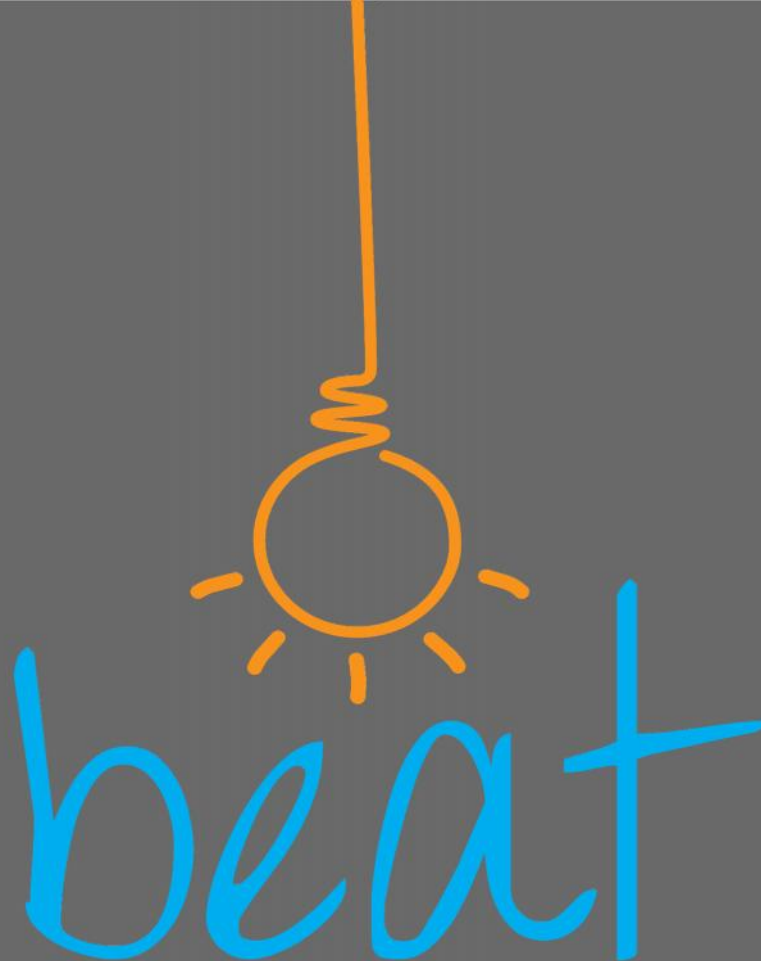




Your sustainable partner

**DESIGN STAGE
WATER EFFICIENCY
CALCULATION REPORT**

FOR

METIS BUILD LTD

AT

**PLOTS 6-9
LONG COPSE LANE
EMSWORTH
PO10 7UR**

1. Executive Summary

This report has been produced by BEAT Solutions Ltd on 10th June 2022 for Metis Build Ltd to demonstrate compliance with Building Regulation Part G Regulation 17K. This report confirms the water usage for the dwelling to be 109.41 litres/person/day.

2. Introduction

BEAT Solutions have been instructed to calculate the predicted water usage for the dwelling based on the proposed specification. This report has been produced by Sophie Pinnick.

The methodology used to calculate the water usage is the national approved BRE water efficiency calculation procedure.

A copy of this report should be submitted to the Building Control Officer within 24hrs.

3. Proposed Water Fittings Specification

Metis Build Ltd hasn't completed a schedule to confirm the water usage fixtures and fittings. Therefore this calculation is based on an assumed water usage target for each of the fitting types.

4. Compliance Summary

BEAT Solutions Ltd hasn't received sufficient information from the client to enable the internal water usage to be calculated. Therefore this calculation is based on an assumed water usage target for each of the fitting types. The schedule below confirms these target figures would achieve the following:-

Plot Type:	Semi Detached Houses
Targeted Water Usage:	110.00 litres/person/day
Proposed Water Usage:	109.41 litres/person/day
Building Reg Compliant:	Yes
Planning Requirement:	110.00 litres/person/day
Planning Compliant:	Yes

5. Note To Developer/Builder

Please ensure a copy of this specification is given to your architect, kitchen and bathroom designers and the specified flow rates / capacities detailed within this report are included on all drawings and specifications. It is the clients responsibility to ensure these flow rates & capacities aren't exceeded when purchasing any fixtures, fittings or appliances. IF IN DOUBT ASK!

Plot / Address	Plots 6-9, Long Copse Lane, Emsworth, PO10 7UR, ,				Our Reference	WAT-0409/PLOTS 6-9	
No. of Bedrooms	3	Plot/House No.	Plots 6-9	Plot Type	Semi Detached Houses	Occupancy rate for Calculation Purposes	4

Basin & Utility Taps	Flow Rate	Quantity
Fitting Type	Litres/Min	(No.)
Flow Rate Not to Exceed (5l/min)	5.00	3
Total No. of Fittings (No.)		3
Total Flow (l/s)		15.00
Maximum Flow (l/s)		5.00
Average Flow (l/s)		5.00
Weighted Average Flow (l/s)		3.50
Flow for Calculation (l/s)		5.00

Showers	Flow Rate	Quantity
Fitting Type	Litres/Min	(No.)
Flow Rate Not to Exceed (7l/min)	7.00	2
Total No. of Fittings (No.)		2
Total Flow (l/s)		14.00
Maximum Flow (l/s)		7.00
Average Flow (l/s)		7.00
Weighted Average Flow (l/s)		4.90
Flow for Calculation (l/s)		7.00

Bath	Capacity to	Quantity
Type	Overflow	(No.)
Capacity Not to Exceed (195L)	195.00	1
Total No. of Fittings (No.)		1
Total Capacity (l)		195.00
Maximum Capacity (l)		195.00
Average Capacity (l)		195.00
Weighted Average Capacity (l)		136.50
Capacity for Calculation (l)		195.00

W/C	Full Flush	Part Flush	Quantity (No)
Type	Volume	Volume	
Flow Rate Not to Exceed (6/3)	6.00	3.00	3
Total number of fittings			3
Average effective flushing volume			4.00

Dishwasher	L per Place	Quantity
Type	Setting	(No.)
l/p/s		
Total No. of Fittings (No.)		0
Total Consumption (l)		1.25
Maximum Consumption (l)		1.25
Average Consumption (l/s)		1.25
Weighted Average Consumption (l)		0.88
Consumption for Calculation (l/s)		1.25

Washing Machine	L per Kg	Quantity
Type	Dry Load	(No.)
(l/kg)		
Total No. of Fittings (No.)		0
Total Consumption (l)		8.17
Maximum Consumption (l)		8.17
Average Consumption (l/s)		8.17
Weighted Average Consumption (l)		5.72
Consumption for Calculation (l/s)		8.17

Kitchen Taps	Flow Rate	Quantity
Type	Litres/Min	(No.)
Flow Rate Not to Exceed (8l/min)	8.00	1
Total No. of Fittings (No.)		1
Total Flow (l/s)		8.00
Maximum Flow (l/s)		8.00
Average Flow (l/s)		8.00
Weighted Average Flow (l/s)		5.60
Flow for Calculation (l/s)		8.00

Waste Disposal Y/N	N
Water Softner	
Consumption beyond 4% l/p/d	
Grey water and harvested rainwater	
Total Grey water from WHB taps (l)	
Total Available Grey Water Supply (l)	208.16
Possible Demand (l)	139.35
Grey/Rain Installed Capacity (l)	
Figure for Calculation lit/person/day	0.00

Water Use Assessment

Installation Type	Unit	Capacity/ Flow Rate	Use Factor	Fixed use (l/p/day)	Total Use (l/p/day)
WC Single Flush	Volume (l)	0.00	4.42	0.00	0.00
WC Dual Flush	Full Flush (l)	0.00	1.46	0.00	0.00
	Pt Flush (l)	0.00	2.96	0.00	0.00
WC's (Multiple)	Volume (l)	4.00	4.42	0.00	17.68
Taps Exc. Kitchen	Flow Rate	5.00	1.58	1.58	9.48
Bath (shower present)	(l/s)	195.00	0.11	0.00	21.45
Shower (bath present)	(l/s)	7.00	4.37	0.00	30.59
Bath Only	(l)	0.00	0.50	0.00	0.00
Shower Only	(l/s)	0.00	5.60	0.00	0.00
Kitchen Taps	(l/s)	8.00	0.44	10.36	13.88
Washing Machines	(l/kgdry)	8.17	2.10	0.00	17.16
Dishwashers	(l/place)	1.25	3.60	0.00	4.50
Waste Disposal	(l/s)	0.00	3.08	0.00	0.00
Water Softner	(l/s)	0.00	1.00	0.00	0.00
Total Calculated Water Use (l/p/day)					114.74
Grey/RainWater Reused (l)					0.00
Normalisation Factor					0.91
Total Consumption CSH (l/p/day)					104.41
External Water Use Allowance (l)					5.00
Total Consumption Part G (l/p/day)					109.41
Assesment Result					PASS

<< Note - these are default values.
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