Water Neutrality Offsetting Report

Site: Garden House, Kerves Lane, Horsham
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1.0 Introduction

1.1 This report has been created to set out the proposed offsetting measures for the site at Garden House, Kerves Lane, Horsham.

1.2 The NE Position Statement states that offsetting can be carried out by retrofitting existing properties with grey water recycling systems, rainwater harvesting and/or water reduction fittings.

1.3 The proposal is to offset the development against a water offsetting scheme in Crawley. A summary of the offsetting scheme can be seen in **Appendix A**. 19 Epsom Road, Furnace Green, Crawley (RH10 6LT) will be used to offset this development.

2.0 Offsetting Measures

2.1 19 Epsom Road is a six-bedroom property with a maximum population of six people. Within the HMO the kitchen is a communal space, used by all the occupants. However, the bathrooms are split between the bedrooms. This means that one bathroom (Bathroom One) will be used by three of the occupants and the second bathroom (Bathroom Two) will be used by three other occupants.

Flow Survey

2.2 A flow survey was undertaken in April 2024 to determine the existing water usage of 19 Epsom Road. A copy of the flow survey can be found in **Appendix B**.

2.3 Noting how the kitchens and bathrooms are used, the Part G calculation has been split into two. A Part G calculation for the water use by the first three occupants and a Part G calculation for the water use by the other three occupants. They all use the communal washing machine, therefore this will be the same across the calculations.

2.4 A Part G calculation following the flow survey on Bathroom One gives a water consumption of 159.52 litres per person per day, which includes an allowance of 5 litres per person per day for external water usage. This equates to 478.56 litres per day with a population of three.

2.5 A Part G calculation following the flow survey on Bathroom Two gives a water consumption of 138.96 litres per person per day, which includes an allowance of 5 litres per person per day for external water usage. This equates to 416.89 litres per day with a population of three. A copy of the Part G calculations for each bathroom can be found in **Appendix C**.

2.6 Following the flow survey, the total water consumption at 19 Epsom Road is 895.45 litres per day.

Water Reduction Measures

2.7 Flow restricting valves will be fitted to the basin taps, showers and kitchen taps within the property to reduce the water consumption. The baths in both bathrooms will be disconnected so that it will act as a shower tray.

2.8 A water calculation in accordance with Building Regulations Part G has been carried out and this confirms that the water use of all the Bathrooms can be reduced to 89.51 litres per person per day, which includes an allowance of 5 litres per person per day for external water usage. A copy of the Part G calculation can be found in **Appendix D** and is summarised in Table 2.1 below:

	Total Water Usage (l/p/day)
WC (full flush)	8.76
WC (part flush)	8.88
Taps (Excluding Kitchen)	7.11
Shower	44.80
Kitchen Taps	12.56
Washing Machine	10.76
Total	92.87
Normalisation Factor	0.91
Total	84.51
External Water Use	5.00
Total	89.51

Table 2.1 – Offsetting Water Usage: All Bathrooms

2.9 Using the Part G water consumption of 89.51 litres per person per day and a total population of six, it is estimated that the water usage of 19 Epsom Road will reduce to 537.08 litres per day.

2.10 A copy of the flow restricting valves to achieve the above water consumptions can be found in **Appendix E**.

2.11 Following the installation of the flow restrictions at 19 Epsom Road the total water consumption can be reduce to 537.08 litres per day.

Summary of Offsetting

2.12 19 Epsom Road's baseline water usage was 895.45 litres per day, following the incorporation of the above measures the water usage will be reduced to 537.08 litres per day. This will provide 358.37 litres per day to offset the water use of other proposed developments to ensure they remain water neutral.

2.13 One litre of water per day is equal to one credit.

2.14 280 of these credits are already allocated against developments in West Chiltington and Crawley, thus of the residual 78.37 credits available from 19 Epsom Road, 49 are being allocated to the proposed development at Garden House, Horsham.

2.15 The remaining 29.37 credits will remain in the credit scheme for use on other proposed developments.

3.0 Summary and Conclusions

3.1 This report sets out the offsetting measures for the site at Garden House, Kerves Lane, Horsham.

3.2 The proposed development at Garden House will purchase 49 credits as part of the offsetting scheme by Sussex Water Neutrality. Therefore, the residual mains water requirement of the development has been fully offset and there is no additional mains water requirement within the SNWSZ as a result of the development.

Appendix A

Sussex Water Neutrality Offsetting Scheme Summary

Sussex Water Neutrality Offsetting Scheme

Developer and Water Credit Allocation

Property	Total Number of Credits	Developer	Planning Reference	Number of Credits Used	Remaining Credits
15 Aintree Road	265	Mr Kevin Shaw	DC/24/0511	265	0
112 Weald Drive	188	Weetman (Lurgashall) Limited	SDNP/23/03365/FUL	159.19	0
118 Weald Drive	597	Wildgoose (UK) Ltd	TBC	597	0
124 Brighton Road	294	Wildgoose (UK) Ltd	TBC	291	3.98 (remaining used below)
73 Ditchling Hill	257	Mr Keith Potts	DC/19/2477	185	72.97 (remaining used below)
73 Ditchling Hill	72.97	Dominos Pizza	DC/24/1265	72.85	0.12
43 Ardingly Close	133.15	Dominos Pizza	DC/24/1265	133.15	0
42 Caburn Height	348	Mr Kevin Shaw	DC/24/112	305	23.42 (remaining used below)
13 Scott Road	381	Mitchell Evans LLP	DC/24/1003	80	301.40 (remaining used below)
37 Five Acres	287.64	Mr Kevin Shaw	DC/24/1486	186	101.64 (remaining used below)
37 Five Acres	101.64	Brix Limited	TBC	101.64	0
20 Buckswood Drive	229.72	Brix Limited	TBC	229.72	0
124 Brighton Road	3.98	Brix Limited	TBC	2.64	1.34
13 Scott Road	301.40	Mr & Mrs Spencer-Smith	DISC/23/0084	301.40	0
11 Aintree Road	40	Mr & Mrs Spencer-Smith	DISC/23/0084	28.60	55.32 (remaining used below)
19 Epsom Road	358.37	Mr Kevin Shaw	TBC	256	102.37 (remaining used below)
42 Caburn Heights	348.68	Christopher Reed	TBC	80	268.68 (remaining used below)
40 Caburn Heights	23.42	Lesley Sheppard	SDNP/23/04579/HOUS	21	2.42
19 Epsom Road	102.37	Mr Kevin Shaw	TBC	24	78.37 (remaining used below)
11 Aintree Road	55.32	Weetman (Lurgashall) Limited	SDNP/23/03365/FUL	10.81	44.51
49 Arden Road	425.60	Remmus Designer Homes Ltd (Burgess Hill)	TBC	220	205.60

42 Caburn Heights	268.68	Mr Kevin Shaw	TBC	140	128.68
8 Ardingly Close	593.94	Mr Kevin Shaw	TBC	87	506.94 (remaining used below)
8 Ardingly Close	506.94	Mr Kevin Shaw	TBC	136	370.94
19 Epsom Road	78.37	Mr Kevin Shaw	TBC	49	29.37
			Total Allocated Credits	3,962	
			Total Remaining Credits		782.97

Appendix B

Flow Survey

Residential Flow Survey

25 Apr 2024 / Kevin Shaw @ 19 Epsom Rd

Complete

Score	12 / 12 (100%)	Flagged items	0	Actions	0

Site conducted	19 Epsom Road, Crawley, RH10 6LT
Conducted on	25.04.2024 15:33 BST
Prepared by	Kevin Shaw @ 19 Epsom Rd
Location	19 Epsom Road Crawley England RH10 6LT United Kingdom (51.10567474033477, -0.17092809152000016)
Water Meter Reading	
Type of Property	Terrace
Number of bedrooms	6

Untitled Page	11 / 11 (100%)
Kitchen 1	1 / 1 (100%)
- Sink Taps - litres/minute VIDEO REQUIRED	Mixer 16Lpm
6 tenants share this kitchen AAB88699-CF9C-4C9B-B610-888F8D608AAC-video.mov	
- Washing Machine Make & Model - litres/kg dry load PHOTO REQUIRED	Yes
- Dishwasher Make & Model - litres/place setting PHOTO REQUIRED	No
Utility Room/Kitchen 2	
Is there a utility room/second kitchen?	Yes
- Washing Machine Make & Model - litres/kg dry load PHOTO REQUIRED	Yes
- Sink Taps - litres/minute VIDEO REQUIRED	Mixer 14Lpm
00730ED8-666F-4A2D-8DF9-BB8F7B9205CF-video.mov	
WC	1 / 1 (100%)
Is there a WC?	Yes
 Photo 1	
- Basin Taps - litres/minute VIDEO REQUIRED	Mixer 18Lpm
728FF69D-0DDF-49D0-9493-59839CCEE9F0-video.mov	
- WC - litres PHOTO REQUIRED	Dual Flush
Bathroom 1	1 / 1 (100%)
- Shower Make/Model - litres/minute VIDEO REQUIRED	Thermostatic mixer 16Lpm
3 tenants share this bathroom 4472A026-4E11-4BF0-9B3F-8FAE6A3EC0B4-video.mov	
- Basin Taps - litres/minute VIDEO REQUIRED	20Lpm
A21A09B1-D604-4317-A6D3-6D24BB1DBF66-video.mov	

- WC - litres PHOTO REQUIRED	Dual Flush



Photo 2

Is there a bath?	Yes
- Bath and Taps - Measure Bath and litres/minute VIDEO REQUIRED	L1300 W490 D300 (to overflow)

Plan to REMOVE BATH



Photo 3

- Bathroom 2	1 / 1 (100%)
Is there an additional bathroom?	Yes
- Basin Taps - litres/minute VIDEO REQUIRED	Mixer 14Lpm

E41C0875-FF7A-43B3-8B91-660CFFE2D2A2-video.mov

- Shower - litres/minute VIDEO REQUIRED	Thermostatic Mixer 13Lpm

F8E15AE4-DBB0-4D3F-BBB1-C47C06BE5242-video.mov

- WC - litres PHOTO REQUIRED	Dual Flush



Photo 4

Is there a bath?	Yes
- Bath and Taps - Measure Bath and litres/minute VIDEO REQUIRED	L1300 W490 D300 (to overflow)

Plan to remove bath


Photo 5

Bathroom 3	2 / 2 (100%)
Is there an additional bathroom?	No
Is there a bath?	No
Bathroom 4	2 / 2 (100%)
Is there an additional bathroom?	No
Is there a bath?	No
Bathroom 5	2 / 2 (100%)
Is there an additional bathroom?	No
Is there a bath?	No
- Bath and Taps - Measure Bath and litres/minute VIDEO REQUIRED	
Other Water uses	1 / 1 (100%)
Are there any other water uses?	No

Media summary

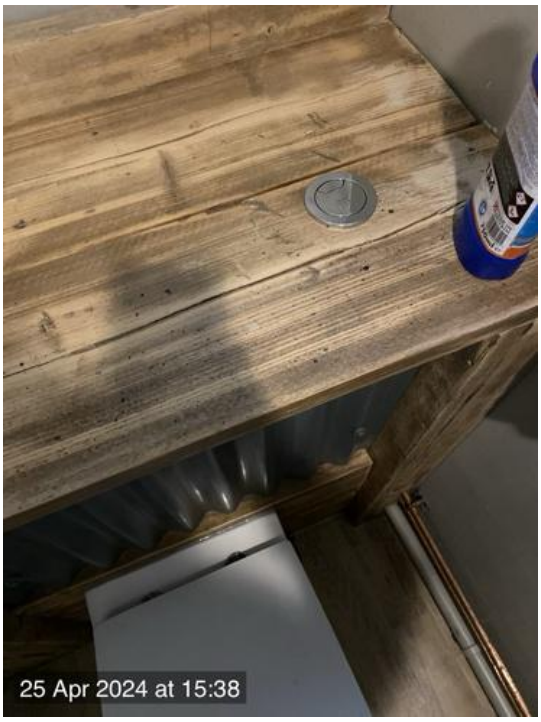


Photo 1



Photo 2



Photo 3



Photo 4



Photo 5

File summary

AAB88699-CF9C-4C9B-B610-888F8D608AAC-video.mov
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F8E15AE4-DBB0-4D3F-BBB1-C47C06BE5242-video.mov

Appendix C

Part G Calculation: Flow Survey

Part G Calculation - 19 Epsom Road Water Usage (Flow Survey)

Bathroom 1

Fixture	Capacity/Flow Rate	Use Factor	Fixed Use	litres/person/ day
WC (Single Flush)		4.42		0.00
WC (Dual Flush)	6	1.46		8.76
WC (Dual Flush) Part	3	2.96		8.88
Taps (excluding kitchen)	20	1.58	1.58	33.18
Bath (where shower present)	190	0.11		20.90
Shower (where bath present)	16	4.37		69.92
Bath Only		0.5		0.00
Shower Only		5.6		0.00
Kitchen Sink	16	0.44	10.36	17.40
Washing Machine	5.13	2.1		10.76
Dishwasher		3.6		0.00
	Total calculated use (litres/person/day)			169.80
Normalisation Factor				0.91
Total Water Consumption (CSH) (litres/person/day)				154.52
External Water Use				5.00
Total Water Consumption (Part G) (litres/person/day)				159.52

	Population	Mains Water Usage
6-bedroom	3	478.56
Totals	3	**478.56**

Appendix D

Part G Calculation: Retrofit

Part G Calculation - 19 Epsom Road Water Usage (Flow Restricting Valves)

Bathroom 1

Fixture	Capacity/Flow Rate	Use Factor	Fixed Use	litres/person /day
WC (Single Flush)		4.42		0.00
WC (Dual Flush)	6	1.46		8.76
WC (Dual Flush) Part	3	2.96		8.88
Taps (excluding kitchen)	3.5	1.58	1.58	7.11
Bath (where shower present)		0.11		0.00
Shower (where bath present)		4.37		0.00
Bath Only		0.5		0.00
Shower Only	8	5.6		44.80
Kitchen Sink	5	0.44	10.36	12.56
Washing Machine	5.13	2.1		10.76
Dishwasher		3.6		0.00
	Total calculated use (litres/person/day)			92.87
Normalisation Factor				0.91
Total Water Consumption (CSH) (litres/person/day)				84.51
External Water Use				5.00
Total Water Consumption (Part G) (litres/person/day)				89.51

	Population	Mains Water Usage
6-bedroom	3	268.54
Totals	3	**268.54**

Appendix E

Fixtures and Fittings Specifications: Retrofit

Fixtures and Fittings - Part G Specifications

Item	Capacity/Flow rate	Overview
Basin Tap	3.5 litres/minute	Flow Restricting Valve
Shower	8 litres/minute	Flow Restricting Valve
Kitchen Sink	5 litres/minute	Flow Restricting Valve