CHARLES SCOTT & PARTNERS CONSULTING ENGINEERS

Table A1: The water efficiency calculator					
		(1)	(2)	(3)	(4)
Installation Type	**Unit of Measure**	**Capacity/Flow Rate**	**Use Factor**	**Fixed Use (Litres/ person/day)**	**Litres/ person/day = [(1)x(2)+(3)**
WC (single Flush)	Flush volume (litres)	0	4.42	0.00	0
WC (dual Flush)	Full flush volume (litres)	0	1.46	0.00	0
	Part Flush volume (litres)	0	2.96	0.00	0
WCs (multiple fittings)	Average affective flushing volume (litres)	4.5	4.42	0.00	19.89
Taps (excluding kitchen/utility room taps	Flow rate (litres/minute)	3.75	1.58	1.58	7.5
Bath (where shower also present)	Capacity to overflow (litres)	200	0.11	0.00	22
Shower (where baths also present)	Flow rate (litres/minute)	0	4.37	0.00	0
Bath only	Capacity to overflow (litres)	0	0.50	0.00	0
Shower only	Flow rate (litres/minute)	6	5.60	0.00	33.6
Kitchen/utility room sink taps	Flow rate (litres/minute)	4	0.44	10.36	12.12
Washing machine	Litres/kg dry load	7.2	2.1	0.00	15.12
Dishwasher	Litres/place setting	1.25	3.6	0.00	4.5
Waste disposal unit	Litres/use	0	3.08	0.00	0
Water softener	Litres/person/day	0	1.00	0.00	0
	(5)	Total calculated use = (Sum Column 4)			114.73
	(6)	Contribution from greywater (litres/person/day)			0
	(7)	Contribution from rainwater (litres/person/day – see A5.1 below.			7.96
	(8)	Normalisation factor			0.91
	(9)	Total water consumption = [(5) – (6) – (7) x (8)			97.16
	(10)	External water use			5.0
	(11)	Total Water Consumption = (9) + (10) (litres/person/day)			102.16
				Target (Litres/Person/ Day)	110

Table A5.1: Rainwater collection calculation -		
(a) Collection area (m^2)		335
(b) Yield coefficient and hydraulic filter efficiency		0.7
(c) Rainfall (average mm/year)		818
(d) Daily rainwater collection (litres)	= [(a) x (b) x (c)]/365	525.5
(e) Number of occupants		66
(f) Daily rainwater per person (litres)	= [(d)/(e)]	7.96

As can be seen from the above calculation the estimated water usage for the Bedhampton Care Home is less than 110 litres/person/day.