

# Water Efficiency Calculations

Building Regulations Part G



Date: 31 October 2023  
Quote No: PKDC5492

Dear Sir / Madam

**Re: New build – Plot 1, Green Walk Garages, Ruislip HA4 8NL**

By following the Government's national calculation methodology for assessing water efficiency in new dwellings this dwelling, as designed, achieves a water consumption of 110 litres per person per day.

Compliance with Building Regulation 17.K has been demonstrated.

The values shown are maximum design values at a pressure of  $3\pm 0.2$  bar, and should not be exceeded without compensatory changes made elsewhere or consideration given to rainwater option.

It may be necessary to install flow limiters to achieve required flow rates.

Key elements of the design include:

No special features

Code for Sustainable Homes Rating

Code Level: 1

**Please note:** Bath taps are exempt from the calculation

Yours Sincerely



James Rivers



## **Building Regulations Part G** **Summary**

<b><u>Type</u></b>	<b><u>Location</u></b>	<b><u>Required flow Rates, Volume</u></b>	<b><u>Qty</u></b>
Taps	Ground Floor Bathroom	4 litres/min	1
Taps	Family Bathroom	4 litres/min	1
Dishwasher	Kitchen	1.25 litres/place	1
Washing Machine	Kitchen	8.17 litres/kg	1
Bath	Family Bathroom	150 litres to overflow	1
Shower	Family Bathroom	9 litres/min	1
Shower	Ground Floor Bathroom	9 litres/min	1
WC's 'Dual Flush'	Ground Floor Bathroom	6 / 3 litres to flush vol.	1
WC's 'Dual Flush'	Family Bathroom	6 / 3 litres to flush vol.	1
Kitchen / Utility Taps (When applicable)	Kitchen	4 litres/min	1

The following items have not been included within the design of the dwelling. If the client wishes to incorporate these items please let us know as they could affect overall compliance.

<b><u>Type</u></b>	<b><u>Location</u></b>	<b><u>Required flow Rates, Volume</u></b>	<b><u>Qty</u></b>
Water Softeners	Not Present	Not applicable	0
Waste Disposal Unit	Not Present	Not applicable	0
Rain / Grey Water Harvester	Not Present	Not applicable	0

### **Please Note:**

- For the water calculations process to be finalised these figures will need to be achieved and confirmation of the flow rates will be required.





Job no: PKDC5492

Date: 31/10/2023

Assessor name: Mr J Rivers

Registration no: STRO008133

Development name: Plot 1, Green Walk Garages, Ruislip HA4 8NL

Issue Date: 31/10/2023

Rainwater

Greywater

Results

## WATER EFFICIENCY CALCULATOR FOR NEW DWELLINGS

(for use with the Code for Sustainable Homes issues Wat 1 for the May 2009 and subsequent versions)

**Dwelling Description** Dwelling - 110 Litres Achieved

### 1st step - Select from options below:

Is a Rain and/or Greywater system specified?	No
Is a shower AND bath present?	Yes
Has a washing machine been specified?	No
Has a dishwasher been specified?	No

### 2nd step - Build spreadsheet (click button below)

**BUILD SPREADSHEET**

As soon as this button is pressed the spreadsheet will change according to the options selected previously in the 1st step. Scroll down to see the changes.

### 3rd step - Enter consumption details for the specified fittings

<b>TAPS</b> (excluding kitchen taps)		Fitting type	Flow rate (litres/min)	Number of fittings
	1	Tap	4.00	2
	2			
	3			
	4			
	Proportionate flow rate (litres/min)			2.80
Consumption / person / day (Litres)			7.90	

  

<b>BATHS</b>		Fitting type	Capacity to overflow (litres)	Number of fittings
	1	Bath	150.00	1
	2			
	3			
	4			
	Proportionate capacity to overflow (litres)			105.00
Consumption / person / day (Litres)			16.50	

SHOWERS		Fitting type	Flow rate (litres/min)	Number of fittings
	1	Shower	9.00	2
	2			
	3			
	4			
	Proportionate flow rate (litres/min)			6.30
		Consumption / person / day (Litres)		39.33
DISHWASHER				
Where no dishwasher is specified, a default consumption figure of 1.25 litres per place setting is used.				
		Consumption / person / day (Litres)		4.50
WASHING MACHINES				Number of fittings

Where no washing machine is specified, a default consumption figure of 8.17 litres per kilogram of dry load is used.				
Where no washing machines have been specified but plumbing for future supply of grey/rainwater was installed, please enter details:				
		Consumption / person / day (Litres)	17.16	
<b>WC's</b>	<b>Fitting Type</b>	<b>Flush Type</b>	<b>Volume**</b>	<b>Number of fittings</b>
1	W/C's	Full Flush	6.00	2
		Part Flush	3.00	
2		Full Flush		
		Part Flush		
3		Full Flush		
		Part Flush		
4		Full Flush		
		Part Flush		
		Average effective flushing volume (litres)		3.99
		Consumption / person / day (Litres)	17.64	

KITCHEN SINK TAPS		Fitting Type	Flow rate (litres/minute)	Number of fittings
	1	Tap	4.00	1
	2			
	3			
	4			
		Proportionate flow rate (litres/min)		2.80
		Consumption / person / day (Litres)		12.12

WASTE DISPOSAL UNIT		
Is a waste disposal unit specified for the dwelling?		Click to select
		Consumption / person / day (Litres)
		0.00

WATER SOFTENER		
Water Softener in use?		Click to select
Total capacity used per regeneration (%)		
Water consumed per regeneration (litres)		
Average number of regeneration cycles per day (No.)		
Number of occupants served by the system (No.)		
		Water consumed beyond 4% person / day (Litres)
		0.00

4th step - Analyse Results	<a href="#">Go to Start</a>
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INTERNAL WATER CONSUMPTION		
NET INTERNAL WATER CONSUMPTION	(litres/person/day)	115.15
RAINWATER ONLY COLLECTION SAVING	(litres/person/day)	0.00
GREYWATER ONLY RECYCLING SAVING	(litres/person/day)	0.00
RAIN/GREYWATER COLLECTION SAVING (combined system)	(litres/person/day)	0.00
NORMALISATION FACTOR	(litres/person/day)	0.91
TOTAL WATER CONSUMPTION	(litres/person/day)	104.8
CSH CREDITS ACHIEVED		3
CSH MANDATORY LEVEL:		Level 3/4

17. K COMPLIANCE		
EXTERNAL WATER USE	(litres / person / day)	5.00
TOTAL WATER CONSUMPTION	(litres / person / day)	109.8
17. K COMPLIANCE?		Yes

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**PRINTING:** before printing please make sure that in "Page Setup" you have selected the page to be as "Landscape" and that the Scale has been set up to 75% (maximum)

# Water Efficiency Calculations

Building Regulations Part G



Date: 31 October 2023  
Quote No: PKDC5492

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By following the Government's national calculation methodology for assessing water efficiency in new dwellings this dwelling, as designed, achieves a water consumption of 110 litres per person per day.

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Code Level: 1

**Please note:** Bath taps are exempt from the calculation

Yours Sincerely



James Rivers



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### **Please Note:**

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		Part Flush		
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		Consumption / person / day (Litres)	17.64	

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