PROMETHEAN
PLANNING

Old Bonnets Cottage,
Bonnets Lane
Ifield, Surrey
RH11 0NY

Proposed extension of existing outbuilding to provide ancillary annex accommodation for son and carer

WATER NEUTRALITY REPORT

10th May 2025

Prepared by Ben Kirk MSc

The Proposal

The proposal is for the extension of the existing outbuilding to provide ancillary annex accommodation for the applicants' son and a carer

Water neutrality

The application site falls within the Sussex North Water Supply Zone, where increased demand for mains-water would exacerbate demand for the continued use/scale of public groundwater abstractions at Hardham Water Works contributing to associated adverse effect upon the integrity of the Arun Valley SAC, SPA and Ramsar sites.

Therefore, based on the evidence it is reasonable to conclude that, without mitigation, the proposal would result in an adverse effect on the integrity of the Arun Valley sites, either alone or in combination with other plans and projects.

The following sets out the water demand from the proposal and how this will be reduced by way of efficient fittings on the development and how this water demand will be met by way of a rainwater harvesting system which would provide for all of the sites water thus removing any potential for impact on the integrity of the Arun Valley SAC, SPA and Ramsar sites.

Baseline Water Consumption and Water reduction measures

The following summarises the flow rates for the fittings in the proposed annex

These have been achieved by the use of efficient fixtures and fittings in order to reduce the water demand.

- WC- 4/2 litre dual flush
- Kitchen sink tap with a flow rate of 4 litre per minute
- Shower with a flow rate of 6 litre per minute
- Bathroom basin taps with a flow rate of 4 litre per minute
- Bath with a capacity to overflow of 130 litres

Using the above figures, the water usage can be calculated using a Part G water calculator as shown in Appendix 1

This demonstrates a water demand of 90.5 litres / person / day which includes an allowance of 5 litres per person per day for external water usage.

Census data has been used to estimate the average number of occupants (as per HDC guidance)

This sets out that the following occupancy rates should be used.

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.

The annex will be two bedroom and so a figure of 1.88 people should be used.

Using the Part G water demand figure of 90.5 litres per person per day and a population size of 1.88 it is estimated that the total water usage per day is 170.14 litres per day.

Proposed mitigation

The applicant intends to purchase credits amounting to 170.14 litres from Sussex Water Neutrality Sussex Water Neutrality - Sussex Water Neutrality

Sussex Water Neutrality have confirmed that sufficient credits can be made available to the applicant and can be secured by way of a section 106 agreement.

The Council have confirmed that they will now look to use Grampian conditions restricting the commencement of development until such time that the bespoke water neutrality solution has been approved and secured.

Sussex Water Neutrality (SWN) is known to the Council as an appropriate scheme and a number of similar agreements are being processed between applicants, SWN and the Council.

As such the use of a Grampian Condition would be in accordance with Government guidance.

Conclusion

This report confirms that the applicant has access to a bespoke water neutrality solution through the purchase of credits amounting to 170.14 litres from Sussex Water Neutrality which would be secured by way of a section 106 agreement.

The use of a Grampian Condition is deemed appropriate to ensure the commencement of development is restricted until such time that the bespoke water neutrality solution has been approved and secured.

This strategy will minimise the impact of the new development on the Sussex North Water Supply Zone. The Water Usage Strategy confirms the proposal will be water neutral once complete and therefore satisfies Natural England's requirements.

As such, there is no reasonable scientific doubt that the proposed development would be water neutral. The proposal would not result in an increase in water abstraction in the River Arun and Western Streams catchment of the Sussex North WRZ.

Therefore, it would not adversely affect the integrity of the Arun Valley SAC, SPA and Ramsar sites. Consequently, it would be consistent with Policy 31 of the HDPF which seek to protect the hierarchy of designated sites and habitats.

APPENDIX 1
Part G Water calculations

Proposed annex

Water Calculator | WC | Taps (Other) | Taps (Kitchen/Utility) | Baths | Dishwashers | Washing Machines | Showers | H2O softeners | Greywater | Rainwater

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)	4	1.46	0.00	5.84
	Part flush Volume (litres)	2	2.96	0.00	5.92
WC (multiple fittings)	Average effective flushing Volume (litres)		4.42	0.00	0
Taps (excluding kitchen/utility room taps)	Flow rate (litres/min)	2.00	1.58	1.58	4.74
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)	4.00	4.37	0.00	17.48
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)	2.00	0.44	10.36	11.24
Washing Machine	(Litres/kg dry load)	6.50	2.1	0.00	13.65
Dishwasher	(Litres/place setting)	0.99	3.6	0.00	3.56
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)**			76.73
	(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)			69.82
	(10)	External water use			5.0
	(11)	**Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day)**			74.8

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