WATER NEUTRALITY STATEMENT

SWAINS FARM

REPORT STATUS: 4.0



Document Control Sheet

REPORT STATUS: 4.0

Client	**Manorwood**		
Development	**Swains Farm, Brighton Road, Henfield, West Sussex, BH5 9RP**		
Report Title:	**Water Neutrality**		
Author	**Naomi Sadler**	**Reviewed by**	**Naomi Sadler**
Date	**23.10.2024**	**Version No.**	**V 4.0**
Reason for version	**For Approval**		

Revision	Date	Description	Prepared by	Checked by
1.0	08.02.2023	For Comment	Naomi Sadler	Naomi Sadler
2.0	10.02.2023	For Planning Approval	Naomi Sadler	Naomi Sadler
3.0	11.09.2023	Updated Planning Application	Naomi Sadler	Jayne Dakin
4.0	**23.10.2024**	**Calculation update**	**NS**	**JD**

About Sadler Energy and Environmental Services Ltd.

Our team of technical specialists offer advanced levels of expertise and experience to our clients. We have a wide experience of the construction and development industry from the concept and planning stage through to the completion of the project.

Our emphasis is to provide innovative and effective solutions that help built environment businesses design and construct sustainable buildings.

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Background

Water Neutrality was coined to indicate the need to reduce the overall water consumption and demand on our natural water resource. The refined definition of water neutrality is "for every new development, the predicted increase in total water demand in the region due to the development should be offset by reducing demand in the existing community" (Environment Agency, 2009).

Reducing the water consumption on a new development is critical to achieving a sustainable design and protecting the natural water features in the area.

Building Regulations Part G has an optional requirement for maximum water usage limit of 110 liters per day on any new builds. Although this is only adopted by developers wishing to meet certain environmental targets.

Natural England provides an interim approach for demonstrating water neutrality which involves:

Reduce Water Use
Minimising water use through a water budget, strict water targets. Where fitted, incorporate: • Low water usage toilets • Low flow taps with flow restrictors • Smaller sized baths • Reduced flow showers
Rainwater
• Incorporate rainwater harvesting i.e. rainwater butts **Rainwater harvesting (RwH) is the capture of water falling on buildings, roads or pathways that would normally be drained via a surface water sewer, infiltrate into the ground or evaporate. In the UK, this water cannot currently be used as a drinking water supply as there are strict guidelines on potable water, but it can be used in other systems within domestic or commercial premises.**
Recycle
• Incorporate grey water recycling **Greywater refers to water that has been "used" in the home in appliances such as washing machines, showers and hand basins. Greywater recycling (GwR) is the treatment and re-use of this water in other systems such as for toilet flushing. By their nature, GwR systems require more treatment and are more complex than RwH systems, and there are limited examples of their use in the UK.**
Water Offsetting
Development that cannot prove water neutrality should await completion of the Strategic Water Strategy which is anticipated to include mitigation measures.

Achieving total neutrality is almost impossible, there will always be a demand on the water supply from a new development. This has been considered by the final point on the list, which is the most difficult to comply with.

Like the way that nutrient neutrality is approached, the applicant can apply for credits to offset the water demand from the development.

The Environment Agency study on water neutrality in the Thames Gateway (2007), indicated that it was technically feasible to achieve a state of water neutrality by offsetting a new development's demands for water in existing households, public buildings, and business properties.

So to achieve a neutral water demand for their development, the developer must investigate ways of offering water consumption reduction in existing buildings in the borough. For example, this could be through retrofitting of low water usage sanitaryware into existing schools or care homes.

1. Introduction

1.1 Development Details

The application site can be found at Swains Farm, Brighton Road, Henfield, West Sussex, BN5 9RP. The current proposal seeks approval for the construction of four new replacement two-bedroom dwellings. It's important to note that the site had previously obtained permission for the conversion of an agricultural barn into four two-bedroom dwellings under application DC/22/2118.



Image 1: Proposed site plan

The application site lies within the Sussex North Water Supply Zone. For planning applications within this Zone, Natural England have published a Position Statement concerning proposals that have implications for increasing water supply pressure. It is the belief of Natural England that abstraction from the North Sussex

Water Supply Zone may be having an impact on protected sites, including the Arun Valley Special Area of Conservation, Special Protection Area and RAMSAR site. The conclusion of the Position Statement is that new development must not add to this impact by increasing demand for water consumption.

2. Water Consumption Analysis

Internal water usage for the proposed 4 no. two bed new build barns with building regulation compliant water calculations for the homes has been calculated using Part G Water Calculations tool provided in Appendix A and as summarised in Table 1 below. The occupancy rates are based on extrapolated 2011 census data for Horsham District, average occupancy data is as follows:

- One-bedroom dwellings: 1.32 occupants
- Two-bedroom dwellings: 1.88 occupants
- Three-bedroom dwellings: 2.47 occupants
- Four-bedroom dwellings: 2.86 occupants
- Five-bedroom dwellings: 3.09 occupants.

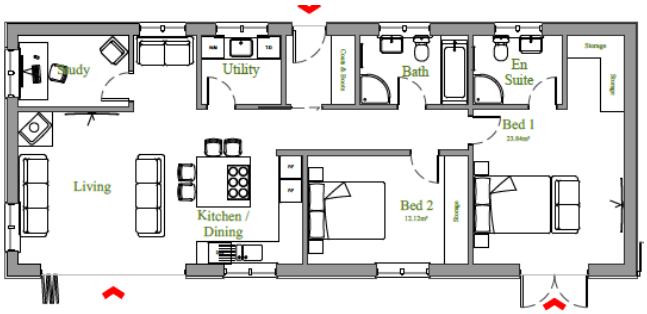


Image 2: Proposed floor plan of the proposed new build replacement barns

Existing	Total Water Consumption Litres/Person/Day	Occupancy Rate	Total Water Consumption Litres Per Plot
2 Bed dwellings	97.8	1.88	183.86
Total water usage using water efficient products			183.86
2 Bed dwelling with Rainwater harvesting incorporated (Appendix B)	69	1.88	129.72
Total Water offset through rain water harvesting per dwelling			-54.14

Table 1: Summary of Water Usage

2.1 Reduce

The applicant has proposed the following specification is to be adopted, as calculated in Appendix A:

- Wash hand basin taps restricted to 3.0 l/m
- Shower 8 l/m
- Toilets are 4/2.6 duel flush toilets
- Baths – None installed
- Dishwasher – <0.8L per place setting
- Washing Machine – <6 L per KG dry load
- Kitchen tap 6 l/m (2 no.)

2.2 Rainwater Harvesting

Rainwater Harvesting for Toilet Flushing and for use in the washing machine is an effective and eco-friendly method of reducing water usage on a development, which will lead to reduced water demand on the local system.

In the UK we refer to the British Standard 16941-1:2018 (previously BS 8515:2009+A1:2013) for guidance on rainwater harvesting. The British Standard gives recommendations on the design, installation, testing and maintenance of rainwater harvesting systems supplying non-potable water in the UK. In terms of calculation of the size of a rainwater harvesting tank there is a three tier approach.

1. Simplified approach for residential properties where there is consistent daily demand
2. An intermediate approach which uses simple formulae to calculate a more accurate estimation of storage capacity
3. A detailed approach for non-standard systems where there is variable demand over the year

The Simplified approach has been used to calculate the size of the tank, with the average rainwater taken from the UK Met data from Table 2.

Month	Maximum temperature (°C)	Minimum temperature (°C)	Days of air frost (days)	Sunshine (hours)	Rainfall (mm)	Days of rainfall ≥1 mm (days)	Monthly mean wind speed at 10 m (knots)
January	7.83	1.52	10.89	53.42	90.34	13.10	6.56
February	8.49	1.44	10.47	75.42	64.46	10.86	6.56
March	11.20	2.79	7.35	119.36	53.65	9.44	6.60
April	14.50	4.24	3.87	171.48	52.49	9.73	5.80
May	17.74	7.11	0.60	206.31	54.83	8.90	5.44
June	20.80	9.92	0.03	209.70	50.67	8.79	5.12
July	23.14	11.99	0.00	215.95	54.73	8.45	4.82
August	22.70	11.86	0.00	199.09	60.42	9.29	4.64
September	19.55	9.51	0.07	156.01	64.71	9.15	4.68
October	15.35	7.10	1.66	110.62	94.33	12.51	5.18
November	11.11	3.91	6.09	65.21	97.11	13.17	5.20
December	8.25	1.74	11.89	45.87	95.95	12.82	5.94
Annual	15.09	6.12	52.92	1628.44	833.69	126.21	5.54

Table 2 – MET OFFICE Station: Charlwood (Nearest Climate Station)

As show in Appendix A and B the development achieves the reductions in litres/person/day for water usage as shown in Table 1 with the rainwater harvesting connected to the roof of the buildings providing water to the toilets and in the washing machine on the development. The average daily rainwater collection is 47.97 litres for the dwelling, the tank will need to be sized (typically 3000 litres for this size of the collection area and number of toilets and potential number of occupants) to provided sufficient supply to the toilets.

2.3 Site Offsetting

A summary of the total water usage over the development is detailed below for the four 2 bed dwellings:

Existing	Total Water Consumption Litres/Person/Day	Occupancy Rate	Site Total Water Consumption for 4 dwelling development Litres
Swains Farms - 2 Bed dwelling with Rainwater harvesting	61	1.88	458.72

The developer is proposing to offset the additional water consumption from the Swains Farm development on an approved development at Pear Tree Farm (REF: DC/17/1374) for three no. 3 bed static homes, a Day room and a 1 bed tourer unit at Pear Tree Farm, BN5 9HX (see Image 4 and 4 below).

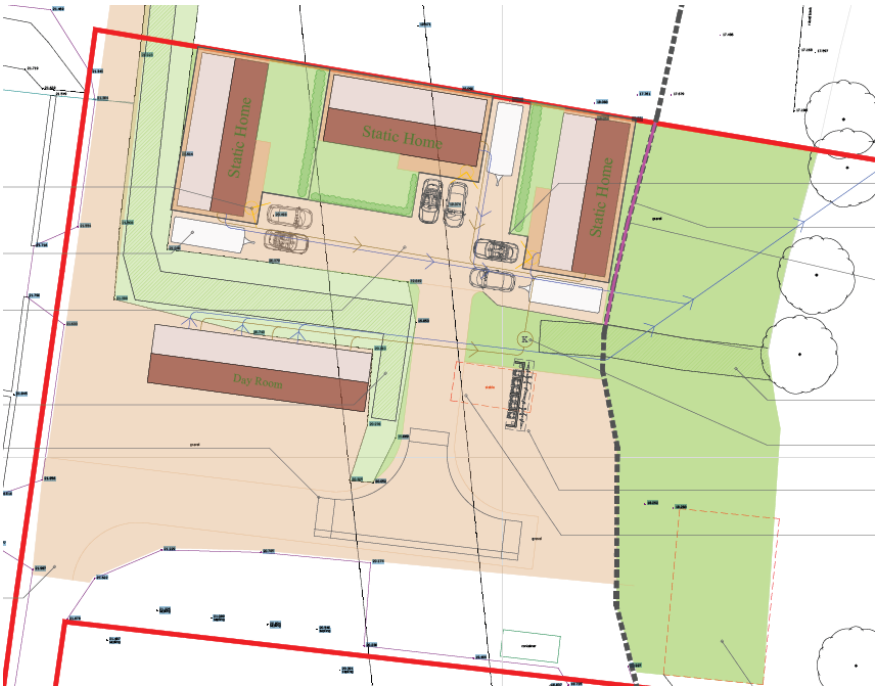


Image 3: Site 2 Pear Tree Farm.

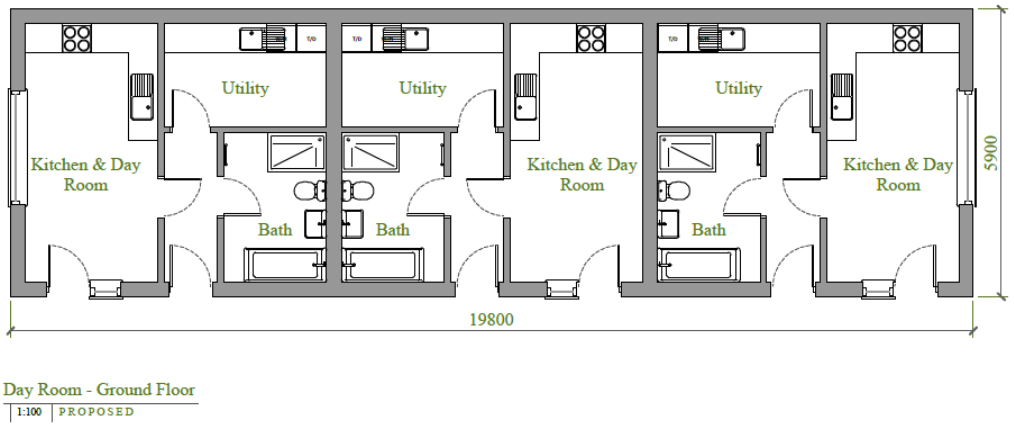


Image 4: Day Room associated with each static home

The approved site includes 3 number static caravans which each have a utility building that contain a kitchen, bathroom, and utility to each dwelling on the site. This is in addition to the bathroom and kitchen within the static caravan. There is no condition limiting water usage on this development other than building regulations restrictions of 125 l/p/p/p/d. The developer is proposing to offset the sites water usage on this development.

2.4 Pear Tree Water Reduce

The applicant has proposed the following specification is to be adopted, as calculated in Appendix D:

- Wash hand basin taps restricted to 3.0 l/m
- Shower 6 l/m
- Toilets are 4/2.6 duel flush toilets
- Baths – 170 l to Overflow
- Kitchen tap 2 l/m (2 no.)

The improved specification achieves a saving of 378.62 liters as summarised in Table 3.

2.5 Pear Tree Rainwater Recycling

The developer is also proposing to fit rainwater harvesting to Pear Tree Farm development to the 3no x 3 bed dwellings (Appendix E) to offset the remaining 518.88 liters water usage from the Swains Farm development.

Table 3 summarises the savings from:

1. Total savings with improvements in the specification upgrades, flow restrictors as detailed in Section 2.4 from the Pear Tree Farm site.
2. Total savings over the base demand from rainwater harvesting installed on the Pear Tree Farm development.

Site 2 - Pear Tree Farm	Total Water Consumption Litres/Person/Day	Occupancy Rate	Number of units	Total Water Consumption Litres
Pear Tree – 3no 3 bed Base demand (Appendix C)	*124.4*	*2.47*	*3*	*921.80*
Pear Tree –3no. x 1 Bed base demand	*124.4*	*1.32*	*3*	*492.62*
TOTAL Pear Tree Farm BASE Demand (b)				**1414.43**
Pear Tree – 3no. x 3 Bed Specification improvements	*91.1*	*2.47*	*3*	*675.05*
Pear Tree – 3no. x 1 Bed specification Improvements	*91.1*	*1.32*	*3*	*360.76*
Total Water Use with upgraded specification to Pear Tree (c)				**1035.81**
Element 1 - SAVINGS due to specification improvements (b – c)				**378.62**

Pear Tree – 3no. x 3 Bed Specification improvements	*91.1*	*2.47*	*3*	*675.05*
Pear Tree - 3no. x 3 Bed water usage with Rainwater Harvesting	*58.1*	*2.47*	*3*	*430.52*
Element 2 - SAVINGS Rainwater Harvesting at Pear Tree Farm				**244.53**
TOTAL Reductions in water usage with specification improvements and rainwater harvesting (1+2)				**623.15**
SWAINS FARM – 2 Bed dwelling with Rainwater harvesting (a)	61	1.88	4	458.72
TOTAL REDUCTION ACROSS BOTH SITES THROUGH IMPROVEMENTS				**164.43**

Table 3: Summary of water suage savings from improved specification, rainwater harvesting and the water offsetting

3. Conclusion

The proposed scheme for four replacement dwellings remains consistent with the previously approved plan for the conversion of four barns. The new build replacement dwellings will have the same water usage requirements as outlined in the original consented scheme.

Our scheme is committed to minimising its impact on water resources and promoting water efficiency throughout the development. To achieve this, we are upgrading the specifications of building equipment by incorporating flow restrictors and low-water-usage sanitary ware. Notably, our proposed scheme goes above and beyond the optional requirement for a maximum daily water usage limit of 110 litres per day for new constructions. This results in a significant reduction in water consumption for the proposed two-bedroom homes. Furthermore, through improved specifications and the implementation of rainwater harvesting, we anticipate further reductions in water usage.

Below is a summary of the total water usage for the four new two-bedroom dwellings within the development:

Site	**Site Total Water Consumption**
	Litres
Swains Farm 4 dwelling Site Total water usage after water saving measures and rainwater harvesting.	458.72
Pear Tree Water Reduction OFFSET	623.14
SAVING OVER Swains Farm – Pear Tree Farm	**-164.42**

The total water offset required for the proposed Swains Farm development, consisting of four replacement dwellings, stands at 458.72 litres after the developer's implementation of rainwater harvesting. In addition, the developer has successfully reduced water consumption by 623.14 litres in the existing consented scheme at Pear Tree Farm. This achievement has resulted in a noteworthy reduction in water offset usage due to the proposed mitigation measures, resulting in a combined savings of **164.42 litres** across both schemes.

The Part G Water Calculations clearly demonstrates that the proposed changes to the development will result in less water demand when measured against the existing planning permission and therefore the proposal will not have an adverse effect on the integrity of the Arun Valley SAC, SPA and Ramsar sites.

Appendix A – Water proposed, Reduced Specification:

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PART G - WATER EFFICIENCY CALCULATOR

Project Ref:	1597
Project Name:	Swains Farm - APPENDIX A
Date:	23.10.2024
Assessor:	Naomi Sadler
Notes:	

Table A1: The water efficiency calculator

Installation type	Unit of measure		(1) Capacity/ flow rate	(2) Use factor	(3) Fixed use (litres/ person/ day)	(4) Litres/person/day = [(1) (2)] + (3)
WCs (multiple fittings)	Average effective flushing volume (litres)		3.06	4.42	0.00	13.53
Taps (excluding kitchen/utility room taps)	Flow rate (litres/minute)		3.00	1.58	1.58	6.32
Bath (where shower also present)	Capacity to overflow (litres)		0.00	0.11	0.00	0.00
Shower (where bath also present)	Flow rate (litres/minute)		0.00	4.37	0.00	0.00
Bath only	Capacity to overflow (litres)		0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)		8.00	5.60	0.00	44.80
Kitchen/utility room sink taps	Flow rate (litres/minute)		6.00	0.44	10.36	13.00
Washing machine	Litres/kg dry load	**Washing machine installed?** Yes	6.00	2.10	0.00	12.60
Dishwasher	Litres/place setting	**Dishwasher installed?** Yes	0.80	3.60	0.00	2.88
Waste disposal unit	Litres/use **(If present = 1, If absent = 0)**	**Waste disposal installed?** No	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	**Water softener installed?** No	0.00	1.00	0.00	0.00
	(5)		Total calculated use = (Sum column 4)			93.13404
	(6)	**Greywater Harvesting installed?** No	Contribution from greywater (litres/person/day) from Table 4.6			0.00
	(7)	**Rainwater Hervesting installed?** No	Contribution from rainwater (litres/person/day) from Table 5.5			0.00
	(8)		Normalisation factor			0.91
	(9)		**Total Internal Water Consumption** = [(5) – (6) – (7)] = (8) **(CSH)**			**84.8**
	(10)		External water use			5
	(11)		**Total water consumption (including external use)** = (9) + (10) (litres/person/day) **(Part G)**			**89.8**

This calculation sheet has been developed in accordance with the methodology stated within Building Regulations Approved Document G 2015 (2016 Ammendments) Appendix A. Please refer to this document for specific guidance of how flow rates are to be derived.

Appendix B – Water proposed Rainwater Recycling:

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PART G - WATER EFFICIENCY CALCULATOR

Project Ref:	1597
Project Name:	Swains Farm - APPENDIX B RH
Date:	23.10.2024
Assessor:	Naomi Sadler
Notes:	

Table A1: The water efficiency calculator

Installation type	Unit of measure		(1) Capacity/ flow rate	(2) Use factor	(3) Fixed use (litres/ person/ day)	(4) Litres/person/day = [(1) (2)] + (3)
WCs (multiple fittings)	Average effective flushing volume (litres)		3.06	4.42	0.00	13.53
Taps (excluding kitchen/utility room taps)	Flow rate (litres/minute)		3.00	1.58	1.58	6.32
Bath (where shower also present)	Capacity to overflow (litres)		0.00	0.11	0.00	0.00
Shower (where bath also present)	Flow rate (litres/minute)		0.00	4.37	0.00	0.00
Bath only	Capacity to overflow (litres)		0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)		8.00	5.60	0.00	44.80
Kitchen/utility room sink taps	Flow rate (litres/minute)		6.00	0.44	10.36	13.00
Washing machine	Litres/kg dry load	**Washing machine installed?** Yes	6.00	2.10	0.00	12.60
Dishwasher	Litres/place setting	**Dishwasher installed?** Yes	0.80	3.60	0.00	2.88
Waste disposal unit	Litres/use **(If present = 1, If absent = 0)**	**Waste disposal installed?** No	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	**Water softener installed?** No	0.00	1.00	0.00	0.00

(5)		Total calculated use = (Sum column 4)	93.13404
(6)	**Greywater Harvesting installed?** No	Contribution from greywater (litres/person/day) from Table 4.6	0.00
(7)	**Rainwater Hervesting installed?** Yes	Contribution from rainwater (litres/person/day) from Table 5.5	26.13
(8)		Normalisation factor	0.91
(9)		**Total Internal Water Consumption** = [(5) – (6) – (7)] = (8) **(CSH)**	**61.0**
(10)		External water use	5
(11)		**Total water consumption (including external use)** = (9) + (10) (litres/person/day) **(Part G)**	**66.0**

This calculation sheet has been developed in accordance with the methodology stated within Building Regulations Approved Document G 2015 (2016 Ammendments) Appendix A. Please refer to this document for specific guidance of how flow rates are to be derived.

Appendix C – Pear Tree Base Specification:

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PART G - WATER EFFICIENCY CALCULATOR

Project Ref:	1597
Project Name:	Pear Tree Farm - Site 2
Date:	08.02.2023
Assessor:	Naomi Sadler
Notes:	

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)**
WCs (multiple fittings)	Average effective flushing volume (litres)		4.66	4.42	0.00	20.60
Taps (excluding kitchen/utility room taps)	Flow rate (litres/minute)		6.00	1.58	1.58	11.06
Bath (where shower also present)	Capacity to overflow (litres)		185.00	0.11	0.00	20.35
Shower (where bath also present)	Flow rate (litres/minute)		10.00	4.37	0.00	43.70
Bath only	Capacity to overflow (litres)		0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)		0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)		8.00	0.44	10.36	13.88
Washing machine	Litres/kg dry load	**Washing machine installed?** No	8.17	2.10	0.00	17.16
Dishwasher	Litres/place setting	**Dishwasher installed?** No	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use **(If present = 1, If absent = 0)**	**Waste disposal installed?** No	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	**Water softener installed?** No	0.00	1.00	0.00	0.00
	(5)		Total calculated use = (Sum column 4)			131.2442
	(6)	**Greywater Harvesting installed?** No	Contribution from greywater (litres/person/day) from Table 4.6			0.00
	(7)	**Rainwater Hervesting installed?** No	Contribution from rainwater (litres/person/day) from Table 5.5			0.00
	(8)		Normalisation factor			0.91
	(9)		**Total Internal Water Consumption** = [(5) – (6) – (7)] = (8) **(CSH)**			**119.4**
	(10)		External water use			5
	(11)		**Total water consumption (including external use)** = (9) + (10) (litres/person/day) **(Part G)**			**124.4**

This calculation sheet has been developed in accordance with the methodology stated within Building Regulations Approved Document G 2015 (2016 Ammendments) Appendix A. Please refer to this document for specific guidance of how flow rates are to be derived.

Appendix D – Pear Tree Reduce Specification:

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PART G - WATER EFFICIENCY CALCULATOR

Project Ref:	1597
Project Name:	Pear Tree Farm - Site 2 IMPROVEMENTS
Date:	08.02.2023
Assessor:	Naomi Sadler
Notes:	

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)**
WCs (multiple fittings)	Average effective flushing volume (litres)		3.06	4.42	0.00	13.53
Taps (excluding kitchen/utility room taps)	Flow rate (litres/minute)		3.00	1.58	1.58	6.32
Bath (where shower also present)	Capacity to overflow (litres)		130.00	0.11	0.00	14.30
Shower (where bath also present)	Flow rate (litres/minute)		6.00	4.37	0.00	26.22
Bath only	Capacity to overflow (litres)		0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)		0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)		5.00	0.44	10.36	12.56
Washing machine	Litres/kg dry load	**Washing machine installed?** No	8.17	2.10	0.00	17.16
Dishwasher	Litres/place setting	**Dishwasher installed?** No	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use **(If present = 1, If absent = 0)**	**Waste disposal installed?** No	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	**Water softener installed?** No	0.00	1.00	0.00	0.00
	(5)		Total calculated use = (Sum column 4)			94.59104
	(6)	**Greywater Harvesting installed?** No	Contribution from greywater (litres/person/day) from Table 4.6			0.00
	(7)	**Rainwater Hervesting installed?** No	Contribution from rainwater (litres/person/day) from Table 5.5			0.00
	(8)		Normalisation factor			0.91
	(9)		**Total Internal Water Consumption** = [(5) – (6) – (7)] = (8) **(CSH)**			**86.1**
	(10)		External water use			5
	(11)		**Total water consumption (including external use)** = (9) + (10) (litres/person/day) **(Part G)**			**91.1**

This calculation sheet has been developed in accordance with the methodology stated within Building Regulations Approved Document G 2015 (2016 Ammendments) Appendix A. Please refer to this document for specific guidance of how flow rates are to be derived.

Appendix E – Pear Tree Rainwater Recycling:

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PART G - WATER EFFICIENCY CALCULATOR

Project Ref:	1597
Project Name:	Pear Tree Farm - Rainwater Harvesting APPENDIX E
Date:	08.02.2023
Assessor:	Naomi Sadler
Notes:	

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)**
WCs (multiple fittings)	Average effective flushing volume (litres)		3.06	4.42	0.00	13.53
Taps (excluding kitchen/utility room taps)	Flow rate (litres/minute)		3.00	1.58	1.58	6.32
Bath (where shower also present)	Capacity to overflow (litres)		130.00	0.11	0.00	14.30
Shower (where bath also present)	Flow rate (litres/minute)		6.00	4.37	0.00	26.22
Bath only	Capacity to overflow (litres)		0.00	0.50	0.00	0.00
Shower only	Flow rate (litres/minute)		0.00	5.60	0.00	0.00
Kitchen/utility room sink taps	Flow rate (litres/minute)		5.00	0.44	10.36	12.56
Washing machine	Litres/kg dry load	**Washing machine installed?** No	8.17	2.10	0.00	17.16
Dishwasher	Litres/place setting	**Dishwasher installed?** No	1.25	3.60	0.00	4.50
Waste disposal unit	Litres/use **(If present = 1, If absent = 0)**	**Waste disposal installed?** No	0.00	3.08	0.00	0.00
Water softener	Litres/person/day	**Water softener installed?** No	0.00	1.00	0.00	0.00
	(5)		Total calculated use = (Sum column 4)			94.59104
	(6)	**Greywater Harvesting installed?** No	Contribution from greywater (litres/person/day) from Table 4.6			0.00
	(7)	**Rainwater Hervesting installed?** Yes	Contribution from rainwater (litres/person/day) from Table 5.5			30.69
	(8)		Normalisation factor			0.91
	(9)		**Total Internal Water Consumption** = [(5) – (6) – (7)] = (8) **(CSH)**			**58.1**
	(10)		External water use			5
	(11)		**Total water consumption (including external use)** = (9) + (10) (litres/person/day) **(Part G)**			**63.1**

This calculation sheet has been developed in accordance with the methodology stated within Building Regulations Approved Document G 2015 (2016 Ammendments) Appendix A. Please refer to this document for specific guidance of how flow rates are to be derived.

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