

2902-Water Neutrality Validation Statement

Annex 2 of the Engrossment S106 Agreement contains the Water Neutrality Statement from Highwood Group dated April 2023. Within this statement it was determined that the new care home development would achieve a Net reduction in water consumption when compared to the existing kennels on the site. However, as part of their drive for continued improvements across their estate Barchester have remained committed to reducing the water consumption in their Red Oaks Care Home where a 1,912 litre per day reduction was initially discussed.

As can be seen in Appendix A of this document there are 13no. showers in total. To reduce the water consumption by 1,912 litres per day all the showers would need to operate at a maximum flow rate of 8.3 litres per minute. As part of this commitment Barchester have purchased 12no shower heads, shower number 9 in F18 was excluded given that it was already operating at 6 litres per minute. Please see Appendix B for the shower head datasheet and Appendix C for purchase order.

Shower No.	Location	Flow Rate (l/min)
1	Basement Ladies	5.5
2	Basement Gents	5.5
3	Bedroom 7	5.5
4	LGF Main	5.5
5	GF Main	5.5
6	G7	5.5
7	Top Floor Main	5.5
8	F16	5.5
9	F18	6
10	F19	5.5
11	F20	5.5
12	F21	5.5
13	F27	5.5
Average Flow Rate (l/min)		5.54 l/min
Proportionate Flow Rate (Highest Flow Rate x 0.7) (l/min)		4.20 l/min

Based on the initial usage and the above updated calculations the flow rate to be used as part of the calculation in line with Approved Document G is 5.54l/min for the new compared to 14l/min.

	Flow rate	Use factor	Fixed use	l/person/day
Existing	14 l/min	5.60	0.00	78.40
New	5.54 l/min	5.60	0.00	31.02
Offset / person / day				47.38
Occupancy				60
Total Offset / day				2,842.80L

Further to the above a verification of the flow rates was undertaken which found that some of the flow rates with the new shower heads installed were less than those in the above calculation with some locations as low as 2L/min. As such we can determine that the above offset has been achieved.

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Appendix A – Initial Water Neutrality Statement

As calculated within the Highwood Construction Ltd., water neutrality report an offset of 1,912 litres per day needs to be achieved to gain water neutrality within the Sussex North Water Resource Zone.

It is proposed that the water offsetting shall be achieved through reduction in the water consumption within the Barchester Healthcare estate; specifically Red Oaks Care Home, The Hooks, Henfield, BN5 9UY.

Red Oaks Care Home is a Barchester Healthcare operated 62 bed home with the building originally constructed in 1830 and the most recent extension and refurbishment was undertaken in 1999. After reviewing the sanitaryware and other water consuming equipment installed it was determined that installing modern showers with a reduced flow rate would provide the greatest water consumption saving. This is due to the home having recently changed their laundry equipment and having WHB's and WCs in line with modern equivalents.

A test of the time taken for each of the 13no. showers within the home to pass 1 litre was undertaken to determine the flow rate per minute. The table of results below outlines the time taken for each shower: -

Shower No.	Location	Time (s)	Flow Rate (l/min)
1	Basement Ladies	6	10
2	Basement Gents	5	12
3	Bedroom 7	4	15
4	LGF Main	5	12
5	GF Main	7	8.6
6	G7	5	12
7	Top Floor Main	4	15
8	F16	5	12
9	F18	10	6
10	F19	6	10
11	F20	5	12
12	F21	6	10
13	F27	3	20
Average Flow Rate (l/min)			11.9 l/min
Proportionate Flow Rate (Highest Flow Rate x 0.7) (l/min)			14.0 l/min

To calculate the water used per person per day from the showers the water efficiency calculator outlined with Approved Document G (ADG) of the Building Regulations shall be used. Paragraph A9 of ADG states: -

'Where the average flow rate/volume is lower than the proportionate flow rate/volume the proportionate figure must be entered into Table A1.'

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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) × (2)] + (3)
Shower only	Flow rate (litres/minute)		5.60	0.00	

For the new proposed showers, the Barchester Healthcare new build sanitaryware specification shall be used. The showers within the specification are the Bristan OPAC. Based on the product datasheet from Bristan the OPAC showers operate at 7.5l/min.

Therefore, using the figures in table A1 above, the proportionate rate existing showers, new proposed showers, and the current home occupancy of 60/62 the following offset can be determined: -

	Flow rate	Use factor	Fixed use	l/person/day
Existing	14 l/min	5.60	0.00	78.40
New	5.5 l/min	5.60	0.00	30.80
Offset / person / day				47.60
Occupancy				60
Total Offset / day				2,856L

Based on the above calculation an offset in excess of the require 1,912 litres per day can be achieved.

Appendix B – Shower Head Datasheet

Pure Freude
an Wasser

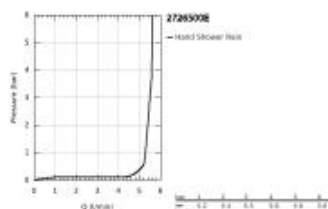


27 265 00E EUPHORIA 110 MONO HAND SHOWER 1 SPRAY



PRODUCT DESCRIPTION

- Colour: Chrome
- Rain spray pattern
- with flow restrictor
- maximum flow rate (at 3 bar): 5.5 l/min
- GROHE EcoJoy - extra efficient water usage, perfect flow
- GROHE DreamSpray - perfect spray pattern
- GROHE LongLife finish
- GROHE SpeedClean - effortless limescale removal
- Inner WaterGuide for a longer life
- Universal Mounting System. Fits all standard shower hoses
- suitable for instantaneous heater
- min. recommended pressure 1.0 bar



Appendix C – Shower Head Purchase Order



PLUMBCO (MIDLANDS) LTD

Unit 1 & 2 Midland Business Units, Finedon Road, Wellingborough, Northamptonshire, NN8 4AD

Tel 01933 224 100

Fax 01933 275 220

Web www.plumbco.co.uk

Email sales@plumbco.co.uk

Invoice No.	
Invoice Date	15/07/2024
Payment Due	31/08/2024
Delivery Note No.	SD0242958
Your Reference	Storrington - As Per Holly
Taken By	Rudi Pipe
Page	1/1

Invoice to: BAR049

Barchester Healthcare Homes Ltd
3rd Floor
The Aspect
Finsbury Square
London
EC2A 1AS

Deliver to:

Home Number - 241
Red Oaks Care Home
The Hooks
Henfield
West Sussex
BN5 9UY

Invoice

Item Code	Description	Quantity	Unit	Unit Price	Value
2726500E	GROHE 2726500E Euphoria 110 Mono Hand Shower	12	EACH		

VAT Code	VAT Rate	Net Goods	VAT
01	20.00%		

Total Goods	
Carriage	
VAT	
Total GBP	

All goods remain the property of the company until paid for in full. All sizes quoted are approximate. Delivery shortages/damaged goods must be reported within 24 hours. Full terms & conditions available upon request. E&O.E. Returned goods may be subject to a handling charge and all non-stock goods will be subject to a re-stocking charge.

Please pay by bank transfer to: HSBC Bank plc Sort code: Account no:
Please quote your Customer No. as a reference and email your remittance to Nadine@plumbco.co.uk Alternatively call us on 01933 224100.

**Barchester Healthcare
Old Clayton Kennels, Storrington**

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Appendix D – Verification Site Notes

Red Oaks

Shower Flowrate Survey

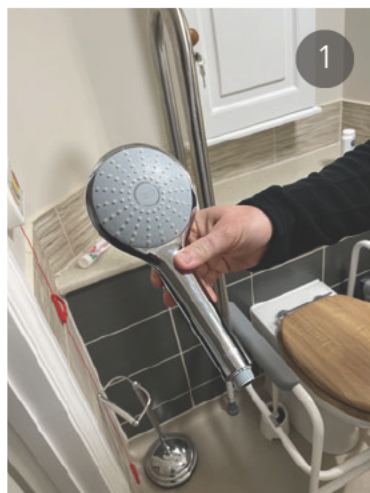
Friday, 23 January 2026

Prepared For Barchester

Room L15

1. Typical shower head

2 and 3. Measured circa 2 l/min (Bristan Shower)



Bedroom G16

1 and 2. Measured circa 6 l/min (Bristan Shower)



Room F13

1 and 2. Measured circa 4 l/min (Bristan Shower)



Room F17

1 and 2. Fuschia House (Gravity fed) - measured circa 3 l/min

