Water Neutrality Statement

Relating to:

Prior Approval granted for the change of use of an agricultural building to form 2no. dwellings (DC/25/0113)

at
Land to the east of Coolham Road
Coolham
Horsham
West Sussex

On Behalf of
H & V Martin-Bird

Prepared by
Charlotte Catton-Giltinane AssocRTPI
[redacted]

April 2025

CONTENTS

1 INTRODUCTION 3
2 BACKGROUND 4
3 CALCULATING WATER USAGE 5
4 PROPOSED WATER CONSUMPTION 7
5 BASELINE WATER USAGE 9
6 SUMMARY 11

1 INTRODUCTION

1.1 Horsham District is situated in an area of serious water stress, as identified by the Environment Agency Water Stressed Areas Classification.

1.2 Horsham District is supplied with water by Southern Water from its Sussex North Water Resource Zone. This supply is sourced from abstraction points in the Arun Valley, which includes locations such as Amberley Wild Brooks Site of Special Scientific Interest (SSSI), Pulborough Brooks SSSI and Arun Valley Special Protection Area/Special Area of Conservation and Ramsar site.

1.3 On 14 September 2021, Horsham District Council received a Position Statement from Natural England. This stated that information collected by Natural England shows that water abstraction for drinking water supplies is having a negative impact on the wildlife sites in the Arun Valley. They have advised that any new development that takes place must not add to this negative impact.

1.4 One way of preventing any further negative impact is to ensure that all new development which takes place is water neutral. Water neutrality is defined as the use of water in the supply area before the development is the same or lower after the development is in place.

1.5 The application site is located within the Sussex North Water Resource Zone. This report therefore provides evidence to show that the development which benefits from prior approval will be water neutral.

2 BACKGROUND

2.1 Prior approval for the conversion of an agricultural building to form 2 x 3 bedroom dwellings was granted previously on the application site on the 23rd February 2022 under application reference DC/22/0024. All pre-commencement conditions attached to the approval have been discharged.

2.2 A Regulation 77 application was submitted under reference HRA/23/0015 to demonstrate that the consented scheme would use less water than the site in its current use. The Regulation 77 application confirmed that the existing building has been used to house cattle and meter readings have been provided to show baseline water usage equating to 197,092.70 litres per annum. The dwellings approved under reference DC/22/0024 would use 186,115.98 litres per annum which left a reduction in mains water of 10,976.72 litres per annum.

2.3 The Regulation 77 application was granted on 17th November 2023.

2.4 The applicants applied in January 2025 for an alternative scheme with the same number of dwellings and bedrooms but with a different layout and appearance. This was granted prior approval on 20th March 2025 under application reference DC/25/0113 and is the scheme to which this HRA application relates.

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 sets out 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.

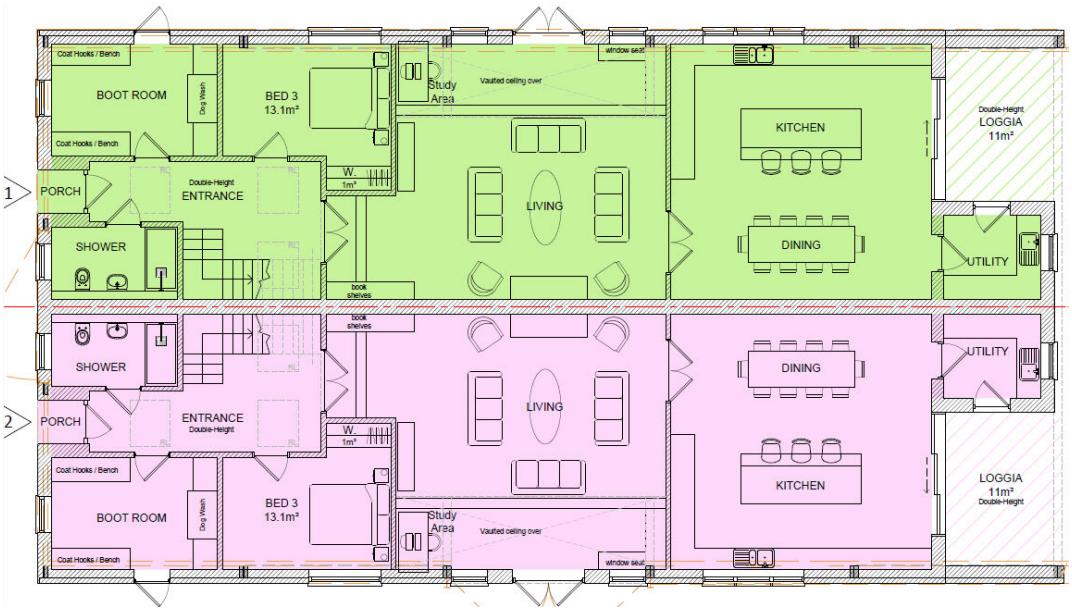
3.2.2 External taps are included in Building Regulations calculations at a fixed rate of 5 litres per person per day. External water use is not included in the target consumption rates for Code for Sustainable Homes.

4 PROPOSED WATER CONSUMPTION

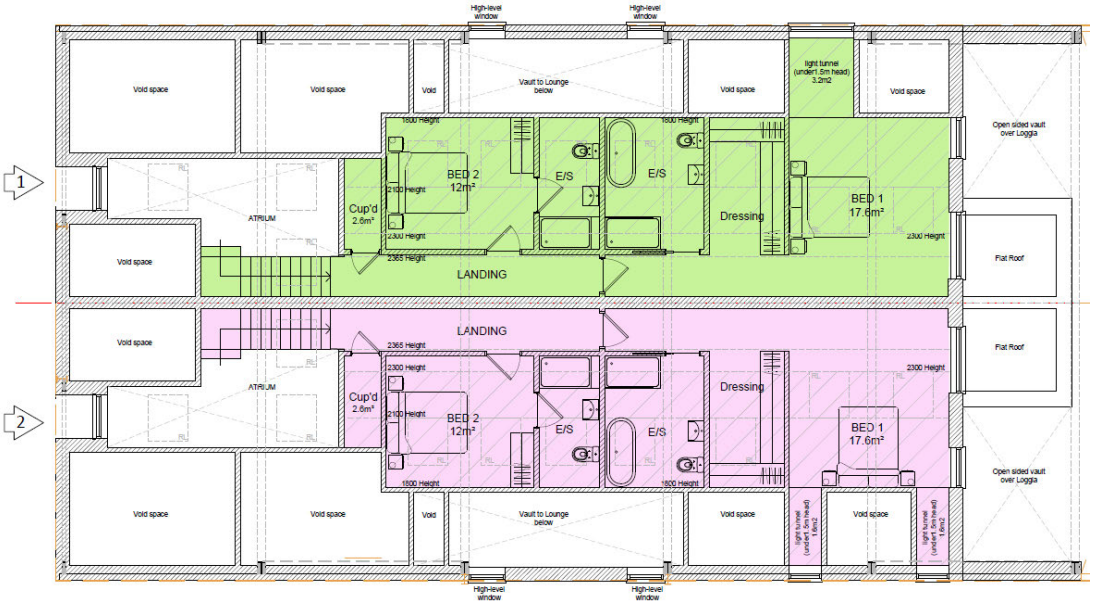
4.1 The scheme comprises two dwellings. Both plots will comprise of 2 ensuite bedrooms, 1 additional bedroom, family bathroom, kitchen/diner, sitting room, utility room, study, cloakroom and a boot room comprised over two floors.

Figure 4.1 – Proposed Floor Plans

Ground Floor Plan



First Floor Plan



4.2 Based on 2011 census data for the Horsham District, the average occupancy rate for a 3 bedroom house is 2.47 occupants.

4.3 The dwellings will be subject to Horsham District Council's maximum water usage requirement of 110 litres of water per person per day.

4.4 Calculations are provided at Appendix A to show the water usage of each dwelling. The calculations show that both dwellings will achieve water usage of **99 litres per person per day** which includes 5 litres for outside taps.

4.5 The proposed 2 x 3 bedroom dwellings will therefore use a combined 489.06 litres per day or 183, 014 litres per year.

99 litres per person per day x 2.47 occupancy = 244.53 litres per day

244.53 litres per day x 2 dwellings = 489.06 litres per day

4.6 The total amount of water that will need to be offset in order to achieve water neutrality is 178,506.90 litres of water per year.

489.06 litres per day x 365 = 178,506.90 litres per annum

4.7 Section 5 details a strategy to offset this figure to ensure the development is water neutral.

5 BASELINE WATER USAGE

Introduction

5.1 The site comprises a livestock building which is used to accommodate cows during the wetter periods of each year when the ground is too wet for outdoor grazing. This period typically spans 190 days a year.

5.2 During the wet seasons a minimum of 26 yearling cows are kept in the building. To evidence how much water the cows use, a water meter was installed on 5th January 2023 during this monitoring period 28 yearling were housed in the barn The water connection to the barn during this period was via an outside connection from 1 Foxcroft Cottages which is located adjacent to the site. A copy of a receipt confirming the date of installation is attached at Appendix B.

5.2.1 Water meter readings were taken between 5th January 2023 and 12th April 2023 which equates to a 98 day period. The water meter readings are shown in Table 5.1 below. These confirm the water usage over the 98 day period to have been 101,658 litres,1,037.32 litres per day or 37.05 litres per yearling per day.

101,658 litres 98 days = 1,037.32 litres per day

1,037.32 litres per day / 28 yearlings = 37.05 litres per day per yearling

Table 5.1 – Water Meter Readings between 5th January – 12th April 2023

Date	Water Meter	Reading
5th January 2023		0
28th February 2023		**64,128 litres**

12th April 2023		**101,658 litres**

5.2.2 Applying the evidenced daily water usage of the cattle whilst housed of 1,037.33 litres per day by 190 days equates to a mains water usage of 197,092.70 litres per annum during the housing period.

5.2.3 Since the meter readings were taken, the farmer has continued to house cows in the building for the 2023/24 and 2024/25 wetter seasons. However, rather than using water from 1 Foxcroft Cottages the farmer has instead been delivering water to the site in bowsers from his farm which is located in Ashington, West Sussex. The farm is located in the same water supply zone as the site and 1 Foxcroft Cottages.

5.2.4 It has not been possible to monitor the amount of water used within the barn as bowsers are filled from a tap at a farm in Ashington (within the same water supply zone) which is also used for other purposes. Therefore, the water usage figures from the housing period have been used which work out as being 7,039 litres per cow per year. as evidenced by the Signed Statutory Declaration in Appendix C.

5.2.5 For the 26 yearling cows being housed during the 2024/25 period, the baseline annual water usage can be calculated to be:

7,039 litres per yearling per year x 26 yearlings = 183,014 litres per annum.

5.2.6 The proposed dwellings would therefore use 4,507.10 litres less per annum than the site's existing water usage.

5.2.7 It is also important to note that the building is occupied at a low density and has capacity for nearly three times the number of cows than have historically been housed. Red Tractor standards require 6.8sqm of space per yearling cow so up to 64 cows could be kept in the building.

5.2.8 As the scheme proposes the change of use of the agricultural building the existing water use associated with livestock will cease upon implementation of the development and be replaced with that of the two dwellings. As the two dwellings will use less water than the existing building it will be water neutral.

6 SUMMARY

6.1 The proposed dwellings will use 178,506.90 litres per annum in total.

6.2 The site's baseline water usage is 183,014litres per annum.

6.3 The proposed development would therefore reduce the site's mains water usage by 4,507.10 litres per annum.

Appendix A

Water usage calculations

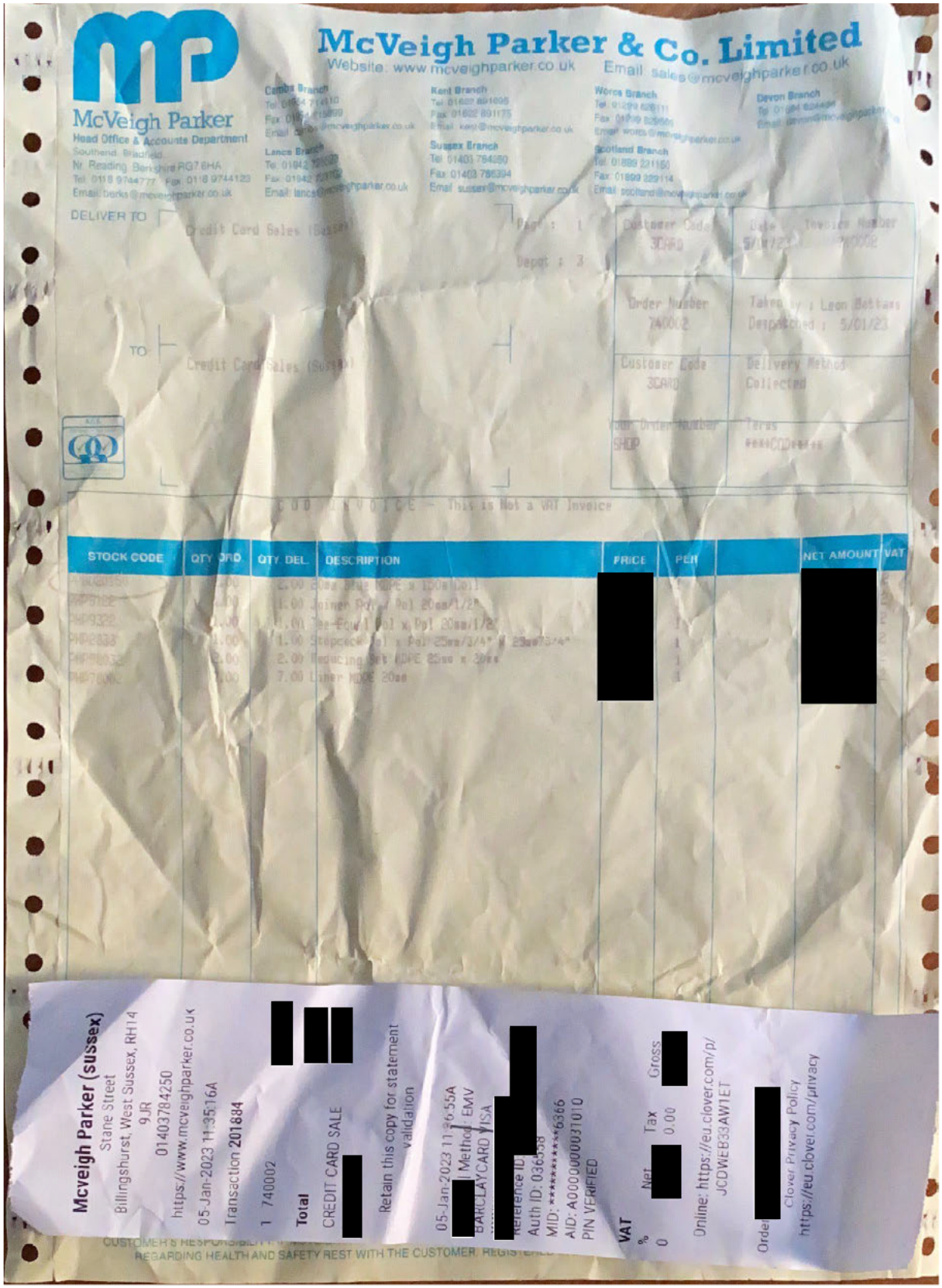
Installation Type	Unit of Measure	Capacity/Flow rate (1)	Use Factor (2)	Fixed use (litres/person/day) (3)	Litres/person/day = [(1)x(2)] + (3) (4)
WC (single flush)	Flush Volume (litres)		4.42	0.00	0
WC (dual flush)	Full flush Volume (litres)		1.46	0.00	0
	Part flush Volume (litres)		2.96	0.00	0
WC (multiple fittings)	Average effective flushing Volume (litres)	3.50	4.42	0.00	15.47
Taps (excluding kitchen/utility room taps)	Flow rate (litres/min)	3.00	1.58	1.58	6.32
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)	8.50	4.37	0.00	37.15
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)	3.00	0.44	10.36	11.68
Washing Machine	(Litres/kg dry load)	8.17	2.1	0.00	17.16
Dishwasher	(Litres/place setting)	1.25	3.6	0.00	4.50
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)			103.28
	(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)			93.98
	(10)	External water use			5.0
	(11)	Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day)			99.0

Installation Type	Make/Model (mandatory)	Litres/Person/Day
WC (multiple fittings)	Dual Flush Example Twyford Bathroom Alcona	15.47
Taps	Example Armitage Shanks Sensorflow	6.32
Baths (shower(s) present)	Example Twyford Bathroom Shallow	11.00
Showers (bath(s) present)	Example Altecnic Ltd	37.15
Kitchen Taps	Example Aqualla Brassware Sense	11.68
Washing Machines		17.16
Dishwasher		4.50

©Water Research Centre Limited 2025

Terms and Conditions
System Requirements

Appendix B



McVeigh Parker & Co. Limited

Website: www.mcveighparker.co.uk Email: sales@mcveighparker.co.uk

McVeigh Parker
Head Office & Accounts Department
Southend, Bradfield
Nr. Reading, Berkshire RG7 6HA
Tel: 0118 9744777 Fax: 0118 9744123
Email: berks@mcveighparker.co.uk

Cambs Branch
Tel: 01954 714410
Fax: 01954 715899
Email: cambs@mcveighparker.co.uk

Lance Branch
Tel: 01942 723029
Fax: 01942 723702
Email: lance@mcveighparker.co.uk

Kent Branch
Tel: 01622 891095
Fax: 01622 891175
Email: kent@mcveighparker.co.uk

Sussex Branch
Tel: 01403 784250
Fax: 01403 786394
Email: sussex@mcveighparker.co.uk

Worcs Branch
Tel: 01299 828111
Fax: 01299 829666
Email: worcs@mcveighparker.co.uk

Scotland Branch
Tel: 01899 221150
Fax: 01899 229114
Email: scotland@mcveighparker.co.uk

Devon Branch
Tel: 01884 824484
Email: devon@mcveighparker.co.uk

DELIVER TO: Credit Card Sales (Sussex)

Page : 1
Depot : 3

TO: Credit Card Sales (Sussex)

Customer Code 3CARD	Date 5/1/23 Invoice Number 740002
Order Number 740002	Taken by : Leon Bottams Despatched : 5/01/23
Customer Code 3CARD	Delivery Method Collected
Your Order Number SHOP	Terms ****CODeeeee

COD INVOICE - This is Not a VAT Invoice

STOCK CODE	QTY ORD	QTY DEL	DESCRIPTION	PRICE	PER		NET AMOUNT	VAT
PHP80158	2.00	2.00	20mm Blue MDPE x 150m Coil	[redacted]	1		[redacted]	
PHP8122	1.00	1.00	Joiner Pol x Pol 20mm/1/2"		1			
PHP9322	1.00	1.00	Tee-Equal Pol x Pol 20mm/1/2"		1			
PHP2833	1.00	1.00	Stopcock Pol x Pol 25mm/3/4" W 25mm/3/4"		1			
PHP80032	2.00	2.00	Reducing Set MDPE 25mm x 20mm		1			
PHP78002	1.00	7.00	Liner MDPE 20mm		1			

Mcveigh Parker (sussex)
Stane Street
Billingshurst, West Sussex, RH14 9JR
01403784250
https://www.mcveighparker.co.uk
05-Jan-2023 11:35:16A
Transaction 201884
1 740002 [redacted]
Total [redacted]
CREDIT CARD SALE [redacted]
Retain this copy for statement validation
05-Jan-2023 11:36:55A
[redacted] Method: EMV
BARCLAYCARD VISA
[redacted]
Reference ID [redacted]
Auth ID: 036558
MID: **********6366
AID: A0000000031010
PIN VERIFIED
VAT
% Net Tax Gross
0 [redacted] 0.00 [redacted]
Online: https://eu.clover.com/p/JCDWEB33AW1ET
Order [redacted]
Clover Privacy Policy
https://eu.clover.com/privacy

CUSTOMER'S RESPONSIBILITY ...
REGARDING HEALTH AND SAFETY REST WITH THE CUSTOMER. REGISTERED ...

Appendix C

Statutory Declaration

Statutory Declaration [redacted]

I, [redacted] of Oasthouse Farm, Billingshurst Road, Ashington, West Sussex RH20 3AZ do solemnly and sincerely declare as follows:

1. I own Oasthouse Farm, Billingshurst Road, Ashington, West Sussex RH20 3AZ which is a beef farm.
2. Since 2022 I have been using the barn shown on the plan at Attachment A as accommodation for some of my cows during the wetter months of the year. The wetter season typically lasts for 6-7 months each year.
3. During the 2022/23 wetter season I kept 28 cows (yearlings) in the barn. Water was supplied to the barn via a connection to an outside tap located at No. 1 Foxcroft. A water monitor was installed in the top to monitor the amount of water being used.
4. I am once again using the barn for the same purpose. Since the beginning of November 2023 26 cows (yearlings) have been in the building during the wetter months of the year and where they remain on an annual basis until the ground is dry enough to release them onto fields at my farm in Ashington.
5. Since 2024 rather than using the water supply from No. 1 Foxcroft I have been transporting water to the barn from my farm in Ashington which is shown on the plan at Attachment B. Water is stored on site in bowsers.
6. I am not able to provide metered bills for the water that the cows use as the bowsers are filled from a tap at my farm which is used for a number of other purposes.

I make this declaration solemnly and sincerely believing the same to be true by virtue of the Statutory Declarations Act 1835.

Signed: [redacted]

Name: [redacted]

Date of signature: 28 March 2025.

Declared at: 24-26 High Street, Storrington, Pulborough, West Sussex RH20 4DU

(Address of solicitor)

MAYO WYNNE BAXTER
24 – 26 High Street
Storrington
Pulborough RH20 4DU

Signed: [redacted]

JULIET GODFREY
(SOLICITOR)

Date of signature: 28 MARCH 2025.