grouse farmyard and field has traditional high flow rate water fittings installed, and the Client is therefore looking to replace/limit these as part of on-site offset measures. The offset measure includes restricting flow rates of the two external taps from 9 l/min to 3.5 l/min. A flow rate of 9 l/min results in 15.80 l/p/d, while a flow rate of 3.5 l/min results in 7.11 l/p/d. This shows a saving of 8.69 l/p/d. It is assumed that approximately 21 cattle are using the water on the farm, and this equates to a saving of 182.49 l/d. The Part G calculator have been used for the calculation and the results are included in Appendix E.

After implementing on-site offset measures by replacing the water fittings with more efficient devices, the water savings for Lower Grouse farmyard and field amount to 2.93 l/d. This exceeds the water consumption after accounting for reused water for non-potable purposes in the Proposed Development. As a result, the Proposed Development can achieve water neutrality with an additional savings of 2.93 l/d. The results are summarised in Table 9.

	Total consumption per day (l/d)	Savings (l/d)
Proposed Development Reuse	179.56	-
On-site Offset (removal)	0	0
On-site Offset (replacement)	182.49	-2.93

Table 9 – Summary of the offset measure results

3.6 Water Neutrality Summary

Therefore, by considering the water reduction measures, rainwater harvesting, and on-site water offset strategies, the Proposed Development's water use can be effectively mitigated through the initiatives implemented on-site. As a result, the overall outcome is that the Proposed Development would achieve water neutrality with all these measures in place.

Summary

4.0 Summary

This Water Neutrality Statement has been prepared by SRE Ltd on behalf of Mrs Tracey Miles (the Client) to demonstrate that the measures incorporated into the design of the new development at Grouse Road, Colgate (the Proposed Development) will meet the requirements of the Natural England Position Statement, Part G of the Building Regulations, and the Horsham District Council planning policies.

The Proposed Development involves the establishment of a new single-story residential dwelling on a greenfield site for a family of four. The dwelling will include three bedrooms, two bathrooms, one kitchen, and a utility room. On the other side of the road from the Proposed Development is the expansive Lower Grouse farmyard and cattle field, which is owned by the Client.

To minimize water usage in the Proposed Development, several water-saving measures have been proposed. Water reduction strategies include the installation of water-efficient devices and smart meters to help occupants monitor their water consumption, and a water-saving information pack will be provided to promote water-conscious behaviours. For water reuse, a rainwater harvesting system will be implemented for all WCs and washing machines. On-site offset measures have been proposed for the replacing of traditional water fittings for the existing Lower Grouse farmyard and field to more restricted water efficiency devices and resulting in a reduction of water usage of 182.49 l/d. This exceeds the water consumption of 179.56 l/d after accounting for reused water for non-potable purposes in the Proposed Development. As a result, the Proposed Development can achieve water neutrality with an additional savings of 2.93 l/d.

	Water Consumption (l/p/d)	Total water consumption (l/d)	Improvement%
Part G	110	440	-
Proposed Development Reduce	74.86	299.44	31.90%
Proposed Development Reuse	44.89	179.56	59.20%
Proposed Development Offset	-	-2.93	100.67%

Table 10 – Summary of the Water Neutrality Calculation of the Proposed Development

Appendix

Appendix A Part G Domestic Water Calculator: Baseline

Building Regulations 2013 Part G	Planning Stage Specification				
		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)	4.00	1.46	0.00	5.84
	Part flush volume (litres)	2.60	2.96	0.00	7.70
WCs (multiple fittings)	Average flush volume (litres)	0.00	4.42	0.00	0.00
Taps (excluding kitchen / utility)	Flow rate (litres/minute)	3.50	1.58	1.58	7.11
Bath (where shower also present)	Capacity to overflow (litres)	109.00	0.11	0.00	11.99
Shower (where bath also present)	Flow rate (litres/minute)	4.00	4.37	0.00	17.48
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)	3.50	0.44	10.36	11.90
Washing machine	Litres/kg dry load	5.44	2.10	0.00	11.43
Dishwasher	Litres/place setting	0.92	3.60	0.00	3.32
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	76.77
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total internal water consumption	**69.86**
				External water use	5.00
				Total water consumption	**74.86**

SRE Main Office, Greenforde Farm, Stoner Hill Road, Froxfield, Petersfield, GU32 1DY
tel: +44 (0)1730 710044
info@sre.co.uk

Appendix B Rainwater Calculation – Part G

Rainwater collection volume

The rainwater collection calculation for new dwellings – BS8515 Intermediate approach	
Collection area (m2)	66.00
Yield co-efficient and hydraulic filter efficiency	0.90
Rainfall (average mm/year)	829.95
Daily rainwater collection (litres)	135.07
Number of occupants	4
Daily rainwater per person (litres)	33.77

Appendix C Water Bills for Lower Grouse Farmyard and Field

business stream
A SCOTTISH WATER COMPANY

business-stream.co.uk

0330 123 2000

For emergencies, please contact your:
Water wholesaler: Southern Water
Visit **business-stream.co.uk/emergencies**

Customer reference / invoice no
[redacted]

Invoice / tax point date: 30 August 2024

Supply address: MILES TROUGHS LOWER GROUSE FARM GROUSE ROAD, COLGATE HORSHAM SW, RH13 6HT

Water supply point ID: 30194685XW1X

Our VAT number: 945 8508 85

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM RH13 6HT

Water efficiency toolkit

We're committed to supporting our customers to reduce their water usage by up to 20%. Download our free water efficiency workplace tools at **business-stream.co.uk/water-efficiency**

Your water services invoice

8 June - 28 August 2024 (82 days)

Your account summary

Your previous balance	[redacted]	CREDIT
Payments received		
Your balance brought forward		CREDIT

Your charges this period (see page 2 for details)

Water services charges	
VAT	
Total charges this period	
Your new account balance	CREDIT

Your water consumption and carbon emissions

The year to date (YTD) water consumption for your site is 28.56m³. Based on the billing period and using UK Government statistics, your annual carbon emissions are 24.49kgCO2e/yr.

Thanks for paying by Direct Debit. You don't need to do anything - we'll collect £5.20 from your account on 16 September 2024.

Ways to pay

Direct Debit

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit **business-stream.co.uk/direct-debit** or call us on **0330 123 2000**.

Online

Visit **business-stream.co.uk/pay online** with your debit or credit card details.

By phone

Call **0330 123 2000** to pay over the phone using your debit or credit card details.

By bank transfer

Sort code: 30-00-02.
Account number: 03029919.
Account name: Business Stream Revenue Account.
Please include this reference number: 2756562 / 5855534

Payment slip

Complete the enclosed **payment slip** and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

Alternatively, you can send a cheque, and the completed payment slip enclosed, to **Business Stream, PO Box (17381), Edinburgh EH12 1GT.** Cheques should be payable to 'Business Stream' and include your customer reference number on the back. Please don't send cash in the post and allow 10 days for payment to be processed. For more information, visit **business-stream.co.uk/ways-to-pay**

Scottish Water Business Stream Limited trading as Business Stream. Registered in Scotland. Company no. SC294924. Registered office address and principal place of business: 1-3 Lochside Crescent, Edinburgh, EH12 9SE. Ofwat, the Water Services Regulation Authority, is the regulator of the water sector in England and Wales. For more information visit ofwat.gov.uk. Unless otherwise agreed, Scottish Water Business Stream Ltd provides services to you in accordance with our standard terms and conditions, a copy of which is available at business-stream.co.uk/terms. Copies are also available on request. Through your continued receipt and acceptance of our services, you are deemed to have accepted our standard terms and conditions.

Your charges in detail

Meter number / meter size: 8128039 / 15mm

Water charges			Units	Rate	VAT	Charge
Fixed water charge						
Yearly fee £83.20	8 Jun 24 - 28 Aug 24		82 days	0.227945	Z	[redacted]
Volumetric water charge						
Estimated reading	29 Aug 24	806				
Estimated reading	8 Jun 24	790				
= volume used this period			16 m³			
Charges	8 Jun 24 - 28 Aug 24		16 m³	1.9706	Z	
Total water charges						
Subtotal						
Total charges this period						£

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption.

We're here to help

Contact us today

If you'd like to speak to one of our friendly advisers, visit **business-stream.co.uk/contact-us** to find out how to get in touch.

Making a complaint

If you feel your query hasn't been resolved as expected, you can make a complaint and we'll escalate your concerns to our Customer Relations Team. You can raise a complaint at **business-stream.co.uk/make-a-complaint** or by letter to **Customer Relations Team. Business Stream, PO Box 17381, Edinburgh, EH12 1GT.**

The Consumer Council for Water

If you've followed our complaints process and remain dissatisfied, The Consumer Council for Water can offer you free independent advice. Visit **ccwater.org.uk**, call **0300 034 2222** or write to **The Consumer Council for Water, c/o 23 Stephenson Street, Birmingham, B2 4BH.**

Helpful information

Emergency

If you have a water emergency, go to **business-stream.co.uk/emergencies**

Improving your bill accuracy

It's important to us that you receive accurate bills. If you have a meter you can help by submitting regular meter reads. Visit **business-stream.co.uk/contact-us**

Understanding your bill

To understand more about your bill, view our interactive bill explainer at **business-stream.co.uk/bill-explainer.**

Got a question?

We're here to help. That's why we make managing your water services as effortless as possible. You can find a range of frequently asked questions at **business-stream.co.uk/help**

Water saving tips

Taking small steps to reduce your water consumption can make a big positive difference to the environment. Find out more and download our water efficiency guide at **business-stream.co.uk/water-efficiency**

More information

Your supply point ID: Year to date consumption

For the year: 2024/25

Supply point ID – year to date consumption total: 28.56m³.

Water supply point – year to date consumption total: 28.56m³.

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business-stream.co.uk

0330 123 2000

For emergencies, please contact your:
Water wholesaler: Southern Water
Visit **business-stream.co.uk/emergencies**

8

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM RH13 6HT

Customer reference / invoice no
[redacted]

Invoice / tax point date: 10 June 2024

Supply address: MILES TROUGHS LOWER GROUSE FARM GROUSE ROAD, COLGATE HORSHAM SW, RH13 6HT

Water supply point ID: 301946885XW1X

Our VAT number: 945 8508 85

Water efficiency toolkit

We're committed to supporting our customers to reduce their water usage by up to 20%. Download our free water efficiency workplace tools at **business-stream.co.uk/water-efficiency**

Your water services invoice

8 March - 7 June 2024 (92 days)

Your account summary

Your previous balance	[redacted]	CREDIT
Payments received		
Your balance brought forward		CREDIT

Your charges this period (see page 2 for details)

Water services charges	
VAT	
Total charges this period	
Your new account balance	CREDIT

Thanks for paying by Direct Debit. You don't need to do anything - we'll collect from your account on .

Your water consumption and carbon emissions

The year to date (YTD) water consumption for your site is 12.56m³.Based on the billing period and using UK Government statistics, your annual carbon emissions are 23.20kgCO2e/yr.

Ways to pay

Direct Debit

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit **business-stream.co.uk/direct-debit** or call us on **0330 123 2000 .**

Online

Visit **business-stream.co.uk/pay online** with your debit or credit card details.

By phone

Call **0330 123 2000** to pay over the phone using your debit or credit card details.

By bank transfer

Sort code: 30-00-02.
Account number: 03029919.
Account name: Business Stream Revenue Account.
Please include this reference number: 2756562 / 5316541

Payment slip

Complete the enclosed **payment slip** and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

Alternatively, you can send a cheque, and the completed payment slip enclosed, to **Business Stream, PO Box (17381), Edinburgh EH12 1GT.** Cheques should be payable to 'Business Stream' and include your customer reference number on the back. Please don't send cash in the post and allow 10 days for payment to be processed. For more information, visit **business-stream.co.uk/ways-to-pay**

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Your charges in detail

Meter number / meter size: 8128039 / 15mm

Water charges			Units	Rate	VAT	Charge
Fixed water charge						
Yearly fee £85.90	8 Mar 24 - 31 Mar 24		24 days	0.234699	Z	
Yearly fee £83.20	1 Apr 24 - 7 Jun 24		68 days	0.227945	Z	
Volumetric water charge						
Estimated reading	8 Jun 24	790				
Estimated reading	8 Mar 24	773				
= volume used this period			17 m^3			
Charges	8 Mar 24 - 31 Mar 24		4.435 m^3	1.6105	Z	
Charges	1 Apr 24 - 7 Jun 24		12.565 m^3	1.9706	Z	
Total water charges						
Subtotal						[redacted]
Total charges this period						£[redacted]

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption. Find out more at **business-stream.co.uk/yorkshire/useful-info**

We're here to help

Contact us today

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Making a complaint

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The Consumer Council for Water

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More information

Your supply point ID: Year to date consumption

For the year: 2024/25

Supply point ID – year to date consumption total: 12.56m³.

Water supply point – year to date consumption total: 12.56m³.

For more information on understanding your bill, visit **business-stream.co.uk/bill-explainer.**

Helpful information

Emergency

If you have a water emergency, go to **business-stream.co.uk/emergencies**

Improving your bill accuracy

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For emergencies, please contact your:
Water wholesaler: Southern Water
Visit **business-stream.co.uk/emergencies**

7

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM RH13 6HT

Customer reference / invoice no
[redacted]

Invoice / tax point date: 11 March 2024

Supply address: MILES TROUGHS LOWER GROUSE FARM GROUSE ROAD, COLGATE HORSHAM SW, RH13 6HT

Water supply point ID: 301946885XW1X

Our VAT number: 945 8508 85

Your water services invoice

8 December 2023 - 7 March 2024 (91 days)

Your account summary

Your previous balance	[redacted]
Payments received	
Your balance brought forward	

Your charges this period (see page 2 for details)

Water services charges	
VAT	
Total charges this period	

Your new account balance

Thanks for paying by Direct Debit. You don't need to do anything - we'll collect from your account on .

Changes to your 2024/25 charges

Like all water retailers, we review our charges every year. As a result, you'll see some changes to the charges included in your bill for the billing period starting 1 April 2024. Find out more information at **business-stream.co.uk/charges**

Carbon consumption

Based on this period your annual carbon consumption is **23.45kgCO2e/yr**, based on National Government statistics.

Ways to pay

Direct Debit

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit **business-stream.co.uk/direct-debit** or call us on **0330 123 2000**.

Online

Visit **business-stream.co.uk/pay online** with your debit or credit card details.

By phone

Call **0330 123 2000** to pay over the phone using your debit or credit card details.

By bank transfer

Sort code: 30-00-02.
Account number: 03029919.
Account name: Business Stream Revenue Account.
Please include this reference number: 2756562 / 4617575

Payment slip

Complete the enclosed **payment slip** and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

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Your charges in detail

Meter number / meter size: 8128039 / 15mm

Water charges			Units	Rate	VAT	Charge
Fixed water charge						
Yearly fee £85.90	8 Dec 23 - 7 Mar 24		91 days	0.234699	Z	[redacted]
Volumetric water charge						
Estimated reading	8 Mar 24	773				
Estimated reading	8 Dec 23	756				
= volume used this period			17 m³			
Charges	8 Dec 23 - 7 Mar 24		17 m³	1.6105	Z	
Total water charges						
Subtotal						
Total charges this period						£

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption. Find out more at **business-stream.co.uk/yorkshire/useful-info**

We're here to help

Contact us today

If you'd like to speak to one of our friendly advisers, visit **business-stream.co.uk/contact-us** to find out how to get in touch.

Making a complaint

If you feel your query hasn't been resolved as expected, you can make a complaint and we'll escalate your concerns to our Customer Relations Team. You can raise a complaint at **business-stream.co.uk/make-a-complaint** or by letter to **Customer Relations Team. Business Stream, PO Box 17381, Edinburgh, EH12 1GT.**

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Helpful information

Emergency

If you have a water emergency, go to **business-stream.co.uk/emergencies**

Improving your bill accuracy

It's important to us that you receive accurate bills. If you have a meter you can help by submitting regular meter reads. Visit **business-stream.co.uk/contact-us**

Got a question?

We're here to help. That's why we make managing your water services as effortless as possible. You can find a range of frequently asked questions at **business-stream.co.uk/help**

Water saving tips

Taking small steps to reduce your water consumption can make a big positive difference to the environment. Find out more and download our water efficiency guide at **business-stream.co.uk/water-efficiency**

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business-stream.co.uk

0330 123 2000

For emergencies, please contact your:
Water wholesaler: Southern Water
Visit **business-stream.co.uk/emergencies**

6

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM RH13 6HT

Customer reference / invoice no
[redacted]

Invoice / tax point date: 10 December 2023

Supply address: MILES TROUGHS LOWER GROUSE FARM GROUSE ROAD, COLGATE HORSHAM SW, RH13 6HT

Water supply point ID: 301946885XW1X

Our VAT number: 945 8508 85

Your water services invoice

8 September - 7 December 2023 (91 days)

Your account summary

Your previous balance	[redacted]
Payments received	
Your balance brought forward	

Your charges this period (see page 2 for details)

Water services charges	
VAT	
Total charges this period	
Your new account balance	

Thanks for paying by Direct Debit. You don't need to do anything - we'll collect from your account on .

Ways to save

With a rise in the cost of living and energy rates higher than ever, we want to help you cut costs wherever we can. View our ways to save tips for help in reducing your water costs. Visit **business-stream.co.uk/ways-to-save**

Carbon consumption

Based on this period your annual carbon consumption is **23.45kgCO2e/yr**, based on National Government statistics.

Ways to pay

Direct Debit

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit **business-stream.co.uk/direct-debit** or call us on **0330 123 2000**.

Online

Visit **business-stream.co.uk/pay online** with your debit or credit card details.

By phone

Call **0330 123 2000** to pay over the phone using your debit or credit card details.

By bank transfer

Sort code: 30-00-02.
Account number: 03029919.
Account name: Business Stream Revenue Account.
Please include this reference number: 2756562 / 3929652

Payment slip

Complete the enclosed **payment slip** and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

Alternatively, you can send a cheque, and the completed payment slip enclosed, to **Business Stream, PO Box (17381), Edinburgh EH12 1GT.** Cheques should be payable to 'Business Stream' and include your customer reference number on the back. Please don't send cash in the post and allow 10 days for payment to be processed. For more information, visit **business-stream.co.uk/ways-to-pay**

Naturally *different.*

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Your charges in detail

Meter number / meter size: 8128039 / 15mm

Water charges			Units	Rate	VAT	Charge
Fixed water charge						
Yearly fee £85.90	8 Sep 23 - 7 Dec 23		91 days	0.234699	Z	
Volumetric water charge						
Estimated reading	8 Dec 23	756				
Estimated reading	8 Sep 23	739				
= volume used this period			17 m³			
Charges	8 Sep 23 - 7 Dec 23		17 m³	1.6105	Z	
Total water charges						
Subtotal						
VAT						
Total charges this period						

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption. Find out more at **business-stream.co.uk/yorkshire/useful-info**

Most of our services are zero-rated (Z) but some are standard rate (S) or outside scope (O). See business-stream.co.uk/vat for more information.

We're here to help

Contact us today

If you'd like to speak to one of our friendly advisers, visit **business-stream.co.uk/contact-us** to find out how to get in touch.

Making a complaint

If you feel your query hasn't been resolved as expected, you can make a complaint and we'll escalate your concerns to our Customer Relations Team. You can raise a complaint at **business-stream.co.uk/make-a-complaint** or by letter to **Customer Relations Team. Business Stream, PO Box 17381, Edinburgh, EH12 1GT.**

The Consumer Council for Water

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Helpful information

Emergency

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Improving your bill accuracy

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Got a question?

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Water saving tips

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0330 123 2000

For emergencies, please contact your:
Water wholesaler: Southern Water
Visit **business-stream.co.uk/emergencies**

S

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM RH13 6HT

Customer reference / invoice no
[redacted]

Invoice / tax point date: 8 September 2023

Supply address: MILES TROUGHS LOWER GROUSE FARM GROUSE ROAD, COLGATE HORSHAM SW, RH13 6HT

Water supply point ID: 301946885XW1X

Our VAT number: 945 8508 85

Your water services invoice

8 June - 7 September 2023 (92 days)

Your account summary

Your previous balance	[redacted]
Payments received	
Your balance brought forward	

Your charges this period (see page 2 for details)

Water services charges	
VAT	
Total charges this period	
Your new account balance	

Thanks for paying by Direct Debit. You don't need to do anything - we'll collect from your account on .

Customer support hub

We're here to help and we're committed to making a positive difference to our customers, so you can save water, save time, and save money. Find out more in our Support Hub. Visit **business-stream.co.uk/customer-support**

Ways to pay

Direct Debit

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit **business-stream.co.uk/direct-debit** or call us on **0330 123 2000** .

Online

Visit **business-stream.co.uk/pay online** with your debit or credit card details.

By phone

Call **0330 123 2000** to pay over the phone using your debit or credit card details.

By bank transfer

Sort code: 30-00-02.
Account number: 03029919.
Account name: Business Stream Revenue Account.
Please include this reference number: 2756562 / 3255456

Payment slip

Complete the enclosed **payment slip** and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

Alternatively, you can send a cheque, and the completed payment slip enclosed, to **Business Stream, PO Box (17381), Edinburgh EH12 1GT.** Cheques should be payable to 'Business Stream' and include your customer reference number on the back. Please don't send cash in the post and allow 10 days for payment to be processed. For more information, visit **business-stream.co.uk/ways-to-pay**

Scottish Water Business Stream Limited trading as Business Stream. Registered in Scotland. Company no. SC294924. Registered office address and principal place of business: 7 Lochside View, Edinburgh, EH12 9DH. Ofwat, the Water Services Regulation, is the regulator of the water sector in England and Wales. For more information visit ofwat.gov.uk. Unless otherwise agreed, Scottish Water Business Stream Ltd provides services to you in accordance with our standard terms and conditions, a copy of which is available at business-stream.co.uk/yorkshire/useful-info. Copies are also available on request. Through your continued receipt and acceptance of our services, you are deemed to have accepted our standard terms and conditions.

Your charges in detail

Meter number / meter size: 8128039 / 15mm

Water charges		Units	Rate	VAT	Charge
Fixed water charge					
Yearly fee £85.90	8 Jun 23 - 7 Sep 23	92 days	0.234699	Z	[redacted]
Total water charges					
Subtotal					
VAT					
Total charges this period					£

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

Most of our services are zero-rated (Z) but some are standard rate (S) or outside scope (O). See business-stream.co.uk/vat for more information.

We're here to help

Contact us today

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Making a complaint

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Helpful information

Emergency

If you have a water emergency, go to **business-stream.co.uk/emergencies**

Improving your bill accuracy

It's important to us that you receive accurate bills. If you have a meter you can help by submitting regular meter reads. Visit **business-stream.co.uk/contact-us**

Got a question?

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Water saving tips

Taking small steps to reduce your water consumption can make a big positive difference to the environment. Find out more and download our water efficiency guide at **business-stream.co.uk/water-efficiency**

business stream
A SCOTTISH WATER COMPANY

business-stream.co.uk

0330 123 2000

For emergencies, please contact your:
Water wholesaler: Southern Water
Visit **business-stream.co.uk/emergencies**

Customer reference / invoice no
[redacted]

Invoice / tax point date: 15 April 2023

Supply address: MILES TROUGHS LOWER GROUSE FARM GROUSE ROAD, COLGATE HORSHAM SW, RH13 6HT

Water supply point ID: 30194685XW1X

Our VAT number: 945 8508 85

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM RH13 6HT

Your water services invoice

7 December 2022 - 6 March 2023 (90 days)

Your account summary

Your previous balance	[redacted]
Payments received	
Your balance brought forward	

Your charges this period (see page 2 for details)

Water services charges	
VAT	
Total charges this period	

Your new account balance

Thanks for paying by Direct Debit. You don't need to do anything - we'll collect from your account on .

Changes to your 2023/24 charges

Like all water retailers, we review our charges every year. As a result, you'll see some changes to the charges included in your bill from 1 April 2023. Find out more information at **business-stream.co.uk/charges**

Ways to pay

Direct Debit

Paying by Direct Debit is the quickest and easiest way to pay your bills. Visit **business-stream.co.uk/direct-debit** or call us on **0330 123 2000** .

Online

Visit **business-stream.co.uk/pay online** with your debit or credit card details.

By phone

Call **0330 123 2000** to pay over the phone using your debit or credit card details.

By bank transfer

Sort code: 30-00-02.
Account number: 03029919.
Account name: Business Stream Revenue Account.
Please include this reference number: 2756562 / 2143132

Payment slip

Complete the enclosed **payment slip** and present it, with your invoice, to your bank branch or to a post office, to pay by cash, card or cheque. You may be charged for this service.

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Naturally *different.*

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Your charges in detail

Meter number / meter size: 8128039 / 15mm

Water charges			Units	Rate	VAT	Charge
Fixed water charge						
Yearly fee £51.61	7 Dec 22 - 6 Mar 23		90 days	0.141397	Z	[redacted]
Volumetric water charge						
Estimated reading	7 Mar 23	736				
Estimated reading	7 Dec 22	1192				
= volume used this period			-456 m³			
Charges	7 Dec 22 - 6 Mar 23		-456 m³	1.545	Z	
Total water charges						
Subtotal						
VAT						
Total charges this period						

This is a fee for the upkeep of external pipes and pumps that supply water to your premises.

This is a charge for the amount of water you've used, as recorded by your water meter. The rate you are charged can vary based on your location and your water consumption. Find out more at **business-stream.co.uk/yorkshire/useful-info**

Most of our services are zero-rated (Z) but some are standard rate (S) or outside scope (O). See business-stream.co.uk/vat for more information.

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Water saving tips

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3

business stream
A SCOTTISH WATER COMPANY

business–stream.co.uk

Customer reference / statement no [redacted]

Statement / tax point date: 8 December 2022
Supply address: TROUGHS LOWER GROUSE FARM, GROUSE ROAD, HORSHAM, RH13 6HT
Supply point ID: 301946885XW1X
Our VAT number: 945 8508 85

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM
RH13 6HT

Your water services statement

11 October – 7 December 2022 (57 days, average £0.58 per day)

YOUR ACCOUNT SUMMARY

Your previous balance	[redacted]
Payments received	
Your balance brought forward	

YOUR CHARGES THIS PERIOD (see page 2 for detai

Water services charges	
VAT	
Total charges this period	

Your new account balance

Thanks for paying by direct debit. You don't need to do anything - we'll collect £17.00 from your account on the 15th of each month from 15 December 2022 until 15 April 2023.

E Estimated statement

This statement is based on an estimated read. If we receive an actual read, we will use it to calculate your next bill. You can submit your own readings, as long as it's safe to access your meter, on **business-stream.co.uk/meter-reading**. If your water is not provided by us, we will receive reads from your other supplier.

The water experts

Unless otherwise agreed, Scottish Water Business Stream Ltd provides services to you in accordance with our standard terms and conditions, a copy of which is available here: www.business-stream.co.uk/EnglandWalesTerms. Copies are also available on request. Through your continued receipt and acceptance of our services, you are deemed to have accepted our standard terms and conditions.
Scottish Water Business Stream Limited, 7 Lochside View, Edinburgh, EH12 9DH. Registered in Scotland SC294924.
Ofwat (the Water Services Regulation Authority) is the regulator of the water sector in England and Wales. For more information visit www.ofwat.co.uk

Your charges in detail

Meter number / meter size: 8128039 ARAD / 15mm

Water charges		Units	Rate	VAT	Charge
Fixed water charge					
Yearly fee £51.61	11 Oct 22 – 6 Dec 22	57 days	0.141397	Z	[redacted]
Volumetric water charge					
Estimated reading	7 Dec 22	1192			
Estimated reading	11 Oct 22	1176			
= Volume used this period		16.00 m³			
Charges	11 Oct 22 – 7 Dec 22	16.00 m³	1.545000	Z	
Total water charges					
Subtotal					
VAT					
Total charges this period					£

A yearly fee for the upkeep of external pipes and pumps that supply water to your property.

The charge for the recorded amount of water you've used, measured by your meter.

VAT on our charges
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2

business stream
A SCOTTISH WATER COMPANY

business–stream.co.uk

Customer reference / statement no [redacted]

Statement / tax point date: 12 October 2022
Supply address: TROUGHS LOWER GROUSE FARM, GROUSE ROAD, HORSHAM, RH13 6HT
Supply point ID: 3019468855XW1X
Our VAT number: 945 8508 85

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM
RH13 6HT

Your water services statement

7 June – 11 October 2022 (126 days, average £0.57 per day)

YOUR ACCOUNT SUMMARY

Your previous balance	[redacted]
Payments received	
Your balance brought forward	

YOUR CHARGES THIS PERIOD (see page 2 for details)

Water services charges	
VAT	
Total charges this period	

Your new account balance [redacted]

Thanks for paying by direct debit. You don't need to do anything - we'll collect £17.00 from your account on the 15th of each month from 15 October 2022 until 15 April 2023.

E Estimated statement

This statement is based on an estimated read. If we receive an actual read, we will use it to calculate your next bill. You can submit your own readings, as long as it's safe to access your meter, on **business-stream.co.uk/meter-reading**. If your water is not provided by us, we will receive reads from your other supplier.

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Your charges in detail

Meter number / meter size: 000008128039 ARAD / 15mm

Water charges		Units	Rate	VAT	Charge
Fixed water charge					
Yearly fee £51.61	7 Jun 22 – 10 Oct 22	126 days	0.141397	Z	[redacted]
Volumetric water charge					
Estimated reading	11 Oct 22	1176			
Estimated reading	7 Jun 22	1141			
= Volume used this period		35.00 m³			
Charges	7 Jun 22 – 11 Oct 22	35.00 m³	1.545000	Z	
Total water charges					
Subtotal					
VAT					
Total charges this period					

A yearly fee for the upkeep of external pipes and pumps that supply water to your property.

The charge for the recorded amount of water you've used, measured by your meter.

VAT on our charges
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business stream
A SCOTTISH WATER COMPANY

business-stream.co.uk

Customer reference / statement no [redacted]

Statement / tax point date: 8 June 2022
Supply address: TROUGHS LOWER GROUSE FARM, GROUSE ROAD, HORSHAM, RH13 6HT
Supply point ID: 3019468855XW1X
Our VAT number: 945 8508 85

Mr N MILES & Mrs T MILES
LOWER GROUSE FARM
GROUSE ROAD
COLGATE
HORSHAM
RH13 6HT

Your water services statement

11 April – 7 June 2022 (57 days, average £0.58 per day)

YOUR ACCOUNT SUMMARY

Your previous balance	[redacted]
Payments received	
Your balance brought forward	

YOUR CHARGES THIS PERIOD (see page 2 for deta

Water services charges	
VAT	
Total charges this period	

Your new account balance

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Your charges in detail

Meter number / meter size: 000008128039 ARAD / 15mm

Water charges			Units	Rate	VAT	Charge
Fixed water charge						
Yearly fee £51.61	11 Apr 22 – 6 Jun 22		57 days	0.141397	Z	[redacted]
Volumetric water charge						
Estimated reading	7 Jun 22	1141				
Estimated reading	11 Apr 22	1125				
= Volume used this period			16.00 m³			
Charges	11 Apr 22 – 7 Jun 22		16.00 m³	1.545000	Z	
Total water charges						
Subtotal						
VAT						
Total charges this period						£

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VAT on our charges
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Appendix D Guideline values (G) for monitoring

Guideline values (G) for bacteriological monitoring

Parameter CFU/100 ml	Spray application: pressure washing, garden sprinkler uses and car wash	Non-spray application			Test method		System type
		WC flushing	Garden watering[a]	Laundry, i.e, washing machine use	Spray application	Non-spray application	
Escherichia coli	Not detected	250	250	250	BS EN ISO 9308-1:2014+A1:2017	BS EN ISO 9308-3:1999, BS 6068-4.10:1999	Single site and communal domestic systems
Intestinal enterococci	Not detected	100	100	100	BS EN ISO 7899-1:1999 or BS EN ISO 7899-2:2000	BS EN ISO 7899-1:1999, BS 6068-4.3:1999	Single site and communal domestic systems
Legionella pneumophila	10	N/A	N/A	N/A	BS EN ISO 11731:2017	N/A	Where analysis is necessary as indicated by risk assessment
Total coliforms[b]	10	1000	1000	1000	Blue Book 223, Method D, (2) or BS EN ISO 9308-1:2014+A1:2017	BS EN ISO 9308-3:1999, BS 6068-4.10:1999	Single site and communal domestic systems

a) If treated rainwater is to be used in kitchen gardens on domestic crops, information regarding the preparation of these crops prior to consumption (e.g. boiling, peeling or thorough washing in potable water) should be provided for the user in the handover documentation.

b) 'Total coliforms' is an indicator parameter for operational interpretation. The bacteriological guideline values given for treated rainwater reflect the need to control the quality of treated water for supply and use.

NOTE Standing Committee of Analysts analytical methods (SCA 'blue books') are available free to download from www. Standingcommitteeofanalysts.co.uk.

Guideline values (G) for non-bacteriological system monitoring

Parameter Number/100 ml	Spray application: pressure washing, garden sprinkler uses and car wash	Non-spray application			Test method	System type
		WC flushing	Garden watering[a]	Laundry, i.e, washing machine use		
Dissolved oxygen in stored rainwater	10% saturation or >1 mg/l O^2 (whichever is least) for all uses				Blue Book 16: Method A (titri-metric) or Method B (instrumental using an oxygen probe) (3) or BS EN ISO 5814:2012	All systems
Suspended solids	Visually clear and free from floating debris for all uses				Blue Book 105: SMP Method (4) or BS EN 872:2005, BS 6068-2.54:2005	All systems
Colour	Not objectionable for all uses				Blue Book 103: Method A2 (mg/lPt/Co) (5) or BS EN ISO 7887:2011	All systems

Turbidity (NTU)	<10 NTU for all uses (<1 NTU if UV disinfection is used)				Blue Book 103: Method B2 (formazin standards) (5) or BS 1427:2009 or BS EN ISO 7027-1:2016	All systems
pH	5 to 9.5	5 to 9.5	5 to 9.5	5 to 9.5	Blue Book 14 (6) or BS 1427:2009 or BS EN ISO 10523:2012	Single site and communal domestic systems
Residual chlorine (mg/l)	<2 mg/l	<2 mg/l	<0.5 mg/l	<2 mg/l	Blue Book 218 (7) or BS EN ISO 7393-2:2018	All systems, where used
Residual bromine (mg/l)	<2 mg/l	<2 mg/l	<2 mg/l	<2 mg/l	Blue Book 218: Method E10 (7) or BS EN ISO 10304-1:2009	All systems, where used

Interpretation of results from bacteriological monitoring

Sample results[a]	Status	Interpretation
<G	Green	System under control
G to 10 G	Amber	Resample to confirm result and investigate system operation
>10 G[b]	Red	Suspend use of rainwater until problem is solved

a) G = guideline value
b) Where the sample result indicates the absence of E.coli, intestinal enterococci and Legionella (i.e. the only exceedance of the 10 times guideline value is the level of coliforms), there is no need to suspend use of the system and the supply may be continued. However, if the observed quality is visually poor or the water condition is altered in other respects, such as smell, the user may suspend its use. The system should be resampled to confirm the initial results. Should e.coli, intestinal enterococci or legionella be detected in the resample, the system should be suspended until the problem is identified and resolved.

Interpretation of results from non-bacteriological system monitoring[a]

Sample results[b]	Status	Interpretation
<G	Green	System under control
>G	Amber	Resample to confirm result and investigate system operation

a) Where monitoring pH, the system is considered to be under control (green status) when levels are within the range recommended. If levels are outside this range, the system status becomes amber, and resampling is necessary. Where colour or suspended solids are present at levels that are objectionable, it is necessary to investigate the system operation to resolve the problem.
b) G = guideline value

Appendix E Part G water usage calculation for retrofitting the existing dwelling house

Building Regulations 2013 Part G	Planning Stage Specification				
		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)	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)	3.50	1.58	1.58	7.11
Bath (where shower also present)	Capacity to overflow (litres)	0.00	0.11	0.00	0.00
Shower (where bath also present)	Flow rate (litres/minute)	0.00	4.37	0.00	0.00
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)	0.00	0.44	10.36	10.36
Washing machine	Litres/kg dry load	0.00	2.10	0.00	0.00
Dishwasher	Litres/place setting	0.00	3.60	0.00	0.00
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	17.47
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total internal water consumption	**15.90**
				External water use	5.00
				Total water consumption	**20.90**

SRE Main Office, Greenforde Farm, Stoner Hill Road, Froxfield, Petersfield, GU32 1DY
tel: +44 (0)1730 710044
info@sre.co.uk

Building Regulations 2013 Part G	Planning Stage Specification				
		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)	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)	9.00	1.58	1.58	15.80
Bath (where shower also present)	Capacity to overflow (litres)	0.00	0.11	0.00	0.00
Shower (where bath also present)	Flow rate (litres/minute)	0.00	4.37	0.00	0.00
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)	0.00	0.44	10.36	10.36
Washing machine	Litres/kg dry load	0.00	2.10	0.00	0.00
Dishwasher	Litres/place setting	0.00	3.60	0.00	0.00
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	26.16
				Contribution from greywater (litres/person/day)	0.00
				Contribution from rainwater (litres/person/day)	0.00
				Normalisation factor	0.91
				Total internal water consumption	**23.81**
				External water use	5.00
				Total water consumption	**28.81**

SRE Main Office, Greenforde Farm, Stoner Hill Road, Froxfield, Petersfield, GU32 1DY
tel: +44 (0)1730 710044
info@sre.co.uk



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W. sre.co.uk

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