BASELINE FLOW ASSESSMENT OF EXISITNIG DEVELOPMENT ON WINEHAM LANE, WEST SUSSEX.

Planning Reference: DC/24/0415
H2Ogeo Reference: 20240507P1
Date: 17 May 2024

Version: FINAL v1.0

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Statement of Limitations

The report will be prepared in accordance with the scope of work outlined within this proposal and is subject to the applicable cost, time and other constraints. It has been prepared for the sole use of the Client and H2Ogeo accepts no liability as a result of the use or reliance of this report by any other parties.

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This report does not constitute legal advice.

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Executive Summary

H2Ogeo provided this Baseline Flow Assessment to accompany a planning application to demolish an existing three-bed property and relocate it as a four-bed residential property west of Wineham Lane and south of Roma Farm in West Sussex.

This document demonstrates that the proposed development would consume less water than the existing and less water than the permitted development on site. As a result the proposed development would not contribute to an existing adverse effect upon the integrity of the internationally designated Arun Valley Special Area of Conservation, Special Protection Area and Ramsar sites by way of increased water abstraction.

The development would be water neutral.

1 Introduction

Following the validation of a planning application, DC/24/0415 on the 15 March 2024, for the Demolition of an existing detached residential dwelling and erection of a new residential dwelling and garage, Horsham District Council Local Planning Authority (LPA) have requested further information.

In an email from the Planning Officer to the Agent dated 3 May 2024 it was stated:

A full water neutrality statement is not required, however, in order to screen the proposal out from requiring water neutrality mitigation, we need to know what the existing baseline water consumption rate is.

This can be demonstrated by providing water bills. If you cannot provide water bills, the existing water consumption will need to be demonstrated by completing a survey of the existing fixtures and fittings.

Once we know the existing water consumption, we can condition that the water consumption will not increase above that amount, as the occupancy will not be increased over the existing, and therefore screen it out from requiring mitigation to reduce water consumption.

1.1 Scope of Work

H2Ogeo was requested to provide a proposal to satisfy the requirements of the LPA's request and the following scope of work was proposed:

- Site Visit;
- Data collection on the existing and proposed development, Client feedback and liaison; and
- Reporting.

The proposal was accepted by the Client and findings from the work are presented in this report.

A Statement of Limitations is presented at the start of this report.

1.2 Background

Natural England cannot, with certainty, conclude that the Sussex North Water Supply Zone, that includes water supply from a groundwater abstraction, is not having an adverse effect on the integrity of:

- Arun Valley Special Area Conservation (SAC);
- Arun Valley Special Protection Area (SPA); and
- Arun Valley Ramsar Site.

Natural England have advised that developments within this zone must not add to this impact.

The Local Planning Authority (LPA) have not requested a full Water Neutrality Statement and only require to understand the existing baseline water consumption on site.

This is because the proposed development is a replacement of an approved planning consent under DC/23/1745 for the prior approval for the enlargement of an existing dwellinghouse by addition of an additional storey resulting in an increase in height of 2.56m.

The decision notice for the prior approval is presented in Annex A of this document.

The prior approval would transform the existing three-bed bungalow to a five-bed two storey residential property.

2 Site Location and Setting

The site is located west of Wineham Lane south of Roma Farm in Wineham West Sussex.

The site is centred on National Grid Reference: TQ23625 19079 (Easting: 523625, Northing: 119079) and presented in Figure 1.

2.1 Existing Site

The existing site consists of a sloping access drive up to a gate. The property is a three-bed bungalow consisting of an open-plan kitchen, lounge, diner, three bedrooms and a family bathroom. The curtilage of the site is marked with post and rail fencing.

The planning drawings presented in Annex B show the existing layout of the site.

2.1.1 Existing Fixtures and Fittings

H2Ogeo visited the site on the 15 May 2024, the numbers of existing fixtures and fittings within the property are summarised in the table below:

Table 1 Existing Fixtures and Fittings

Fixture	***3-Bedroom House***
WC	1
Taps (excluding kitchen/utility room taps)	2
Shower	1
Bath	1
Kitchen/Utility room sink taps	1

3 Baseline Water Consumption

This section outlines the existing baseline water consumption for the site.

3.1 Existing Demand

There are no individual water bills for this property as Roma Farm has one metered supply that then distributes water to additional properties on site.

The property is currently unoccupied however has had tenants living there in the past three years[1].

The water demand has been calculated using flow testing carried out on the 15 May 2024 and the Building Regulations Part G Water Calculator for residential properties.

3.1.1 Flow Testing

The table below summarises the flow testing results:

Table 2 Existing Fixtures and Fittings – Flow Testing

Fixture	***3-Bedroom House***	***Flow***	***Units***
WC	1	6/4 Dual Flush	Effective Flush in Litres
Taps (excluding kitchen/utility room taps)	2	15	Litres/Minute
Shower	1	12	Litres/Minute
Bath	1	200	Litres to Overflow
Kitchen/Utility room sink taps	1	10	Litres/Minute

3.1.2 Part G Calculator

The Part G Calculator generates a consumption in Litres/Person/Day and is presented in Annex C and summarised below:

Existing 3-Bed Bungalow = 147.6 Litres/Person/Day.

3.1.3 Occupancy

The average occupancy for a 3-bed bungalow in Horsham District is based on 2021 Census data and equals 2.47 people.

3.2 Existing Baseline Summary

The existing baseline water consumption is calculated to be 365 litres/Day.

A further calculation has been carried out to understand the likely consumption of the five-bed two storey approved development under Planning Permission DC/23/1745. It is assumed additional and higher efficiency fixtures and fittings would be built into the approved property and these are summarised below:

Table 3 Proposed Fixtures and Fittings Efficiencies in 5-Bed Approved Property – DC/23/1745

Fixture	***Number***	***Performance Level 3 Efficiency***	***Units***
WC	3	3.75	Effective Flush in Litres
Taps (excluding kitchen/utility room taps)	3	5	Litres/Minute

[1] Client comment

Fixture	*Number*	*Performance Level 3 Efficiency*	*Units*
Kitchen/Utility Taps	1	6	Litres/Minute
Baths	3	140	Litres to Overflow
Showers	3	6	Litres/Minute
Washing Machine	1	5.00	Litres/Dry Load kg
Dishwasher	1	0.92	Litres/Place Setting

The average occupancy of a five-bed property in Horsham District is 3.09.

The Part G Calculator for a five-bed property with Performance Level 3 fixtures and fittings under the BREEAM guidelines is presented in Annex C and summarised below:

5-Bed Property = 91.0 Litres/Person/Day or, 281 Litres/Day.

4 Proposed Development DC/24/0415

The proposed development under this application, DC/24/0415, is for a four-bed two storey residential building with kitchen, lounge, dining area, utility room, family bathroom, en-suite facilities and a WC.

The number of water consuming fixtures and fittings are presented in the table below:

Table 4 Proposed Fixtures and Fittings in the 4-Bed Approved Property – DC/24/0415

Fixture	***Number***	***Performance Level 3 Efficiency***	***Units***
WC	3	3.75	Effective Flush in Litres
Taps (excluding kitchen/utility room taps)	3	5	Litres/Minute
Kitchen/Utility Taps	2	6	Litres/Minute
Baths	1	140	Litres to Overflow
Showers	3	6	Litres/Minute
Washing Machine	1	5.00	Litres/Dry Load kg
Dishwasher	1	0.92	Litres/Place Setting

The average occupancy of a four-bed property in Horsham District is 2.86.

The Part G Calculator for the four-bed property using Performance Level 3 Efficiencies (BREEAM New Construction 2018) is presented in Annex C and summarised below:

4-Bed Property = 91.0 Litres/Person/Day or, 260 Litres/Day.

5 Conclusion

The table below shows the results of the flow testing and water consumption modelling for the site.

Property	***Occupancy #***	***Part G Calculated (L/P/D)***	***Total Consumption (Litres/Day)***
Existing 3-Bed	2.47	147.6	365
Permitted 5-Bed	3.09	91	281
Proposed 4-Bed	2.86	91	260

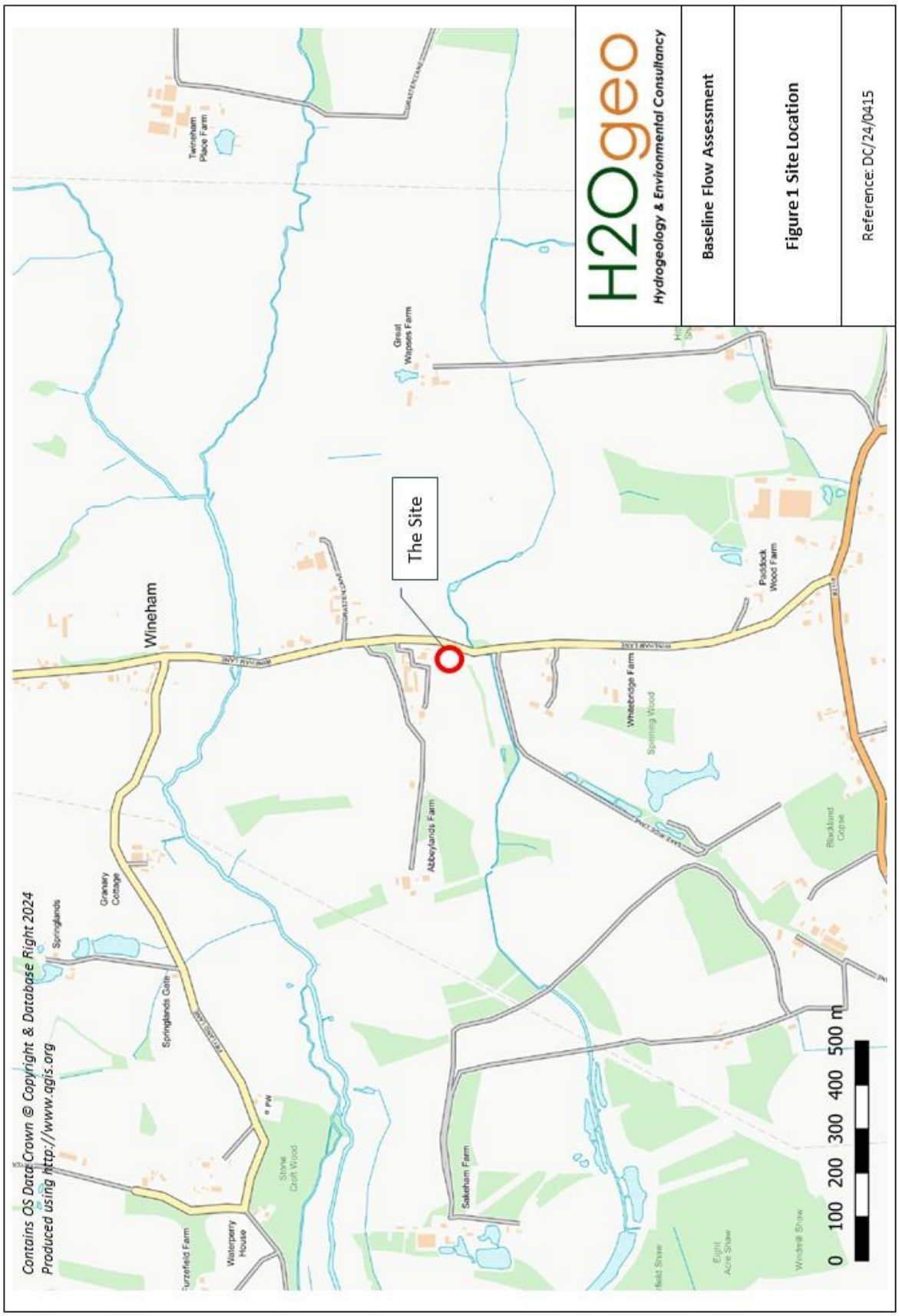
It is clear that with improved fixtures and fittings the proposed 4-bed property would be water neutral, as would the permitted 5-bed development.

This document demonstrates that the proposed development will not contribute to an existing adverse effect upon the integrity of the internationally designated Arun Valley Special Area of Conservation, Special Protection Area and Ramsar sites by way of increased water abstraction.

6 Figures

Figure 1 Site Location

Figure 1 Site Location



7 Annexes

Annex A – Decision Notice DC/23/1745

Annex B - Planning Drawings

Annex C - Part G Calculations

Annex A – Decision Notice DC/23/1745

Horsham District Council

Phil Rowe
Melton Lodge
Rusper Road
Newdigate
RH5 5BX

Our ref:	DC/23/1745
Your ref:	Roma Farm Cottage, Wineha La...
Email:	planning@horsham.gov.uk
Direct Line:	01403 215429
If Calling Please ask for:	Bethan Tinning
Date:	13th November 2023

Dear Sir/Madam,

Town and Country Planning Act 1990 (as amended)
Town and Country Planning (General Permitted Development) (England) Order 2015
Application for Prior Approval under Schedule 2, Part 1, Class AA

Prior approval for the enlargement of an existing dwellinghouse by addition of an additional storey resulting in an increase in height of 2.56m.

Roma Farm Cottage, Wineham Lane, Wineham, West Sussex

Further to the above prior notification which was received on 19 September 2023, I am writing to confirm that **prior approval is required and granted.** The proposal can now proceed subject to the following conditions:

1 **Pre-Commencement Condition**: No development shall take place, including any works of demolition, until the following construction site set-up details have been submitted to, and approved in writing by, the Local Planning Authority.

i. the proposed development hours of operation
ii. how any adverse impact of noise, dust, vibration and traffic on adjoining owners or occupiers will be mitigated.

The approved details shall be adhered to throughout the construction period.

Reason: As this matter is fundamental in order to consider the potential impacts on the amenity of nearby occupiers during construction and in accordance with Policy 33 of the Horsham District Planning Framework (2015).

Additional information for applicant

Discharge of Conditions
Please be advised that there are conditions on this notice that will require the submission of details to be submitted for approval to the Local Planning Authority. To approve these details, you will need to submit an "*Application for approval of details reserved by condition*" with an application form and pay the appropriate fee. Guidance and the forms can be found at planningportal.co.uk/planning/planningapplications

The Conservation of Species and Habitats Regulations 2017

Article 3(1) of the Town and Country Planning (General Permitted Development) (England) Order 2015 as amended states that:

"Subject to the provisions of this Order and regulations 73 to 76 of the Conservation of Habitats and Species Regulations 2010 (general development orders), planning permission is hereby granted for the classes of development described as permitted development in Schedule 2."

Section 75 of the Conservation of Habitats and Species Regulations 2017 states that *"it is a condition of any planning permission granted by a general development order made on or after 30th November 2017, that development which -*

(a) Is likely to have a significant effect on a European site or a European offshore marine site (either alone or in combination with other plans or projects), and

(b) Is not directly connected with or necessary to the management of the site, must not be begun until the developer has received written notification of the approval of the local planning authority under regulation 77 (approval of local planning authority)."

The application site falls within the Sussex North Water Supply Zone as defined by Natural England which draws its water supply from groundwater abstraction at Hardham. Natural England has issued a Position Statement for applications within the Sussex North Water Supply Zone which states that it cannot be concluded with the required degree of certainty that new development in this zone would not have an adverse effect on the integrity of the Arun Valley SAC, SPA and Ramsar sites.

Community Infrastructure Levy (CIL)

Horsham District Council has adopted a Community Infrastructure Levy (CIL) Charging Schedule which took effect on 1st October 2017. **This development constitutes CIL liable development**.

If you have not received a Liability Notice from the Council within 1 month of the decision date please contact the CIL Team at cil@horsham.gov.uk

CIL is a mandatory financial charge on development. To avoid additional financial penalties, the requirements of CIL must be managed before development is commenced (including in the event of any successful appeal).

Payment must be made in accordance with the requirements of the CIL Demand Notice issued.

Schedule of plans/documents

The following plans and document were considered when making the above decision:

Plan Type	Description	Drawing Number	Received Date
Location & Block plan		2305RM_R0_000a	19.09.2023
Floor plan	Existing and Proposed Ground	2305RM_R0_100a	19.09.2023
Floor plan	Proposed First	2305RM_R0_101a	19.09.2023
Elevation plan	Existing and Proposed South	2305RM_R0_102a	19.09.2023
Elevation plan	Existing and Proposed East	2305RM_R0_103a	19.09.2023
Elevation plan	Existing and Proposed North	2305RM_R0_104a	19.09.2023
Elevation plan	Existing and Proposed West	2305RM_R0_105a	19.09.2023
Photos	Materials	2305RM_R0_200a	19.09.2023

Appeals to the Secretary of State

If you are aggrieved by the decision to refuse permission for the proposed development or to grant it subject to conditions, then you can appeal to the Secretary of State under Section 78 of the Town and Country Planning Act 1990.

You must appeal within 12 weeks of the date of this decision notice for a 'minor commercial' (shop front) application, and within 6 months for most other types of planning applications. There are different timescale – usually 28 days – if an enforcement notice is/has been served for the same (or very similar) land and development. Please note, only the applicant possesses the right of appeal.

Appeals can be made online at: https://www.gov.uk/planning-inspectorate. If you are unable to access the online appeal form, please contact the Planning Inspectorate to obtain a paper copy of the appeal form on tel: 0303 444 5000.

The Secretary of State can allow a longer period for giving notice of an appeal but will not normally be prepared to use this power unless there are special circumstances which excuse the delay in giving notice of appeal.

The Secretary of State need not consider an appeal if it seems to the Secretary of State that the local planning authority could not have granted planning permission for the proposed development or could not have granted it without the conditions they imposed, having regard to the statutory requirements, to the provisions of any development order and to any directions given under a development order.

If you intend to submit an appeal that you would like examined by inquiry then you must notify the Local Planning Authority and Planning Inspectorate (inquiryappeals@planninginspectorate.gov.uk) at least 10 days before submitting the appeal. Further details are at https://www.gov.uk/government/collections/casework-dealt-with-by-inquiries

New postal addresses

If this permission relates to new dwellings, commercial premises or other buildings which will require a new postal address you should contact the Council's Street Naming & Numbering Department as soon as possible or before work commences on site. Further details are available on the Street Naming page on the Council's website or alternatively e-mail streetnaming@horsham.gov.uk or telephone 01403 215139.

Waste bins

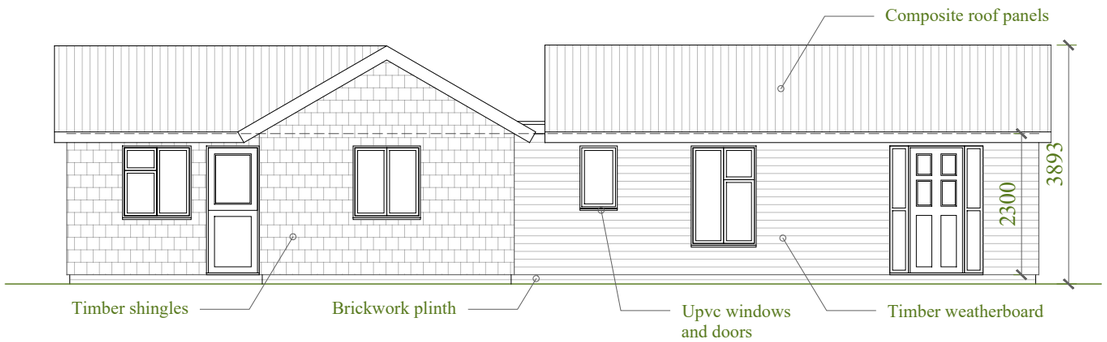
It is the responsibility of the developer to provide bins for the development. If you are a developer and need to purchase bins, please email hop.oast.admin@horsham.gov.uk.

Yours faithfully



Emma Parkes
Head of Development and Building Control

Annex B - Planning Drawings



South

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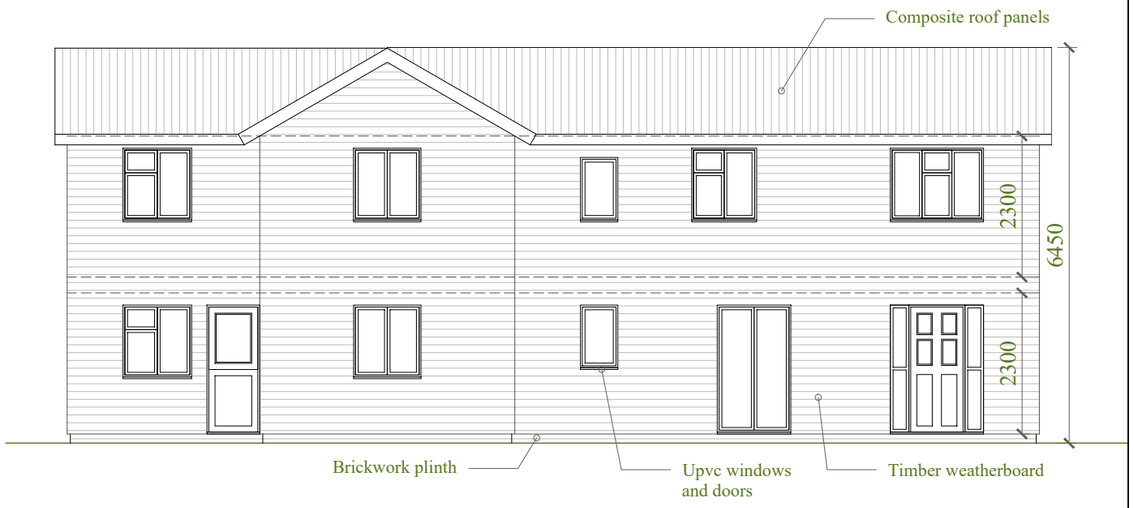

South

1:100 | PROPOSED

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Construction (Design and Management) Regulations 2015

This drawing is intended for Planning purposes only and as such does not highlight residual design related health and safety risks.

This information can be provided on request; however, it is anticipated that the full extent of residual risks will be identified during the detailed Building Regulations or construction design phase and prior to construction works commencing on site.

All responsibilities and duties of Principle Designer as stated within the above regulations now revert to the client unless Manorwood are appointed to undertake Building Regulations or construction drawings.

MANORWOOD
building on tradition

Suite 114
26 The Hornet
Chichester
West Sussex
PO19 7BB

tel: 01243 201 102
email: enquiries@manorwood.co.uk
web: www.manorwood.co.uk

Address

Roma Farm Cottage, Wineham Lane, Henfield BN5 9AG

Drawing No.	2305RM_R0_102a
Scale @ A3	1:100
Job No.	2305RM_R0
Drawn By	VM
Checked By	BK
Drawn On	05.07.2023
Issued On	05.07.2023
Drawing	South
Status	Planning
Revision	
00	05.07.2023

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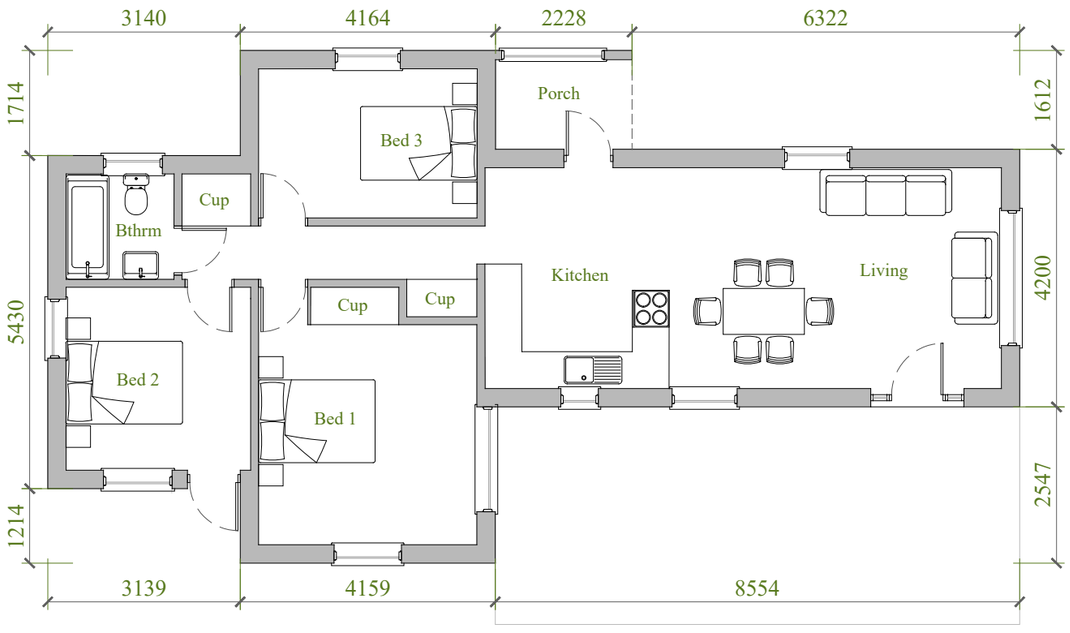
Existing GIA = 74 m^2



Ground Floor Plan

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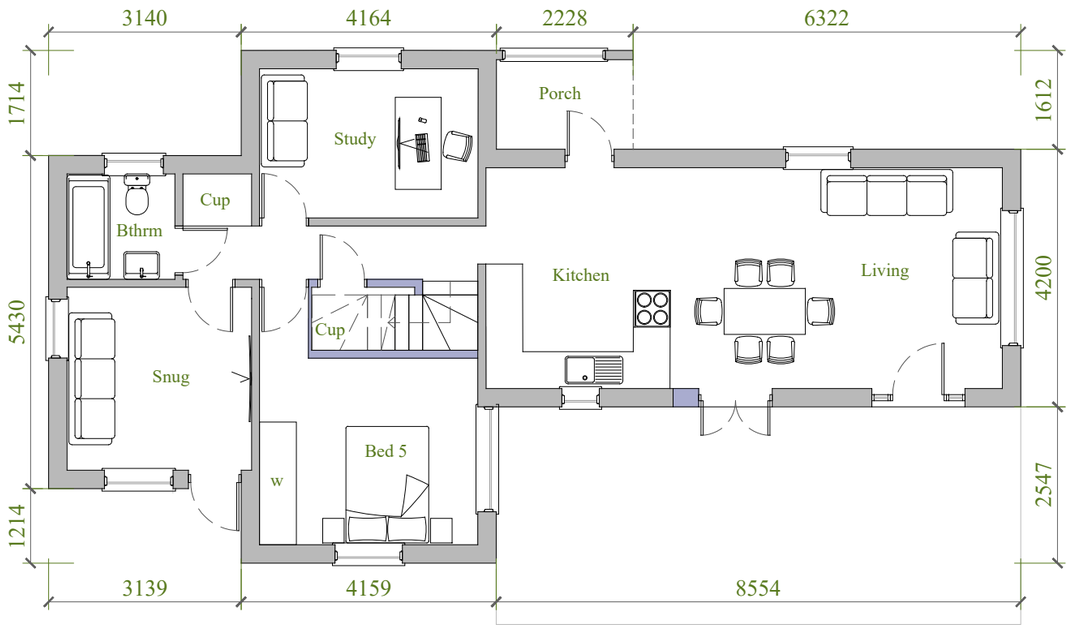
Proposed GIA = 74 m^2



Ground Floor Plan

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email: enquiries@manorwood.co.uk
web: www.manorwood.co.uk

Address	
Roma Farm Cottage, Wineham Lane, Henfield BN5 9AG	
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Job No.	2305RM_R0
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Checked By	BK
Drawn On	05.07.2023
Issued On	05.07.2023
Drawing	Ground Floor Plan
Status	Planning
Revision	
00	05.07.2023



Indicative: 25.9°

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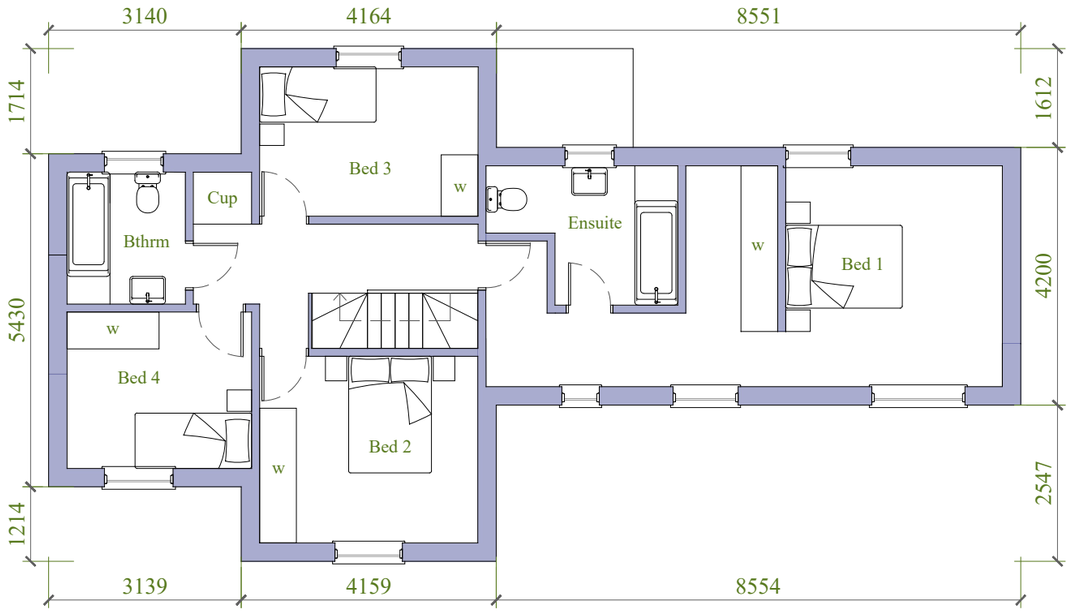
Proposed GIA = 74 m²



First Floor Plan

1:100 | PROPOSED

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Checked By	BK
Drawn On	05.07.2023
Issued On	05.07.2023
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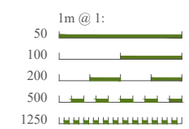
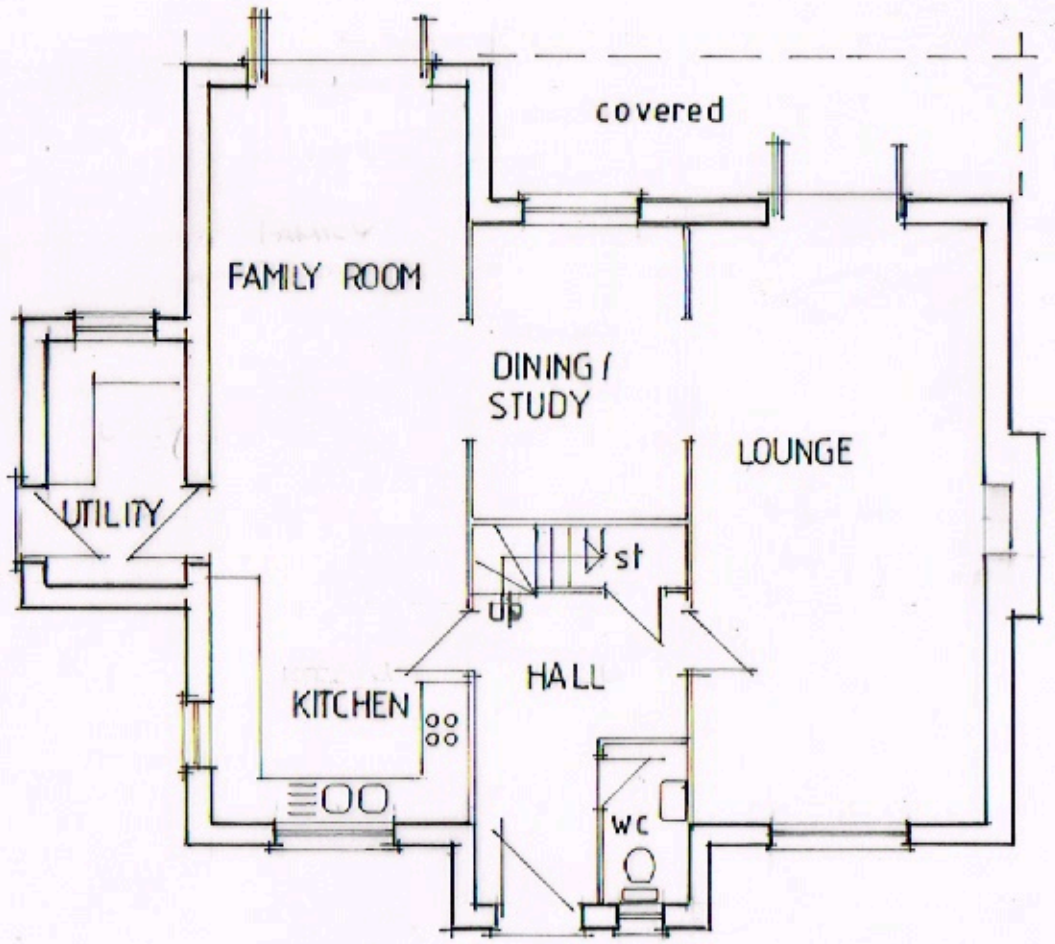
Status	Planning
Revision	
00	05.07.2023



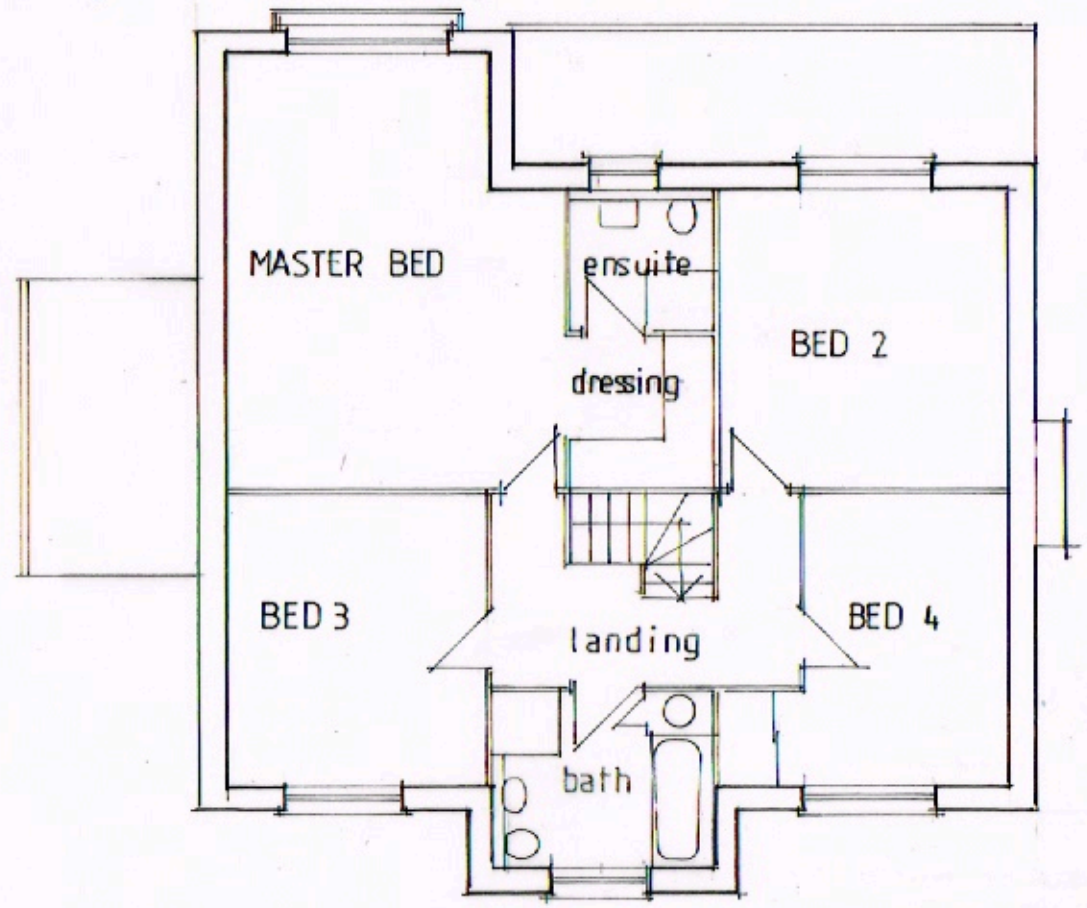
Indicative: 25.9°







GROUND FLOOR



FIRST FLOOR

PROPOSED REPLACEMENT DWELLING
Roma Farm Cottage. Wineham Lane Wineham. BN5 9AG

Plans as Proposed

2401/02

SCALE 1:100
DATE MAR 24
DRAWN

Repropoint 528359

Annex C - Part G Calculations

Existing 3-Bed Bungalow Modelled Water Consumption

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)	6	1.46	0.00	8.76
	Part flush Volume (litres)	4	2.96	0.00	11.84
WC (multiple fittings)	Average effective flushing Volume (litres)		4.42	0.00	0
Taps (excluding kitchen/utility room taps)	Flow rate (litres/min)	15.00	1.58	1.58	25.28
Bath (where shower also present)	Capacity to overflow(litres)	200.00	0.11	0.00	22.00
Shower (where bath also present)	Flow Rate(litres / minute)	12.00	4.37	0.00	52.44
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)	10.00	0.44	10.36	14.76
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)			156.74
	(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)			142.63
	(10)	External water use			5.0
	(11)	Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day)			147.6

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Approved (DC/23/1745) 5-Bed Bungalow Modelled Water Consumption

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)	3.75	4.42	0.00	16.58
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)		4.42	0.00	0
Taps (excluding kitchen/utility room taps)	Flow rate (litres/min)	5.00	1.58	1.58	9.48
Bath (where shower also present)	Capacity to overflow(litres)	140.00	0.11	0.00	15.40
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)	6.00	0.44	10.36	13.00
Washing Machine	(Litres/kg dry load)	5.00	2.1	0.00	10.50
Dishwasher	(Litres/place setting)	0.92	3.6	0.00	3.31
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)			94.49
	(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)			85.99
	(10)	External water use			5.0
	(11)	Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day)			91.0

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Proposed 4-Bed two storey development

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)	5	1.46	0.00	7.30
	Part flush Volume (litres)	3	2.96	0.00	8.88
WC (multiple fittings)	Average effective flushing Volume (litres)		4.42	0.00	0
Taps (excluding kitchen/utility room taps)	Flow rate (litres/min)	5.00	1.58	1.58	9.48
Bath (where shower also present)	Capacity to overflow(litres)	140.00	0.11	0.00	15.40
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)	6.00	0.44	10.36	13.00
Washing Machine	(Litres/kg dry load)	5.00	2.1	0.00	10.50
Dishwasher	(Litres/place setting)	0.92	3.6	0.00	3.31
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)			94.09
	(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)			85.62
	(10)	External water use			5.0
	(11)	Total water consumption (Building Regulation 17.K) =(9)+(10)(litres/person/day)			90.6

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