Water Neutrality Statement

Oaklands Barn
Coltstaple Lane
Horsham
RH13 9BB

On Behalf of
Jedris Ltd

Prepared by
Charlotte Catton-Giltinane Assoc RTPI
c.catton-giltinane@batchellermonkhouse.com
01798 877555

JULY 2025

CONTENTS

1 EXECUTIVE SUMMARY

1.1 This report is submitted in support of a planning application for two new dwellings on land at Oaklands Barn, Coltstaple Lane, Horsham.

1.2 The site has an extant permission for the conversion of an agricultural barn to form two dwellings which has been partially implemented.

1.3 The applicants are seeking planning permission for an alternative new-build scheme comprising the same number of dwellings.

1.4 This report is required as Natural England has raised concerns regarding water extraction within the Sussex North Water Supply Zone. Ultimately, any development which will use water is now required to demonstrate water neutrality before it can go ahead.

1.5 The extant permission for the proposed new dwellings would have used 123.92 litres of water per person per day, equating to 129,360 litres per year per dwelling based on an occupancy rate of 2.86 people. Total baseline water usage for the site is therefore 258,720 litres per year.

1.6 The proposed scheme will have a water usage of 101.6 litres of water per person per day, equating to 105,497 litre per year per dwelling. Total proposed water usage for the site is therefore 210,993 litres per year.

1.7 The proposed residential use will therefore use considerably less water than the extant permission by 47,727 litres per year.

2 INTRODUCTION

2.1 This report is submitted following concerns raised by Natural England, through the publication of a Position Statement in September 2021, regarding water extraction within the Sussex North Water Supply Zone. It is stated that it cannot be concluded that the existing abstraction within Sussex North Water Supply Zone is not having an impact on the protected sites within Arun Valley, therefore new developments within this area must not add to this impact. This is demonstrated by achieving water neutrality.

2.2 In response to Natural England's Position Statement, this report seeks to demonstrate that the proposed development is water neutral and can thus be implemented in accordance with the relevant regulations.

3 CALCULATING WATER USAGE

3.1 Introduction

3.1.1 In the UK every person uses approximately 150 litres of water a day, whilst consumption in our homes has steadily increased every year by around 1% since 1930 as we enjoy better standards of cleanliness and greater use of water-using appliances.

3.1.2 Increased consumption and a growing number of households has put more pressure on water supplies and it is likely that this problem will worsen as our climate changes.

3.1.3 From April 2010 Part G of the Building Regulations requires new dwellings to limit maximum water usage to 125 litres per person per day, whilst dwellings assessed under The Code for Sustainable Homes are required to achieve a lower maximum water usage level. Policy 37 of the Horsham District Planning Framework a more stringent requirement of 110 litres of water per person per day.

3.2 What is needed for a water usage calculation

3.2.1 The calculation method requires the use of water consumption figures provided from manufacturer's product details. In order to calculate predicted water usage of a dwelling the following information is collected to determine the consumption of each fitting:

- Whether the dwelling has a low or high water pressure system.
- Kitchen, utility and other taps – the quantity of taps as well as the flow rates in litres per minute for each tap. Where separate hot and cold taps are provided the flow rate of each is taken to determine the average.
- Baths – the quantity of baths and the capacity to overflow in litres. The flow rates of the bath taps are not required. Jacuzzis are not included in the water efficiency calculations.
- Showers – the quantity of showers and the cold-water flow rate.

- WCs – the quantity of toilets and flush capacity in litres of both single and dual flushes (part and full flush)

- Dishwashers – the water usage in litres per place setting. If no dishwasher is present in the development then a generic figure of 1.25 litres per place setting is used. This will allow for any future installations.

- Washing machines – the water usage in the litres per kilogram of dry load. If no washing machine is present in the development, then a generic figure of 8.17 litres per kilogram of dry load is used. This will allow for any future installations.

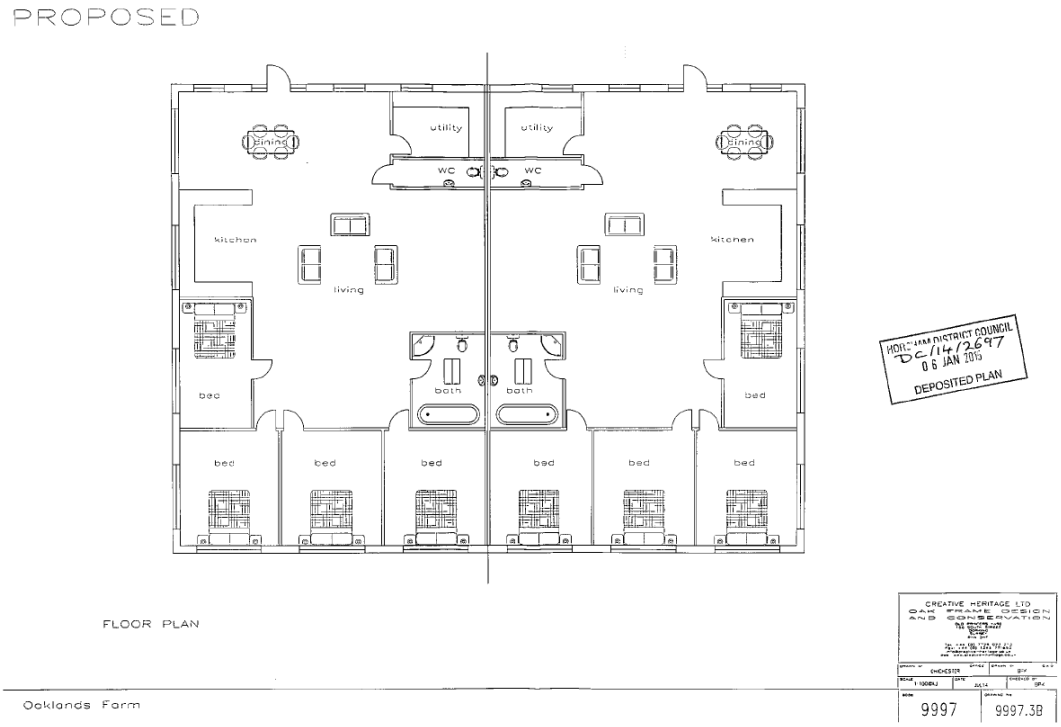
3.2.2 External taps are included in Building Regulations calculations at a fixed rate of 5 litres per person per day. External water use is not included in the target consumption rates for Code for Sustainable Homes.

4 WATER USAGE OF THE EXTANT PERMISSION

4.1 The application site has an extant permission for the conversion of an agricultural building into two dwellings. The permission has been partially implemented.

4.2 The consented dwellings each comprise four bedrooms, an open plan kitchen/dining/living room, Utility/WC and family bathroom as shown on the floor plan below:

Figure 4.1 – Proposed Floor Plan Plots 1 & 2



4.3 At the time of the permission Building Regulations required all new dwellings to have a water usage of no more than 125 litre per person per day.

4.4 A water usage calculation for the consented scheme is provided in Appendix A. This shows how the scheme would have achieved water usage of 123.92 litres of water per person per day.

4.5 The average occupancy rate of a 4-bedroom property in the Horsham District is 2.86 persons. The total water usage of each property would therefore be 354.41 litres of water per day (2.86 x 123.92) or 129,360 litres per year.

4.6 The baseline water usage for the site is therefore 258,720 litres of water per year.

5 WATER USAGE OF THE PROPOSED DEVELOPMENT

5.1 The scheme now proposed comprises 2 x 4 bedroom detached houses as an alternative to the scheme mentioned in section 4 of this report. Each dwelling will consist of 4 bedrooms (2 en-suite), downstairs cloakroom, kitchen/living/dining room, utility room and a family bathroom. Plot 2 will consist of an additional study.

Figure 5.1 – Proposed Floor Plans Plots 1 & 2

5.2 Horsham District Council's more stringent water usage requirement of 110 litres per person per day will apply to the new scheme.

5.3 A water usage calculation for the scheme now proposed is provided in Appendix B. This shows how the scheme will achieve 90.4 litres per person per day.

5.4 Based on the average occupancy rate of a 4-bedroom property in the Horsham District being 2.86 persons, Unit 1 will use 258.54 litres per day.

90.4 litres per person per day x 2.86 Occupancy = 258.54 litres per day.

5.5 To account for the inclusion of a study in Unit 2 and to take a precautionary approach, a higher occupancy rate of 3.09 has been applied. As a result, the estimated daily water usage is calculated at 279.34 litres.

90.4 litres per person per day x 3.09 Occupancy = 279.34 litres per day.

5.5 This therefore totals a combined daily water usage of 537.88 litres per day.

258.54 litres per day + 279.34 litres per day = 537.88 litres per day.

5.6 Total water usage for the proposed development will be 196,326.20 litres per year.

5.7 As the baseline water usage for the site is 258,720 litres of water per year, no offsetting is required as the proposed development will use less water.

Appendix A

Baseline Water Calculation

the water calculator

http://www.thewatercalculator.org.uk/

Oaklands

Congratulations

You are within your maximum consumption of potable water: 125 litres / person / day.

Total potable water consumption as per your calculation: 118.92 litres / person / day.

Total inc. external water use (17.K Compliance Building Regs Part G): 123.92 litres / person / day.

This calculator is intended to inform design choices by demonstrating the likely impact of specification changes on total water consumption. Results can only be used to demonstrate compliance with Building Regulations when the calculations have been verified by a Building Control Officer.

Calculation summary

Installation Type	μ Value	x Usage	+ Fixed	= Total
Single Flush Toilets	0	4.42	0	19.89
Dual Flush Toilets	4.5			
Washrooms Taps	14.9	1.58	1.58	25.12
Baths Only	110	0.11	0	12.1
Showers Only	8.5	4.37	0	37.15
Kitchen/Utility Taps	10	0.44	10.36	14.76
Washing Machine	8.17	2.1	0	17.16
Dishwasher	1.25	3.6	0	4.5
Waste Disposal	☐	3.08	0	0
Water Softener	☐	1	0	0
Grey Water Contribution	0	1	0	0
Rain Water Contribution	0	1	0	0
Total litres / person / day, including a normalisation factor of 0.91:				118.92

Appendix B

Proposed Water Calculation

Installation Type	Unit of Measure	Capacity/Flow rate (1)	Use Factor (2)	Fixed use (litres/person/day) (3)	Litres/person/day = [(1)x(2)] + (3) (4)
WC (single flush)	Flush Volume (litres)		4.42	0.00	0
WC (dual flush)	Full flush Volume (litres)		1.46	0.00	0
	Part flush Volume (litres)		2.96	0.00	0
WC (multiple fittings)	Average effective flushing Volume (litres)	3.38	4.42	0.00	14.94
Taps (excluding kitchen/utility room taps)	Flow rate (litres/min)	4.00	1.58	1.58	7.90
Bath (where shower also present)	Capacity to overflow(litres)	100.00	0.11	0.00	11.00
Shower (where bath also present)	Flow Rate(litres / minute)	6.00	4.37	0.00	26.22
Bath Only	Capacity to overflow(litres)		0.50	0.00	0
Shower Only	Flow Rate (litres/minute)		5.60	0.00	0
Kitchen/Utility room sink taps	Flow rate (litres/minute)	4.00	0.44	10.36	12.12
Washing Machine	(Litres/kg dry load)	8.17	2.1	0.00	17.157
Dishwasher	(Litres/place setting)	1.25	3.6	0.00	4.5
Waste disposal unit	(Litres/use)	☐ Present	3.08	0.00	0
Water Softener	(Litres/person/day)		1.00	0.00	0
	(5)	Total Calculated use (litres/person/day) =SUM(column 4)			93.84
	(6)	Contribution from greywater (litres/person/day)			0
	(7)	Contribution from rainwater (litres/person/day)			0
	(8)	Normalisation factor			0.91
	(9)	Total internal water consumption = [(5)-(6)-(7)]x(8) (litres/person/day)			85.39
	(10)	External water use			5.0
	(11)	Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day)			90.4

Installation Type	Make/Model (mandatory)	Litres/Person/Day
WC (multiple fittings)	Dual Flush Flow Rate 3.38	14.94
Taps	Handbasin Flow Rate 4	7.90
Baths (shower(s) present)	Bath Capacity 100	11.00
Showers (bath(s) present)	Shower Flow Rate 6	26.22
Kitchen Taps	Shower Flow Rate 4	12.12
Washing Machines		17.157
Dishwasher		4.5