

Mr. John Hyland

96 Court Way

Twickenham

Middlesex TW2 7SW

Water sustainability statement

**Incorporating fittings schedule
and water use calculations**

21/2713 wat rev O

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Estimation of water usage for the development

Background

The proposal consists of the sub-division of the existing five-bedroom semi-detached dwelling-house to form a new two-bedroom end terrace unit and a three-bedroom mid-terraced dwelling house plus ancillary works on the development site at 96 Court Way, Twickenham TW2 7SW.

All new fittings, brassware and sanitaryware to be provided on the development will be of low flow/aerated or low capacity to ensure that each of the dwellings will meet the requirements of Richmond Council for internal potable water use.

AED Design has been commissioned by Mr John Hyland to prepare this 'water sustainability statement' the purpose of which is to show the potable water use of the dwelling to be in line with planning policy and meet the requirements of the building regulations AD Part G (listed below).

Water efficiency

G2, 'Reasonable provision must be made by the installation of fittings and fixed appliances that use water efficiently for the prevention of undue consumption of water'.

Water efficiency of new dwellings

Regulation 36 - (1) 'the potential consumption of wholesome water by persons occupying a new dwelling must not exceed the requirement in paragraph (2).

(2) The requirement referred to in paragraph (1) is either:

- a) 125 litres per person per day; or
- b) In a case to which paragraph (3) applies, the optional requirement of 110 litres per person per day.

(3) This paragraph applies where the planning permission under which the building work is carried out:

- a) Specifies the optional requirement in paragraph (2)(b); and
- b) Makes it a condition that the requirement must be complied with.

1.0 - Analysis of the Site

The site 96 Court Way, Twickenham, is situated to the north side of Court Way at its junction with Egerton Road opposite Richmond upon Thames College close to Twickenham town centre.

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To the north (rear) are the rear gardens to both properties and the rear accessway serving properties in Court Way and Heathfield South (nos. 88-94 Heathfield South), to the east is the flank of no.94 Court Way, to the south is the junction of Court Way with Egerton Road and dwellings fronting it and to the west is Court Way and the flank of no.16 Egerton Road facing it.

The scheme consists of the sub-division of the existing property to form a new two-bedroom end-terrace dwelling and a new three-bedroom mid-terrace dwelling plus ancillary works on the development site.

The proposed units are oriented north/south with the front entrances of the dwellings facing south; the location is sheltered by other buildings to all sides

2.0 – Water use (assessment)

The calculations (summarised below) have been carried out using the BREEAM Water Efficiency Calculator (basic calculator) based upon the floor plans elevations, sections, and site plan etc. (listed below) prepared and issued by AJT Design Services Ltd:

- CW/96/01 - existing plans and elevations
- CW/96/02 - proposed plans and elevations
- CW/96/03 - proposed site plan and location plan
- CW/96/04 - proposed site plan

3.0 - Water use (fittings)

Table 1 – schedule of sanitaryware and brassware for dwellings (all plots)

Location	Item	Flow rate/capacity
<u>96 Court Way</u> [3-bed]		
Kitchen	Kitchen taps	Flow restricted to 7.0 l/m
	Dishwasher	4.50 l/place (BREEAM default value used).

Utility	Kitchen taps	Flow restricted to 7.0 l/m
	Washing machine/dryer	17.16 l/kg (BREEAM default value used)
WC	WC	4/2.5 litre
	Basin taps	Flow restricted to 6.0 l/m
Family bathroom	WC	4/2.5 litre
	Bath	150litre capacity to overflow
	Shower	Flow restricted to 9.0 l/m
	Basin taps	Flow restricted to 6.0 l/m
<u>98 Court Way [2-bed]</u>		
Kitchen	Kitchen taps	Flow restricted to 7.0 l/m
	Dishwasher	4.50 l/place (BREEAM default value used).
Utility	Kitchen taps	Flow restricted to 7.0 l/m
	Washing machine/dryer	17.16 l/kg (BREEAM default value used)
WC	WC	4/2.5 litre
	Basin taps	Flow restricted to 6.0 l/m
Family bathroom	WC	4/2.5 litre
	Bath	150litre capacity to overflow
	Shower	Flow restricted to 9.0 l/m
	Basin taps	Flow restricted to 6.0 l/m

4.0 – Water Use (calculation)

The Potable Water demand is all the water that would be used by the dwellings under pre-determined conditions.

The calculations shown below (appendix 1) have been prepared using the BRE (BREEAM) water calculator in conjunction with the schedule of fittings shown in table 1 above.

5.0 – Conclusion

As can be seen from Appendix 1 (table 2) below the dwellings on the development are shown to use 104.9 litres/person/day which meets planning requirements and not only meets that required under the building regulations, but also meets 'Regulation 36' paragraph (2)(b) which is in line with the enhanced 'optional requirement' of the building regulations.

This shows that all dwellings have an average water use of ≤ 105 litres/person/day and will therefore meet any requirements conditioned by Richmond Council planning requirements.

Although this is better than the basic requirement of regulation 36, the G (2)(b) maximum target of 105 litre/person/day has been selected for the dwellings to ensure that the development is compliant with the enhanced optional requirement of the building regulations should the development be so conditioned in the planning approval notice.

Appendix 1 - Table 2 internal potable water use calculation

BREEAM UK Domestic Refurbishment 2014 Wat 01 Calculator

Tool Version		0.1					
Assessment Reference Number		21/2713					
Site Name		96 Court Way, Twickenham, Middlesex TW2 7SW					
WATER EFFICIENCY CALCULATOR (BASIC CALCULATOR)							
House Type:		Type 1		Type 2		Type 3	
Description:		96 Court Way [three-bed]		98 Court Way [two-bed]			
Installation Type	Unit of measure	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day
Is a dual or single flush WC specified?		Dual		Dual		Select option:	
WC	Full flush volume	4	5.84	4	5.84		0.00
	Part flush volume	2.5	7.40	2.5	7.40		0.00
Taps (excluding kitchen and external taps)	Flow rate (litres / minute)	6	11.06	6	11.06		0.00
Are both a Bath & Shower Present?		Bath & Shower		Bath & Shower		Click to Select	
Bath	Capacity to overflow	150	16.50	150	16.50		0.00
Shower	Flow rate (litres / minute)	9	39.33	9	39.33		0.00
Kitchen sink taps	Flow rate (litres / minute)	7	13.44	7	13.44		0.00
Has a washing machine been specified?		No		No		Click to Select	
Washing Machine	Litres / kg	1	17.16	1	17.16		0.00
Has a dishwasher been specified?		No		No		Click to Select	
Dishwasher	Litres / place setting	1	4.50	1	4.50		0.00
Has a waste disposal unit been specified?		No	0.00	Click to Select	0.00	Click to Select	0.00
Water Softener	Litres / person / day		0.00		0.00		0.00
Calculated Use			115.2		115.2		0.0
			0.91		0.91		0.91
Total Consumption			104.9		104.9		0.0
Number of Credits			2.5		2.5		No Data
Exemplary Credits			0		0		No Data
Minimum level		BREEAM Excellent		BREEAM Excellent		No Data	