



Consulting Civil Engineers

Existing Fittings Survey

Alderbury, Pulborough

For

R Ellis Consultancy Ltd

Rev – P-

Reference **C2950**

Date **23rd January 2024**

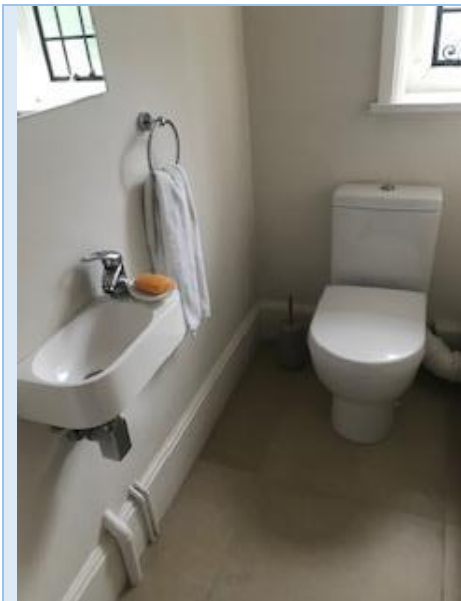
Revision	Date of Issue	Comments	Prepared By	Checked By
P-	23.01.2024	Initial Issue	LT	CS

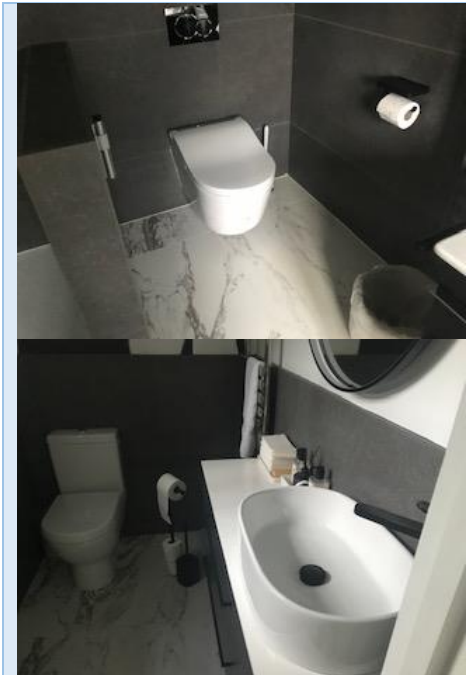
1 Introduction

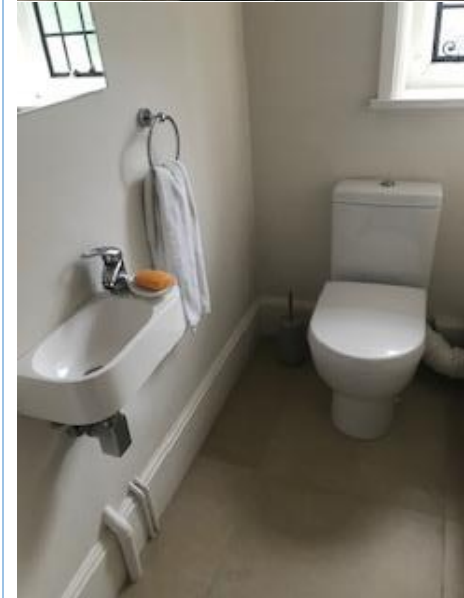
- 1.1.1 CGS Civils Ltd has been appointed by R Ellis Consultancy Ltd to undertake an Existing Fittings Survey in support of a Water Neutrality Report (C2950 Water Neutrality Report) for a proposed development at Alderbury, Church Hill, Pulborough. Planning permission is sought for the construction of two 1-bedroom holiday lets which will be available for use all year round.
- 1.1.2 The existing main house at the site is a 6-bedroom property. It is currently occupied by two people, so for the purposes of this report an occupancy level of two will be used within the calculations.
- 1.1.3 The purpose of this report is to provide an overview on the existing fittings and their water usages as well also show the proposed water usage changes on the site as a result of the recommendations made within the Water Neutrality report.
- 1.1.4 The water usage calculations within this report have been made using the Water Calculator from Building Regulations G as per the accompanied Water Neutrality Report.

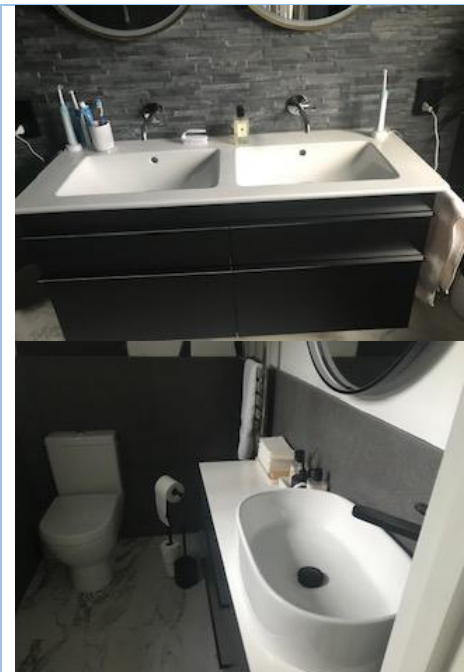
2 Alderbury, Church Hill – Existing 6-bedroom Dwelling

Fittings	Type of Fitting	Existing Water usage (l/day)
	Toilets	Full flush – 8.76 Part flush – 11.84
		Reduced to: Full flush – 5.84 Part flush – 7.70



		
	Taps (excluding kitchen)	11.06 Reduced to: 5.53

  		
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	Bath (shower also present)	20.35 Reduced to: 15.95
	Shower (bath also present)	43.70 Reduced to: 30.60

	Washing machine	17.16 Reduced to: 0 l/day
	Dishwasher	4.50
	Total (l/p/day) with normalisation factor and 5l/p/day added for outdoor use (refer to appendix A):	124.44
	Total (l/p/day) with normalisation factor and 5l/p/day added for outdoor use (refer to appendix B) With the installation of water efficient fittings and rainwater harvesting for the washing machine and outdoor use:	68.41
	Difference in water demand (l/p/day):	56.03
	Difference in water demand, multiplied by occupancy level of 2:	112.06

3 Conclusion

- 3.1.1 As indicated within the above calculations, the water demand of existing 6-bedroom can be calculated to be reduced by **112.06 l/day**.
- 3.1.2 As the water demand from the two proposed 1-bedroom holiday lets will be only **95.36 l/day**, the total water demand of the site will be reduced by **16.70 l/day**, making the site water neutral.

4 Appendices

4.1 Appendix A:

Table 2 – Water Calculator from Building Regulations Part G – Information input from existing property.

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)	4.5	4.42	0	0
WC (Dual Flush)	Full Flush Vol.	6	1.46	0	8.76
	Part Flush vol.	4	2.96	0	11.84
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)	185	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)					131.25
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)					124.44

4.2 Appendix B:

Table 10 – Water Calculator from Building Regulations Part G – Information input from existing property with water efficient devices from Table 6 of “C2950 Water Neutrality Report”.

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	1.46	0	5.84
	Part Flush vol.	4	2.96	0	7.70
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)	7	4.37	0	30.60
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	8.17	2.1	0	17.16
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)					91.84
Contribution from greywater (l/p/d)					0
Contribution from rainwater (l/p/d)					22.16
Normalisation factor					0.91
External water use					5
Total water consumption (36(1)) (l/p/d)					68.41