

Water Calculations

Water Calculation Report for 1 Hillfield Road, London, NW6 1QD

Project: 1 Hillfield Road

Our Reference: TNCT/22/11/DA/HR

Report Date: 22/12/2022

Site Address: 1 Hillfield Road, London, NW6 1QD

Client: Ace of Hearts Investments Ltd

Client Address: 5 Broadbent Close LONDON N6 5JW

QA Control:

	Name	Position	Signature	Date
Prepared By	Aharon Horwich	Director		22/12/2022
Approved By	Aharon Horwich	Director		22/12/2022

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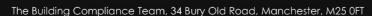


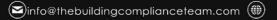
















Contents

1.0 **Executive Summary**

1.1 Instruction

The Building Compliance Team have been appointed by Ace of Hearts Investments Ltd to provide a water efficiency calculation regarding proposed works the excavation of basement including new front bay window and front garden area. Erection of single storey rear extension and green roof above, installation of two rooflights to front roof slope and replacement dormer window to rear roof slope in the creation of one additional residential unit and erection of bin and bike store to rear. at 1 Hillfield Road, London, NW6 1QD under application 2019/2109/P.

1.2 Calculation

A summary of the Water Efficiency Calculations are shown in Table 1 below.

Unit Number	Water Calculation (Litres Per Person Per Day)	Assessment Criteria (Litres Per Person Per Day)	Pass/Fail
Α	104.8	105	PASS
В	104.8	105	PASS
С	104.8	105	PASS
D	104.8	105	PASS

Table 1: Water Efficiency Calculation

1.3 Conclusion

Based on the calculations and assessments made within this report it is the professional opinion of The Building Compliance Team Ltd that compliance in respect to Water Efficiency can be met at the proposed development.



















2.0 Introduction

2.1 Background

The Building Compliance Team Ltd has been commissioned by Ace of Hearts Investments Ltd to undertake Water Efficiency Calculations to discharge condition 7 of a Section 106 Legal Agreement dated 26th May 2021.

The development description is as follows:

Excavation of basement including new front bay window and front garden area. Erection of single storey rear extension and green roof above, installation of two rooflights to front roof slope and replacement dormer window to rear roof slope in the creation of one additional residential unit. Erection of bin and bike store to rear.

2.2 **Scope and Objectives**

2.2.1 The calculations seek to establish Water Efficiency Calculations at the proposed development and identify whether these Water Efficiency Calculations meet the requirements of criteria indicated in Condition 7.

Condition 7

- 7. Prior to commencement, full details to demonstrate the proposed internal water efficiency and/or water recycling equipment, to ensure that the development will pose no additional strain on adjoining sites or the existing drainage infrastructure (and demonstrating an internal water consumption target of no more than 105 litres per person per day) should be submitted to the Local Planning Authority and approved in writing.
- 2.2.4 The Building Compliance Team Ltd has completed this report for the benefit of the individuals referred to in paragraph 1.1 and any relevant statutory authority which may require reference in relation to approvals for the proposed development. Other third parties should not use or rely upon the contents of this report unless explicit written approval has been gained from The Building Compliance Team Ltd.
- 3.2.5 The Building Compliance Team Ltd accepts no responsibility or liability for:
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 - b) The issue of this document to any third party with whom approval for use has not been agreed.









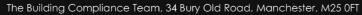
















3.0 **Site Description**

4.1 **Site Description**

4.1.1 Existing Site

The development site is situated in the ward of Fortune Green, within the Borough of Camden.

4.1.2 Development Proposals

The proposed development proposals, to be known as 1 Hillfield Road, London, NW6 1QD, comprises the excavation of basement including new front bay window and front garden area. The erection of single storey rear extension and green roof above, installation of two rooflights to front roof slope and replacement dormer window to rear roof slope in the creation of one additional residential unit and the erection of bin and bike store to rear.

The current proposed layout plan is provided in Appendix A.









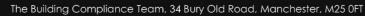


















4.0 **Performance Requirements**

4.1 **Planning Requirements**

In order to comply with Condition 7 of the section 106 Legal agreement, the proposed development must not exceed a water efficiency standard of 105 litres per person per day.

5.0 **Water Efficiency Calculation**

Table A: Water Calculation for Flats A-D

The results are contingent upon the follow:

Fixture/Fitting	Water Usage
Bathroom Taps	Average flow rate of 8 litres per minute or less
Kitchen Tap	Average flow rate of 8 litres per minute or less
WCs	Full flush volume of 4 litres, part flush volume of 2 litres
Showers	Average flow rate of 8 litres per minute or less
Baths	Capacity of 120 litres to overflow (or less)
Washing Machine (if supplied)	To use 8.17 litres per kg dry load (or less)
Dishwasher (if suppled)	To use 1.25 litres per place setting (or less)

Table A: Contingent Requirements for Fixtures and Fittings

Inline flow limiters should be fitted to the pipe work where the fittings do not achieve the above flow rates.

Compliance with Part G and condition 7 has been met. Please refer to the accompanying calculation sheet in Appendix B for full details.

6.0 Conclusion

Based on the calculations and assessments made within this report it is the professional opinion of The Building Compliance Team Ltd that compliance in respect to Water Efficiency as per condition 7 of the section 106 Legal Agreement and Approved Document G can be met at the proposed development.























PROJECT DETAILS

Project Reference: TBCT/22/11/DA/HR Client: TBCT/22/11/DA/HR Sharegold Ltd

Property: Flat A

1 Hillfield Rd

London NW6 1QD

Local Authority: Camden Agent: TBCT

Assessor: Aharon Horwich
Address: 34 Bury Old Road
Contact: 0203 773 9222

Software: G-Calc 2015 version 3.0.2

Prepared on: 18-Nov-22

RESULT SUMMARY

By following the Government's national calculation methodology for assessing water efficiency in new dwellings this 2 bed dwelling, as designed, achieves a water consumption of 104.8 litres per person per day.

Table 1: The Wa	ater Calculator	for New	Dwellings	5	
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)	2.66	4.42	0.00	11.76
Taps(excl. Kitchen)	Flow rate	2.00	11.12	0.00	11.70
	(litres/min)	8	1.58	1.58	14.22
Bath (shower	Capacity to				
also present) Shower (bath	overflow (litres) Flow rate	120	0.11	0.00	13.2
also present)	(litres/min)	8	4.37	0.00	34.96
Bath only	Capacity to				
	overflow (litres)		0.50	0.00	0
Shower only	Flow rate (litres/minute)		5.6	0.00	0
Kitchen sink taps	Flow rate (litres/minute)	8	0.44	10.36	13.88
Washing Machine	litres/kg dry load	8.17	2.1	0.0	17.16
Dishwasher	litres/place setting	1.25	3.6	0.0	4.5
Waste disposal	litres/use	0	3.08	0.0	0
Water softener	litres/person/day	0	1.0	0.0	0
		Total calculated use (litres/person/day)			109.68
		Contribution from greywater (litres/person/day)			_
	Contribution from rainwater (litres/person/day)			-	
	Normalisation factor		0.91		
		Total Water Consumption. Code for Sustainable Homes (litres/person/day)			99.8
			water use		5.0
		Total Water Consumption. (36(1)) (litres/person/day)			104.8

Table 2: Consumption Ca	alculator for multip	le fittings for N	ew Dwellings		
2.1: Taps (excluding kitchen si	nk taps)				
	Flow Rate (I/min)	Quantity (No.)	Total per fitting type		
1 Family Bathroom	8	1	8		
2 Ensuite	8	1	8		
3					
4					
Total					
(Sum of all Quantities)		2			
Total					
(Sum of all totals per fitting ty	16				
Average Flow Rate (I/min)	8				
Maximum Flow Rate (I/min)	8				
Proportionate flow Rate (I/min	Proportionate flow Rate (I/min)				

Table 2: Consumption	Calculator for multi	ple fittings for N	ew Dwellings
2.2: Baths			
	Capacity (litres)	Quantity (No.)	Total per fitting type
1 Family Bathroom	120	1	120
2 Ensuite	120	1	120
3			
4			
Total			
(Sum of all Quantities)		2	
Total			
(Sum of all totals per fitting	type)		240
Average Capacity to overflo	ow (litres)		120
Maximum Capacity to over	flow (litres)		120
Pproportionate capacity to	overflow (litres)		84

Table 2: Consumption Ca	alculator for multip	ole fittings for N	ew Dwellings
2.6: Showers			
Shower Type	Flow rate (I/min)	Quantity (No.)	Total per fitting type
1 Over Bath	8	1.	8
2 Over Ensuite Bath	8	1	8
3			
4			
Total			
(Sum of all Quantities)		2	
Total			
(Sum of all totals per fitting ty	pe)		16
Average Flow rate (I/min)			8
Maximum Flow rate (I/min)			8
Proportionate flow rate (I/min)	ĺ		5.6

Table 2: Consumption	n Calculator for multip	ole fittings for N	ew Dwelling	
2.7: WC's			_	
WC Type	Effective flushing	Quantity (No.)	Total per	
	volume (litres)		fitting type	
1 Family Bathroom	2.66	1	2.66	
2 Ensuite	2.66	1	2.66	
3				
4				
Total				
(Sum of all Quantities) 2				
Total				
(Sum of all totals per fittin	5.32			
Average effective flushing	2.66			

S	Summary of fitting types "As Designed"					
Type	Description	Flow rates, volumes etc.	Qty			
Taps	Family Bathroom	8 litres/min	1			
	Ensuite	8 litres/min	1			
Baths	Family Bathroom	120 litres to overflow	1			
	Ensuite	120 litres to overflow	1			
Dishwashers		1.25 litres/place	1			
Washing Machines	A++	8.17 litres/kg	1			
Showers	Over Bath	8 litres/min	1			
	Over Ensuite Bath	8 litres/min	1			
WC's	Family Bathroom	4 / 2 litres flush vols.	1			
	Ensuite	4 / 2 litres flush vols.	1			
Kitchen/Utility taps	Kitchen Mixer	8 litres/min	1			

Declaration of fitting types "As Built"							
Туре	Make and Model	Flow rates, volumes etc.	Qty				
Taps							
Baths							
Dishwashers							
Washing Machines							
Showers							
WC's							
Kitchen/Utility taps							

Project ref: TBCT/22/11/DA/HR - Flat A

The above declaration of fittings, values and quantities is a true reflection of those installed on this project.

Name:	 Signature:		Date:	
	End	of Report		

PROJECT DETAILS

Project Reference: TBCT/22/11/DA/HR Client: TBCT/22/11/DA/HR Sharegold Ltd

Property: Flat B

1 Hillfield Rd

London NW6 1QD

Local Authority: Camden Agent: TBCT

Assessor: Aharon Horwich
Address: 34 Bury Old Road
Contact: 0203 773 9222

Software: G-Calc 2015 version 3.0.2

Prepared on: 18-Nov-22

RESULT SUMMARY

By following the Government's national calculation methodology for assessing water efficiency in new dwellings this 3 bed dwelling, as designed, achieves a water consumption of 104.8 litres per person per day.

Table 1: The Wa	ater Calculator	for New	Dwellings	5	
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)	-	2.66	4.45	0.00	44.76
Tanadaval Kitaban	Flush vol. (litres) Flow rate	2.66	4.42	0.00	11.76
Taps(excl. Kitchen)	(litres/min)	8	1.58	1.58	14.22
Bath (shower	Capacity to		1.50	1.50	17.22
also present)	overflow (litres)	120	0.11	0.00	13.2
Shower (bath	Flow rate			3000 00	
also present)	(litres/min)	8	4.37	0.00	34.96
Bath only	Capacity to overflow (litres)		0.50	0.00	0
Shower only	Flow rate		SCHOOL MARK	970 200 HOW	
120 1	(litres/minute)		5.6	0.00	0
Kitchen sink taps	Flow rate (litres/minute)	8	0.44	10.36	13.88
Washing Machine	litres/kg dry load	8.17	2.1	0.0	17.16
Dishwasher	litres/place setting	1.25	3.6	0.0	4.5
Waste disposal	litres/use	0	3.08	0.0	0
Water softener	litres/person/day				
		0	1.0	0.0	0
		Total calculated use (litres/person/day)			109.68
		Contribution from greywater			
(litres/person/day) Contribution from rainy			water	_	
		(litres/person/day)			-
		Normalisation factor			0.91
			er Consumpt nable Homes		99.8
		External v			5.0
			er Consumpt	ion. (36(1))	104.8

Table 2: Consumption Ca	alculator for multip	le fittings for N	ew Dwellings
2.1: Taps (excluding kitchen si	nk taps)		
	Flow Rate (I/min)	Quantity (No.)	Total per fitting type
1 Family Bathroom	8	1	8
2 Ensuite	8	1	8
3			
4			
Total			
(Sum of all Quantities)		2	
Total			
(Sum of all totals per fitting type)			16
Average Flow Rate (I/min)			8
Maximum Flow Rate (I/min)			8
Proportionate flow Rate (I/min	5.6		

Table 2: Consumption	Calculator for multip	ole fittings for N	ew Dwellings
2.6: Showers		-	
Shower Type	Flow rate (I/min)	Quantity (No.)	Total per fitting type
1 Over Bath	8	1	8
2 Ensuite	8	1	8
3			
4			
Total			
(Sum of all Quantities)		2	
Total		·	
(Sum of all totals per fitting	16		
Average Flow rate (I/min)			8
Maximum Flow rate (I/min)			8
Proportionate flow rate (I/mi	n)		5.6

Table 2: Consumption Ca	alculator for multip	ole fittings for N	ew Dwellings
2.7: WC's			
WC Type	Effective flushing	Quantity (No.)	Total per
	volume (litres)		fitting type
1 Family Bathroom	2.66	1	2.66
2 Ensuite	2.66	1	2.66
3			
4			
Total			
(Sum of all Quantities)	2		
Total			
(Sum of all totals per fitting ty	5.32		
Average effective flushing volu	2.66		

Summary of fitting types "As Designed"				
Type	Description	Flow rates, volumes etc.	Qty	
Taps	Family Bathroom	8 litres/min	1	
	Ensuite	8 litres/min	1	
Baths	Family Bathroom	120 litres to overflow	1	
Dishwashers		1.25 litres/place	1	
Washing Machines	A++	8.17 litres/kg	1	
Showers	Over Bath	8 litres/min	1	
	Ensuite	8 litres/min	1	
WC's	Family Bathroom	4 / 2 litres flush vols.	1	
	Ensuite	4 / 2 litres flush vols.	1	
Kitchen/Utility taps	Kitchen Mixer	8 litres/min	1	

	Declaration of fitting types "As Built"				
Туре	Make and Model	Flow rates, volumes etc.	Qty		
Taps					
Baths					
Dishwashers					
Washing Machines					
Showers					
WC's					
Kitchen/Utility taps					

Project ref: TBCT/22/11/DA/HR - Flat B

The above declaration of fittings, values and quantities is a true reflection of those installed on this project.

Name:	 Signature:		Date:	
	Fnd	of Report		

PROJECT DETAILS

Project Reference: TBCT/22/11/DA/HR Sharegold Ltd Client:

Property: Flat C

1 Hillfield Rd

London NW6 1QD

Local Authority: Camden **TBCT** Agent:

Aharon Horwich Assessor: Address: 34 Bury Old Road 0203 773 9222

G-Calc 2015 version 3.0.2 Software:

Prepared on: 18-Nov-22

RESULT SUMMARY

By following the Government's national calculation methodology for assessing water efficiency in new dwellings this 2 bed dwelling, as designed, achieves a water consumption of 104.8 litres per person per day.

Table 1: The W	ater Calculator	for New	Dwelling	5	
Installation Type	Unit of measure	Value	Use factor	Fixed use	litres/person/day
WC(single flush)	Flush volume				
	(litres)		4.42	0.00	0
WC(dual flush)	Full flush vol.	4	1.46	0.00	5.84
	Part flush vol.	2	2.96	0.00	5.92
WC(multiple fittings)	-	•			
Taradanal Khabaa	Flush vol. (litres)	0	4.42	0.00	0
Taps(excl. Kitchen)	Flow rate (litres/min)	8	1.58	1.58	14.22
Bath (shower	Capacity to	0	1.56	1.50	14.22
also present)	overflow (litres)	120	0.11	0.00	13.2
Shower (bath	Flow rate		¥	2.44	
also present)	(litres/min)	8	4.37	0.00	34.96
Bath only	Capacity to				
	overflow (litres)		0.50	0.00	0
Shower only	Flow rate				_
	(litres/minute)		5.6	0.00	0
Kitchen sink taps	Flow rate	8	0.44	10.36	13.88
Washing Machine	(litres/minute) litres/kg	0	0.44	10.36	13.00
washing machine	dry load	8.17	2.1	0.0	17.16
Dishwasher	litres/place	0127		0.0	17.120
	setting	1.25	3.6	0.0	4.5
Waste disposal					
	litres/use	0	3.08	0.0	0
Water softener	litres/person/day				
		0	1.0	0.0	0
			ulated use		
			rson/day)	Charles 1951 B 1 (Marketon	109.68
			ion from grey	water	
		703	rson/day) ion from rain	water	-
		(litres/pe		water	_
		(iiti cs/pci	13011/ddy)		
		Normalisa	ation factor		0.91
			ter Consumpt	ion. Code	po (5 =
			nable Homes		99.8
	(litres/person/day)				
		External v	water use		5.0
			ter Consumpt	ion. (36(1))	
		(litres/pe	rson/day)		104.8

Summary of fitting types "As Designed"				
Type	Description	Flow rates, volumes etc.	Qty	
Taps	Family Bathroom	8 litres/min	1	
Baths	Family Bathroom	120 litres to overflow	1	
Dishwashers		1.25 litres/place	1	
Washing Machines	A++	8.17 litres/kg	1	
Showers	Over Bath	8 litres/min	1	
WC's	Bathroom WC	4 / 2 litres flush vols.	1	
		/ litres flush vols.	1	
Kitchen/Utility taps	Kitchen Mixer	8 litres/min	1	

	100 NO NO NO NO NO	· , ,				
Declaration of fitting types "As Built"						
Туре	Make and Model	Flow rates, volumes etc.	Qty			
Taps						
Baths						
Dishwashers						
Washing Machines						
Showers						
WC's						
Kitchen/Utility taps						

Project ref: TBCT/22/11/DA/HR - Flat C

The above declaration of fittings, values and quantities is a true reflection of those installed on this project.

Name:	 Signature:		Date:	
	End	of Report		

PROJECT DETAILS

Project Reference: TBCT/22/11/DA/HR Client: TBCT/22/11/DA/HR Sharegold Ltd

Property: Flat D

1 Hillfield Rd

London NW6 1QD

Local Authority: Camden Agent: TBCT

Assessor: Aharon Horwich
Address: 34 Bury Old Road
Contact: 0203 773 9222

Software: G-Calc 2015 version 3.0.2

Prepared on: 18-Nov-22

RESULT SUMMARY

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	Part flush vol.	2	2.96	0.00	5.92
WC(multiple fittings)	-	•			
Taradanal Khabaa	Flush vol. (litres)	0	4.42	0.00	0
Taps(excl. Kitchen)	Flow rate (litres/min)	8	1.58	1.58	14.22
Bath (shower	Capacity to	0	1.56	1.50	14.22
also present)	overflow (litres)	120	0.11	0.00	13.2
Shower (bath	Flow rate		¥	2.44	
also present)	(litres/min)	8	4.37	0.00	34.96
Bath only	Capacity to				
	overflow (litres)		0.50	0.00	0
Shower only	Flow rate				_
	(litres/minute)		5.6	0.00	0
Kitchen sink taps	Flow rate	8	0.44	10.36	13.88
Washing Machine	(litres/minute) litres/kg	0	0.44	10.36	13.00
washing machine	dry load	8.17	2.1	0.0	17.16
Dishwasher	litres/place	0127		0.0	17.120
	setting	1.25	3.6	0.0	4.5
Waste disposal					
	litres/use	0	3.08	0.0	0
Water softener	litres/person/day				
		0	1.0	0.0	0
			ulated use		
			rson/day)	Charles 1951 B 1 (Marketon	109.68
			ion from grey	water	
		703	rson/day) ion from rain	water	-
		(litres/pe		water	_
		(iiti cs/pci	13011/ddy)		
		Normalisa	ation factor		0.91
			ter Consumpt	ion. Code	po (5 =
			nable Homes		99.8
	(litres/person/day)				
		External v	water use		5.0
			ter Consumpt	ion. (36(1))	
		(litres/pe	rson/day)		104.8

Summary of fitting types "As Designed"				
Туре	Description	Flow rates, volumes etc.	Qty	
Taps	Family Bathroom	8 litres/min	1	
Baths		120 litres to overflow	1	
Dishwashers		1.25 litres/place	1	
Washing Machines	A++	8.17 litres/kg	1	
Showers		8 litres/min	1	
WC's	Bathroom WC	4 / 2 litres flush vols.	1	
		/ litres flush vols.	1	
Kitchen/Utility taps	Kitchen Mixer	8 litres/min	1	

Declaration of fitting types "As Built"								
Туре	Make and Model	Flow rates, volumes etc.	Qty					
Taps								
Baths								
Dishwashers								
Washing Machines								
Showers								
WC's								
Kitchen/Utility taps								

Project ref: TBCT/22/11/DA/HR - Flat D

The above declaration	of fittings,	values and	quantities	is a true	reflection	of those	installed
on this project.							

Name:	 Signature:		Date:	
	End	of Report		