HARNISS CONSULTING

WATER MANAGEMENT & CONSERVATION STATEMENT

FOR

PROPOSED CARE HOME, HOTEL FELIX, CAMBRIDGE

ON BEHALF OF

DOC No: 1761-REP-WM-01

REVISION P1
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Contents

1.0 Water Management

Similar to the energy hierarchy, the water strategy for the proposed building focuses first on resource reduction, and then considers efficient use and recycling. The approach seeks to ensure water efficiency across the development whilst also meeting the requirements of the South Cambridgeshire Local Plan Policy *CC/4: Water Efficiency.* Specific measures adopted for this project are described and is described in more detail below.

1.1 Reduction of water demand

- The water usage specification has been designed to achieve an improvement against the limiting values set at 110 litres/person/day.
- Metering of water consumption is proposed. This will highlight any abnormal usage patterns and help in the creation and tracking of targets for water use minimisation. Primary billing meter communications link will also potentially provide the methodology for implementing leak detection through the alarm of 'out of range' values being recorded (this is subject to the billing meter location and configuration).
- Sub-metering is proposed for individual system usage such as domestic hot water, process loads for kitchen and laundry and building mains potable water distribution, etc, in line with *CIBSE TM39 and AD Part L* requirements with pulsed output capability to the BMS.

1.2 Efficiency

- Water efficient appliances and fittings are proposed to further minimise water consumption.
- Laundry and kitchen appliances will be supplied and equipped with low water consumption equipment.

1.3 Water Consumption

With the above put into practice, we have calculated the predicted consumption as follows in accordance with the calculation method outline in Approved Document G:

Installation type	Unit of measure	Capacity / flow rate	Use factor	Fixed use (L/person/day)	L/person/day
WC (single flush)	Flush volume (L)		4.42	0.00	0.00
WC (dual flush)	Full flush volume (L)		1.46	0.00	0.00
	Part flush volume (L)		2.96	0.00	0.00
WCs (multiple fittings)	Average effective flushing volume (L)	3.3	4.42	0.00	14.59
Taps (excluding kitchen/utility room taps)	Flow rate (L/m)	4	1.58	1.58	7.90
Bath (where shower also present)	Capacity to overflow (L)	170	0.11	0.00	18.70
Shower (where bath also present)	Flow rate (L/m)	8	4.37	0.00	34.96
Bath only	Capacity to overflow (L)		0.50	0.00	0.00
Shower only	Flow rate (L/m)		5.60	0.00	0.00
Kitchen utility room sink taps	Flow rate (L/m)	6	0.44	10.36	13.00
Washing machine	L/kg	8.17	2.10	0.00	17.16
Dishwasher	L/place setting	1.25	3.60	0.00	4.50
Water disposal unit	L/use		3.08	0.00	0.00
Water softener	L/person/day		1.00	0.00	0.00
		Total calculated use (L/person/day)			**110.80**
		Contribution from greywater (L/person/day)			
		Contribution from rainwater (L/person/day)			
		Normalisation factor			0.91
		Total water consumption			100.83
		External water use			5.00
		Total water consumption (L/person/day)			**105.83**