

G-Calc Summary

Project Address

123 Any Street
Any Town
Any Where
ABC 123

Application details

Authority: Any Town DC
Agent: Dr R Saunders
Project. 001
Prepared 16-Mar-10

By following the Government's national calculation methodology for assessing water efficiency in new dwellings this 3 bed dwelling achieves a water consumption of 104.5 litres per person per day.

Compliance with Regulation 17.K has been demonstrated.

Credits for Sustainable homes rating: 3

Key elements of the design include:

Grey water recycling with a 100% specified efficiency

Rain water harvesting system apportioned 100% to this dwelling

BS8515 Intermediate approach adopted

Table 1: The Water Calculator for New Dwellings					
Installation Type	Unit of measure	Value	Use factor	Fixed use	litres/person/day
WC(single flush)	Flush volume (litres)	0	4.42	0.00	0
WC(dual flush)	Full flush vol.	0	1.46	0.00	0
	Part flush vol.	0	2.96	0.00	0
WC(multiple fittings)	Average effective Flush vol. (litres)	6.16	4.42	0.00	27.23
Taps(excl. Kitchen)	Flow rate (litres/min)	5.5	1.58	1.58	10.27
Bath (shower also present)	Capacity to overflow (litres)	116.5	0.11	0.00	12.82
Shower (bath also present)	Flow rate (litres/min)	11	4.37	0.00	48.07
Bath only	Capacity to overflow (litres)	0	0.50	0.00	
Shower only	Flow rate (litres/minute)	0	5.6	0.00	
Kitchen sink taps	Flow rate (litres/minute)	6.16	0.44	10.36	13.07
Washing Machine	litres/kg dry load	12	2.1	0.0	25.2
Dishwasher	litres/place setting	1.25	3.6	0.0	4.5
Waste disposal	litres/use	1	3.08	0.0	3.08
Water softener	litres/person/day	0.6	1.0	0.0	0.6
Total calculated use (litres/person/day)					144.84
Contribution from greywater (litres/person/day)					- 25.86
Contribution from rainwater (litres/person/day)					- 9.59
Normalisation factor					0.91
Total Water Consumption. Code for Sustainable Homes (litres/person/day)					99.5
External water use					5.0
Total Water Consumption. (17.K) (litres/person/day)					104.5

Table 2: Consumption Calculator for multiple fittings for New Dwellings			
2.1: Taps (excluding kitchen sink taps)			
	Flow Rate (l/min)	Quantity (No.)	Total per fitting type
1	6	1	6
2	5	1	5
3			
4			
Total (Sum of all Quantities)		2	
Total (Sum of all totals per fitting type)			11
Average Flow Rate (l/min)			5.5
Maximum Flow Rate (l/min)			6
Proportionate flow Rate (l/min)			4.2

Table 2: Consumption Calculator for multiple fittings for New Dwellings			
2.2: Baths			
	Capacity (litres)	Quantity (No.)	Total per fitting type
1	111	1	111
2	122	1	122
3			
4			
Total (Sum of all Quantities)		2	
Total (Sum of all totals per fitting type)			233
Average Capacity to overflow (litres)			116.5
Maximum Capacity to overflow (litres)			122
Proportionate capacity to overflow (litres)			85.4

Table 2: Consumption Calculator for multiple fittings for New Dwellings			
2.5: Washing Machines			
W/machine Type	litres/kg dry load	Quantity (No.)	Total per fitting type
1	12	1	12
2	12	1	12
3			
4			
Total (Sum of all Quantities)		2	
Total (Sum of all totals per fitting type)			24
Average litres per kg of dry load			12
Maximum litres per kg of dry load			12
Proportionate litres per kg of dry load			8.4

Table 2: Consumption Calculator for multiple fittings for New Dwellings			
2.6: Showers			
Shower Type	Flow rate (l/min)	Quantity (No.)	Total per fitting type
1	12	1	12
2	10	1	10
3			
4			
Total (Sum of all Quantities)		2	
Total (Sum of all totals per fitting type)			22
Average Flow rate (l/min)			11
Maximum Flow rate (l/min)			12
Proportionate flow rate (l/min)			8.4

Table 2: Consumption Calculator for multiple fittings for New Dwellings			
2.7: WC's			
WC Type	Effective flushing volume (litres)	Quantity (No.)	Total per fitting type
1	6.33	1	6.33
2	6	1	6
3			
4			
Total (Sum of all Quantities)		2	
Total (Sum of all totals per fitting type)			12.33
Average effective flushing volume (litres)			6.16

Table 3: The Water Softener consumption calculation for New Dwellings	
Total Capacity used per regeneration (%)	10
Water consumed per regeneration (litres)	4
Average number of regeneration cycles per day(No.)	1
Number of occupants served by the system (No.)	4
Water consumed beyond 4% (litres/day)	2.4
Water consumed beyond 4% (litres/person/day)	0.6

Table 4.1: The greywater demand calculations for new dwellings - WC's			
Effective flushing volume(litres)	Number of fittings present	Quantity using greywater	Greywater demand
6.33	1	0	0
6	1	1	6
		0	0
		0	0
Total fittings consumption	2	Total greywater demand	6
Average greywater demand from WC's			13.26

Table 4.2: The greywater demand calculations - Washing machines			
Litres per kg	Number of fittings present	Quantity using greywater	Greywater demand
12	1	1	12
12	1	0	0
		0	0
		0	0
Total fittings consumption	2	Total greywater demand	12
Average greywater demand from washing machines			12.6

Table 4.3: The greywater collection calculations for new dwellings - taps			
Litres per minute	Number of fittings present	Qty supplying greywater	Greywater demand
6	1	1	6
5	1	1	5
		0	0
		0	0
Total fittings consumption	2	Total greywater supply	11
Average greywater supply from taps			10.27

Table 4.4: The greywater collection calculations - showers			
Litres per minute	Number of fittings present	Qty supplying greywater	Greywater demand
12	1	1	12
10	1	1	10
		0	0
		0	0
Total fittings consumption	2	Total greywater supply	22
Average greywater supply from showers			48.07

Capacity to overflow	Number of fittings present	Qty supplying greywater	Greywater demand
111	1	1	111
122	1	1	122
		0	0
		0	0
Total fittings consumption	2	Total greywater supply	233
Average greywater supply from baths			12.81

Supply (l/p/d)	% to be recycled	Available (l/p/d)	Demand (l/p/d)	Greywater savings (litres/person/day)
71.15	100	71.15	25.86	25.86

Collection area (sqr. m)	100
Yeild co-efficient and hydraulic filter efficiency	0.7
Rainfall (average mm/year)	200
Daily rainwater collection (litres)	38.36
Number of occupants	4
Daily rainwater per person (litres)	9.59

Effective flushing volume(litres)	Number of fittings present	Quantity using rainwater	Rainwater demand
6.33	1	1	6.33
6	1	0	0
		0	0
		0	0
Total fittings consumption	2	Total rainwater demand	6.33
Average rainwater demand from WC's			13.99

Table 5.4: The rainwater demand calculations - Washing machines			
Litres per kg	Number of fittings present	Quantity using rainwater	Rainwater demand
12	1	0	0
12	1	1	12
		0	0
		0	0
Total fittings consumption	2	Total rainwater demand	12
Average rainwater demand from washing machines			12.6

Table 5.5: Rainwater saving calculation for New Dwellings	
	Litres per person per day
Rainwater collected	9.59
Rainwater demand	26.59
Rainwater savings	9.59

-----End of Report-----

Notice of Water Efficiency

By following the Government's methodology for assessing water efficiency as set out in the document "The Water Efficiency Calculator for New Dwellings," the potential consumption of wholesome water per person per day for the new dwelling at:

123 Any Street

Any Town

Any Where

ABC 123

has been calculated as:

104.5 litres per person per day