Consulting Civil Engineers

Existing Fittings Survey

Normans, East Street, Rusper, Horsham, West Sussex

For

Dean Smith

Rev - **P**

Reference **3153**

Date **25th April 2024**

Revision	Date of Issue	Comments	Prepared By	Checked By
P-	25.04.2024	Initial Issue	LT	CS

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1 Introduction

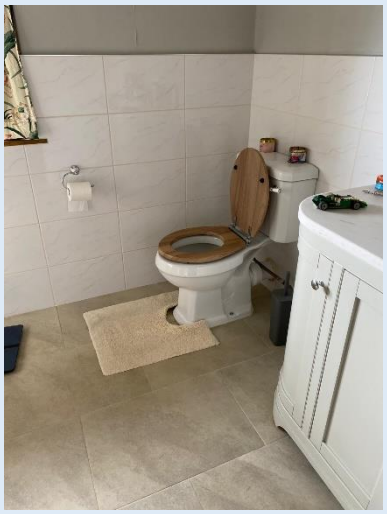
1.1.1 CGS Civils Ltd has been appointed by Dean Smith to undertake an Existing Fittings Survey in support of a Water Neutrality Report (C3153 Water Neutrality Report) for a proposed development at Normans, East Street, West Sussex. Planning permission is sought to convert the existing car port into 1-bedroom ancillary accommodation.

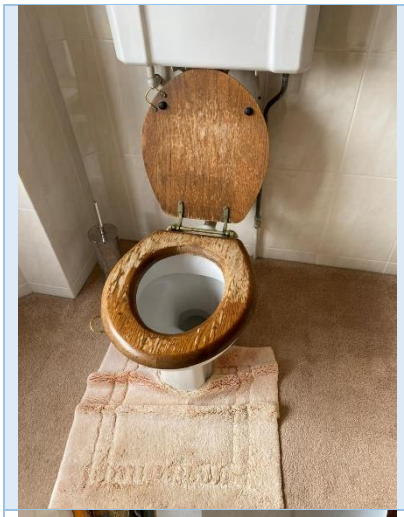
1.1.2 The purpose of this report is to provide an overview on the existing fittings and their water usages, as well to show the proposed water usage changes on the existing main house present at the site as a result of the recommendations made within the Water Neutrality report. The existing house is currently used by a family of 5.

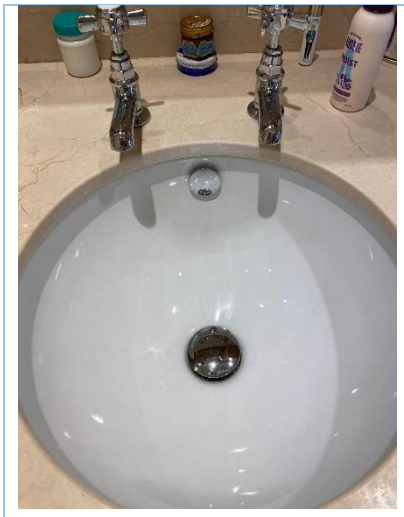
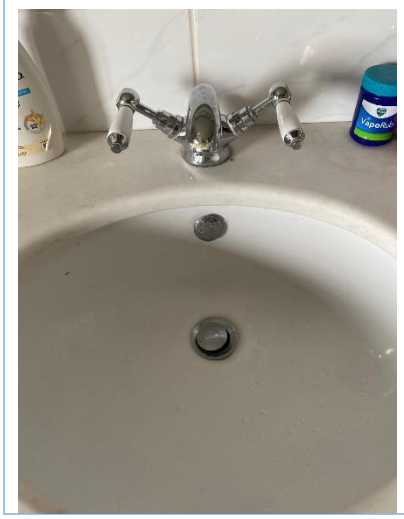
1.1.3 The water usage calculations within this report have been made using the Water Calculator from Building Regulations G as per the accompanied Water Neutrality Report.

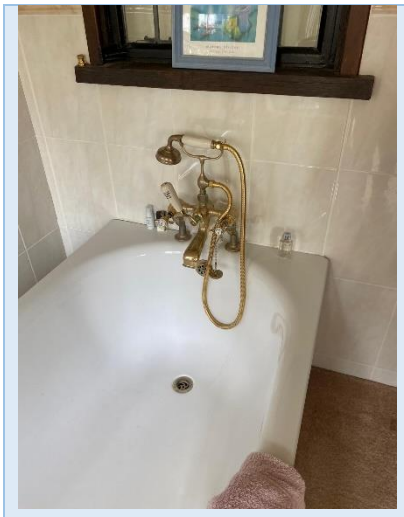
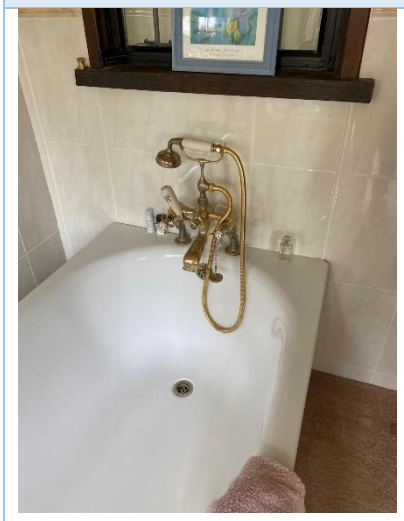
2 Existing Main House

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

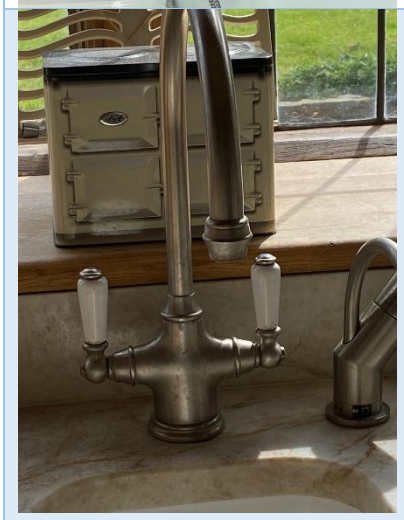
		
		
		

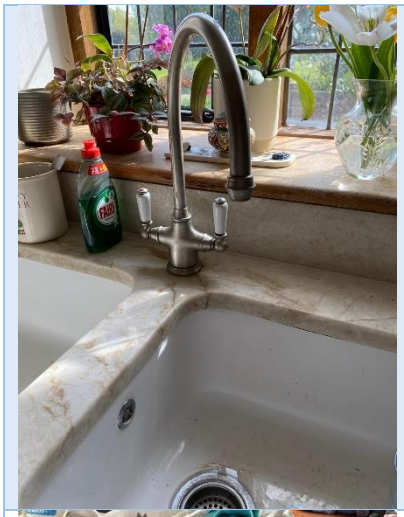
		
 	Taps (excluding kitchen)	11.06 Reduced to 5.53

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

 		
	Kitchen sink taps	13.88 Reduced to 12.56

		
	Washing machine	17.16
PHOTO UNAVAILABLE FOR THE PURPOSES OF THIS REPORT IT HAS BEEN ASSUMED THAT THE DISHWASHER IS ALREADY EFFICIENT AND NO IMPROVEMENTS CAN BE MADE	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 efficicient toilets, showers and taps:	99.86
	Difference in water demand (l/p/day):	24.58
	Total reduction in water demand based on confirmed occupancy of 5:	122.90

3 Conclusion

3.1.1 As indicated within the above calculations, the water demand of existing property can be reduced by **122.90 l/day**.

3.1.2 The water demand from the proposed 1-bedroom dwelling will be **117.53 l/day** after water efficient fittings are installed (refer to C3153 Water Neutrality report). This results in a total reduction in water demand of **5.37 l/day** over the existing site, making the proposals 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)	0	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 3 – Water Calculator from Building Regulations Part G – Information input from existing properties with water efficient toilets, showers and taps.

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	7.70
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)	185	0.11	0	20.35
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)	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	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)			104.24
		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)			99.86