Consulting Civil Engineers

Installed Fittings Survey

35A Brambling Road, Horsham, West Sussex RH13 6AX

For

Simone Brown

Rev – **P2**

Reference **C2826**

Date **27th May 2025**

Revision	Date of Issue	Comments	Prepared By	Checked By
P	06.11.2024	Initial Issue	LH	CS
P1	09.12.2024	Revised	LH	CS
P2	27.05.2025	Revised	LH	CS

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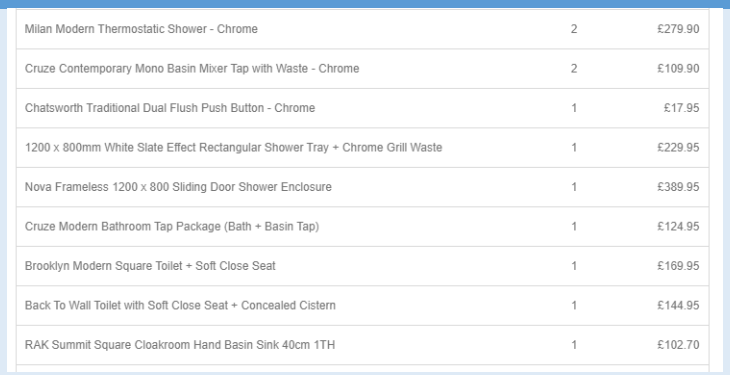
1 Introduction

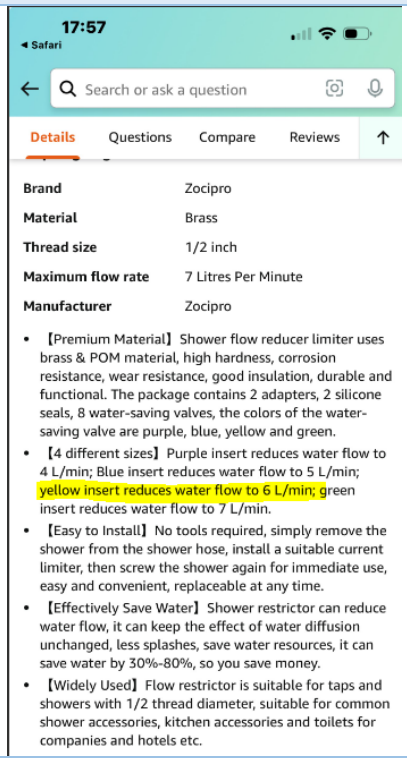
1.1.1 CGS Civils Ltd has been appointed by Simone Brown to undertake an Installed Fittings Survey for a proposed development at the 35 Brambling Road, Horsham, West Sussex, which will follow the required measures that were listed within the Water Neutrality Report which was carried out by CGS Civils Ltd – Ref: **C2826 Water Neutrality Report**.

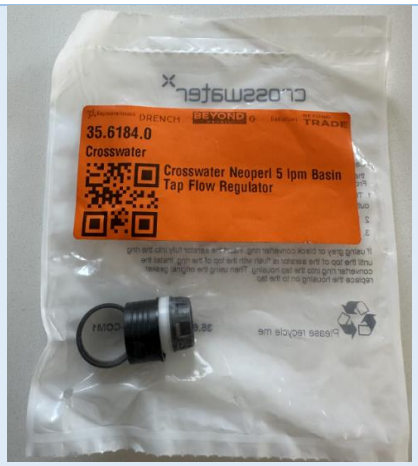
1.1.2 The water neutrality report has stated that the 4-bedroom dwelling is to have water efficient fittings and water butts installed which will result in a water demand of **227.4 l/day**. The water neutrality report also states that the another property within the Horsham DC area is also to have the fittings changed and water butts fitted in order to offset the demand from the proposed dwelling and they will therefore follow this report.

1.1.3 The purpose of this report is to provide details on the fittings that have been / are to be installed within the proposed dwelling in order to adhere to the water usage set out within the water neutrality report.

2 Installed Fittings within Brambling Rd

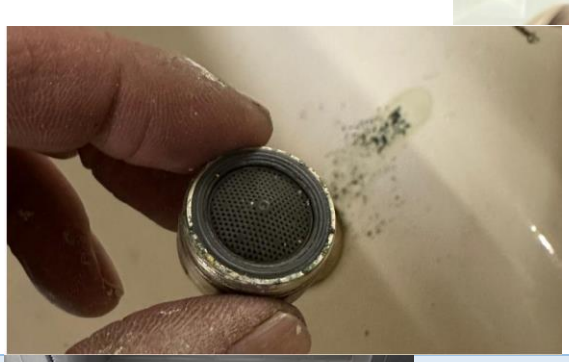
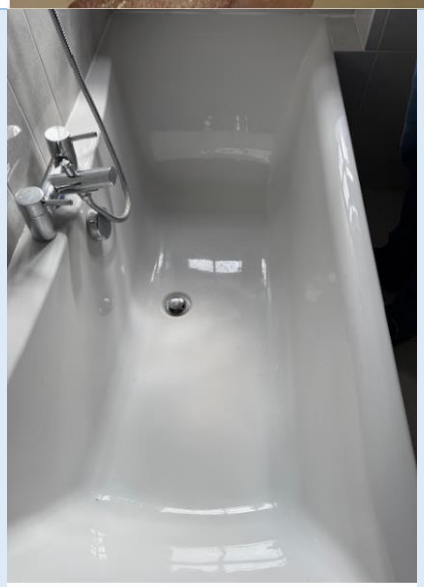
Fitting Type	Water Reduction measure:	Water Usage Required:	Proof:
Toilet	Fitted New Toilets	Required Water Demand: 5.84 + 7.70 = 13.54 l/p/day (dual Flush) Installed measures water demand: 5.84 + 7.70 = 13.54 l/p/day (dual Flush)	
Basin Taps	Fitted 2l/min tap limiter	Required Water Demand: 5.53 l/p/day Installed Measures Water Demand: 5.53 l/p/day	

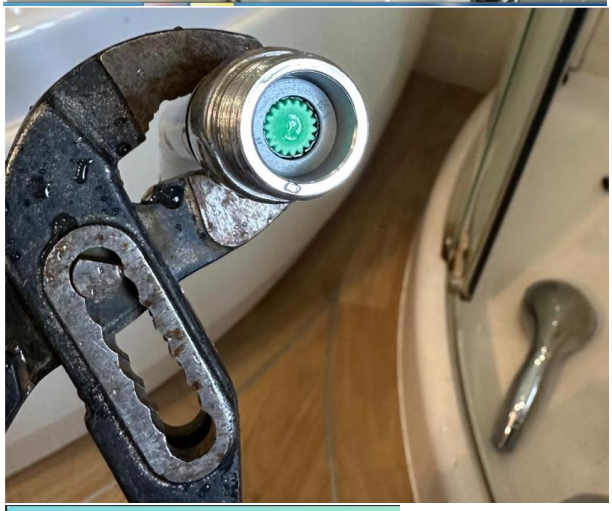
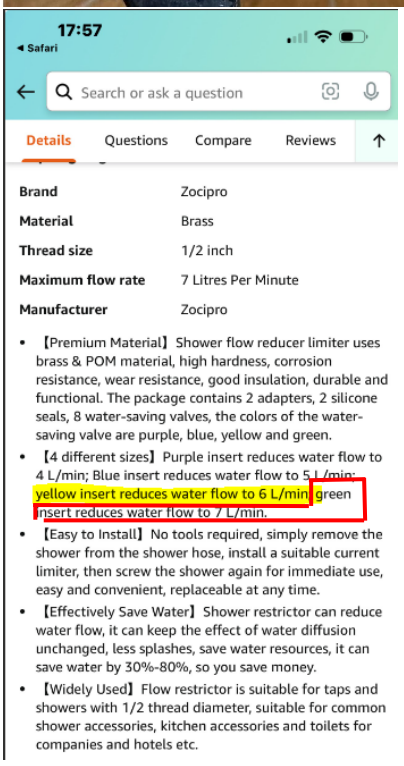
Bath	Installed 145 litre capacity	145 litres capacity to overflow	Brooklyn 1700 x 700 Grey Avola Bathroom Suite with Tall Cabinet
Showers	Fitted 6l/min flow restricter	Required Water Demand: 30.6 l/p/day Installed Measures Water Demand: 26.22 l/p/day	

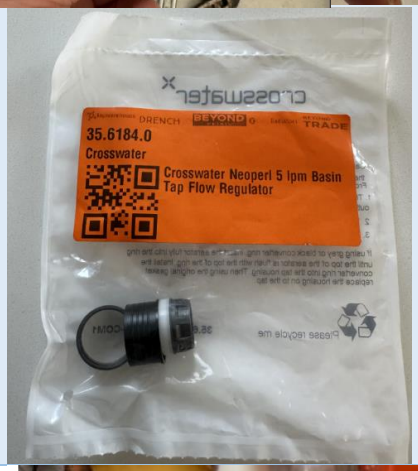
Kitchen Taps	Fitted 5 l/min flow restricter	Required Water Demand: 12.56 l/p/day Installed Measures Water Demand: 12.56 l/p/day	
Dishwasher		Required Water Demand: 0.73 l/p/day Installed Measures Water Demand: 0.92 l/p/day	Performance Energy consumption per cycle 0.94 kWh Noise level 47 dB Wash efficiency rating A Water consumption per cycle 12 litres Energy efficiency rating E Place settings 13 Noise rating C Energy consumption per 100 cycles 94 kWh
Water Butt		Required water butt for 5l/p/day external usage	
Required fitting water demand:			79.5 l/p/day
Installed fitting water demand			76.2 l/p/day

3 Fittings to be installed within existing house at BN5 9ST

Fitting Type	Water Reduction measure:	Water Usage Required:	Proof
Toilet	Fitted 2x 1lt cistern displacement bag reducing flush volume to 3.5 l/flush	Required Water Demand: 5.84 + 7.70 = 13.54 l/p/day (dual Flush) Installed measures water demand: 15.47 l/p/day	   **Overview** **Introducing the Save-a-Flush Water Displacement Bag – The Simple Solution to Saving Water!** **The Smart and Easy Way To Reduce Water Consumption** – When Save-a-Flush is placed in the cistern it displaces around 1 litre of water every time you flush.

Basin Taps	Fitted 2l/min tap limiter	Required Water Demand: 5.53 l/p/day Installed Measures Water Demand: 4.74 l/p/day	  
Bath	Installed 145 litre capacity	145 litres capacity to overflow	 Brooklyn 1700 x 700 Grey Avola Bathroom Suite with Tall Cabinet

Showers	Fitted 7l/min flow restricter	Required Water Demand: 30.6 l/p/day Installed Measures Water Demand: 30.59 l/p/day	   17:57 ◂ Safari Search or ask a question Details Questions Compare Reviews **Brand** Zocipro **Material** Brass **Thread size** 1/2 inch **Maximum flow rate** 7 Litres Per Minute **Manufacturer** Zocipro • 【Premium Material】 Shower flow reducer limiter uses brass & POM material, high hardness, corrosion resistance, wear resistance, good insulation, durable and functional. The package contains 2 adapters, 2 silicone seals, 8 water-saving valves, the colors of the water-saving valve are purple, blue, yellow and green. • 【4 different sizes】 Purple insert reduces water flow to 4 L/min; Blue insert reduces water flow to 5 L/min; yellow insert reduces water flow to 6 L/min; green insert reduces water flow to 7 L/min. • 【Easy to Install】 No tools required, simply remove the shower from the shower hose, install a suitable current limiter, then screw the shower again for immediate use, easy and convenient, replaceable at any time. • 【Effectively Save Water】 Shower restrictor can reduce water flow, it can keep the effect of water diffusion unchanged, less splashes, save water resources, it can save water by 30%-80%, so you save money. • 【Widely Used】 Flow restrictor is suitable for taps and showers with 1/2 thread diameter, suitable for common shower accessories, kitchen accessories and toilets for companies and hotels etc.

Kitchen Taps	Fitted 5 l/min flow restricted	Required Water Demand: 12.56 l/p/day Installed Measures Water Demand: 12.56 l/p/day	  
Washing Machine	Fitted washing machine with 4.46 l/kg dry load	Required Water demand: 11.55 l/p/day Installed measures water demand: 9.366 l/p/day	 LG F4Y513WWLN1 Freestanding Washing Machine, 13kg Load, 1400rpm Spin, White

Dishwasher		Required Water Demand: 0.73 l/p/day Installed Measures Water Demand: 0.92 l/p/day	 Performance Energy consumption per cycle 0.94 kWh Noise level 47 dB Wash efficiency rating A Water consumption per cycle 12 litres Energy efficiency rating E Place settings 13 Noise rating C Energy consumption per 100 cycles 94 kWh
Water Butt		Required water butt for 5l/p/day external usage	 
Required fitting water demand:	79.5 l/p/day		
Installed fitting water demand	80.24 l/p/day		

4 Conclusion

4.1.1 Based upon the planned installation of the above fittings fittings, the main house's water demand will be reduced from **631.55 l/day** to **401.2 l/day.** This is a total saving across the site of **230.35 l/day** which is enough to offset the water demand of **227.4 l/day** from the proposed 3-bedroom dwelling.

5 Appendices

5.1 Appendix A:

Table 1 – Water Calculator from Building Regulations Part G – Information input from existing properties prior to any mitigation.

The Water Calculator for New Dwellings with Water efficient measures					
Installation Type	Unit of measure	Volume/ flow rate	Use factor	Fixed use	Litres/person/day
WC (Single Use)	Flush volume (l)	0	4.42	0	0
WC (Dual Flush)	Full Flush Vol.	6.4	1.46	0	9.34
	Part Flush vol.	4.5	2.96	0	13.32
WC (Multiple Fittings)	Average effective flush volume (l)	0	4.42	0	0
Taps (excl. Kitchen)	Flow rate (l/min)	6	1.58	1.58	11.06
Bath (shower also present)	Capacity to overflow (l)	190	0.11	0	20.35
Shower (bath also present)	Flow rate (l/min)	10	4.37	0	43.70
Bath only	Capacity to overflow (l)	0	0.5	0	0
Shower only	Flow rate (l/min)	0	5.6	0	0
Kitchen sink taps	Flow rate (l/min)	8	0.44	10.36	13.88
Washing Machine	Litres/kg dry load	8.17	2.1	0	17.16
Dishwasher	litres/place setting	1.25	3.6	0	4.50
Waste disposal unit	litres/use	0	3.08	0	0
Water softener	litres/person/day	0	1	0	0
		Total Calculated use (l/p/d)			133.31
		Contribution from greywater (l/p/d)			0
		Contribution from rainwater (l/p/d)			0
		Normalisation factor			0.91
		External water use			5
		Total water consumption (36(1)) (l/p/d)			126.31

5.2 Appendix B:

Table 2 – Water Calculator from Building Regulations Part G – Information input from existing dwelling with installed fittings with Water Butts

The Water Calculator for New Dwellings with Water efficient measures					
Installation Type	Unit of measure	Volume/ flow rate	Use factor	Fixed use	Litres/person/day
WC (Single Use)	Flush volume (l)	0	4.42	0	0
WC (Dual Flush)	Full Flush Vol.	4	1.46	0	5.84
	Part Flush vol.	2.6	2.96	0	7.696
WC (Multiple Fittings)	Average effective flush volume (l)	0	4.42	0	0
Taps (excl. Kitchen)	Flow rate (l/min)	2.5	1.58	1.58	5.53
Bath (shower also present)	Capacity to overflow (l)	145	0.11	0	15.95
Shower (bath also present)	Flow rate (l/min)	6	4.37	0	26.22
Bath only	Capacity to overflow (l)	0	0.5	0	0
Shower only	Flow rate (l/min)		5.6	0	0
Kitchen sink taps	Flow rate (l/min)	5	0.44	10.36	12.56
Washing Machine	Litres/kg dry load	5.5	2.1	0	11.55
Dishwasher	litres/place setting	0.92	3.6	0	3.312
Waste disposal unit	litres/use	0	3.08	0	0
Water softener	litres/person/day	0	1	0	0
		Total Calculated use (l/p/d)			88.658
		Contribution from greywater (l/p/d)			0
		Contribution from rainwater (l/p/d)			5
		Normalisation factor			0.91
		External water use			0
		Total water consumption (36(1)) (l/p/d)			76.1

5.3 Appendix C:

Table 2 – Water Calculator from Building Regulations Part G – Information input from existing dwelling at BN5 9ST with installed fittings

The Water Calculator for New Dwellings with Water efficient measures					
Installation Type	Unit of measure	Volume/ flow rate	Use factor	Fixed use	Litres/person/day
WC (Single Use)	Flush volume (l)	3.5	4.42	0	15.47
WC (Dual Flush)	Full Flush Vol.	0	1.46	0	0
	Part Flush vol.	0	2.96	0	0
WC (Multiple Fittings)	Average effective flush volume (l)	0	4.42	0	0
Taps (excl. Kitchen)	Flow rate (l/min)	2	1.58	1.58	4.74
Bath (shower also present)	Capacity to overflow (l)	145	0.11	0	15.95
Shower (bath also present)	Flow rate (l/min)	7	4.37	0	30.59
Bath only	Capacity to overflow (l)	0	0.5	0	0
Shower only	Flow rate (l/min)	0	5.6	0	0
Kitchen sink taps	Flow rate (l/min)	5	0.44	10.36	12.56
Washing Machine	Litres/kg dry load	4.46	2.1	0	9.366
Dishwasher	litres/place setting	1.25	3.6	0	4.5
Waste disposal unit	litres/use	0	3.08	0	0
Water softener	litres/person/day	0	1	0	0
		Total Calculated use (l/p/d)			93.176
		Contribution from greywater (l/p/d)			0
		Contribution from rainwater (l/p/d)			5
		Normalisation factor			0.91
		External water use			0
		Total water consumption (36(1)) (l/p/d)			80.24