

Residential development at Brooklands, Finchampstead

Flood Risk summary

This document provides a summary of the flood risk data obtained from the Environment Agency (EA) for the above property.

Old Louma Cottage is detached building located to the rear of Brooklands, Hollybush Ride, Finchampstead, see existing block plan in **Appendix A**.

The proposed scheme comprises the change of use of a detached annex (Old Louma Cottage) to a self-contained dwelling. See proposed plan in **Appendix B**.

A topographic survey has been undertaken. See **Appendix C**. The survey shows the site falls westwards within the eastern half of the site with levels ranging between 49.0m - 54.0m AOD. There is a small-scale ditch which runs through the centre site in a N-S direction (shown on block plan but not picked up on survey). West of the ditch, site levels rise westwards to at least 51.75m AOD (survey did not extend to western boundary thought to be due to dense vegetation). Photos of the ditch are enclosed in **Appendix D**.

The proposed residential development is classed as More Vulnerable Development under the National Planning Policy Framework (NPPF) Table 2: Flood Risk Vulnerability Classification. The National Planning Policy Framework (NPPF) states that sequential and exception test should not need to be applied to minor development or changes of use (except for a change of use to a caravan, camping or chalet site, or to a mobile home or park home site).

The Flood Map for planning confirms the site is wholly located in Flood Zone 1 'Low Probability' – Land at less than 1 in 1000 (0.1%) annual probability of river or sea flooding. See **Appendix E**.

The flood map is assumed not fully take into account structures such as culverts which can influence local flooding. The Flood Map for Planning does not map fluvial flood risk from minor watercourses. However, the "Risk of Flooding from Surface Water" map is considered a reasonable initial indicator of fluvial flood risk from minor watercourses such as the ditch on site, further details on the surface water flood risk is provided within this assessment.

The surface water flood map shows the majority of the site is at very low risk of surface water flooding, see map in **Appendix E**. The low, medium and high flood risk coincide with the alignment of the existing ditch within the site. The proposed development plan has been superimposed onto the surface water flood map and it shows the proposed dwelling is wholly located outside the surface water floodplain approximately 20m away from the ditch, see plan in **Appendix F**. The 1 in 1000 year (light shaded blue extent) flood level is interpolated to be 49.60m AOD.

EA flood maps indicate the site is not at risk of flooding in the event of a breach from reservoirs.

British Geological Survey (BGS) Mapping shows the site is likely to be underlain by Windlesham Formation comprising sand, silt and clay. BGS borehole records indicates the groundwater level is a minimum 10m below the ground surface based on a borehole log east of the site (SU86SW263) and therefore it is considered the risk of groundwater flooding is low. See **Appendix G**.

Due to the proposed location of the dwelling away from main roads it is assumed the risk of sewer flooding is negligible.

The Wokingham Borough Council Strategic Flood Risk Assessment SFRA hold no historical flood records for the site, see **Appendix H**.

Ground levels at the proposed dwelling are a minimum 50.30m AOD. It is recommended the finished floor level (FFL) of the dwelling is set at 50.45m AOD, 150mm above surrounding ground levels to mitigate the residual flood risk associated with excess surface water runoff in an extreme rainfall event. Setting the FFL at this level will also provide sufficient freeboard (850mm in this case) above the 1 in 1000 year flood level of the ditch which runs through the site.

Where the new access road is proposed a small extension to the culvert is required. Any extension to the culvert will need to be of an appropriate size so that it does not affect the current capacity of the culvert. The final design of the culvert will be a separate process requiring ordinary watercourse consent and will not form part of the drainage design for the site.

304169/MH
26.07.2024

Appendix A – Existing Site Plan

Appendix B – Proposed Site Plan

Appendix C – Topographic Survey

Appendix D – Photos of ditch

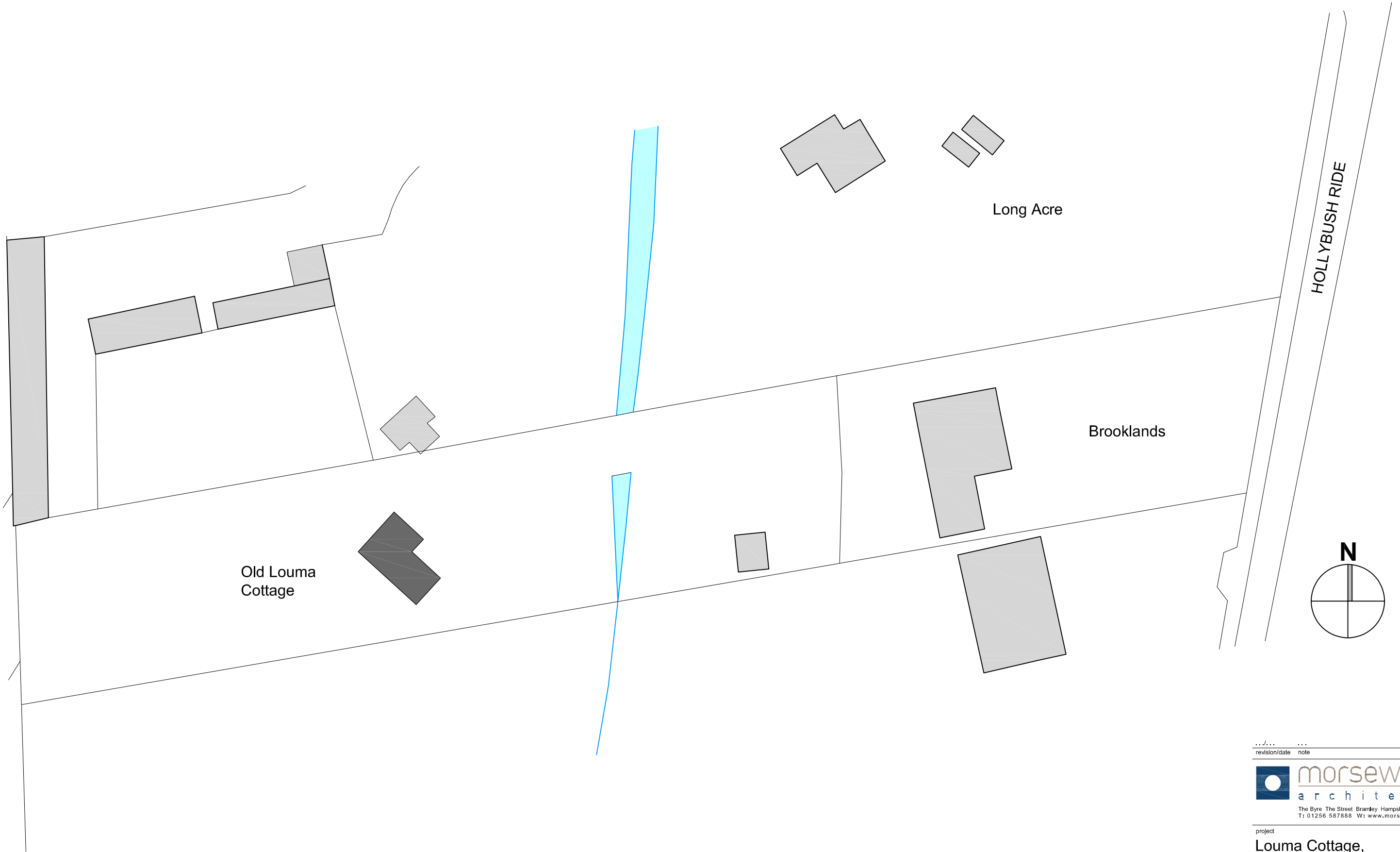
Appendix E – Flood Map Extracts

Appendix F – Surface Water Map superimposed onto proposed site layout

Appendix G – British Geological Survey Records

Appendix H – SFRA Map Extracts

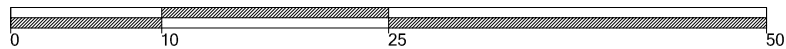
Appendix A – Existing Site Plan



01 EXISTING BLOCK PLAN

1:500

Scale Bar. 1:500



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revision/date	note
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project

Louma Cottage,
Finchampstead

title

Existing Block Plan

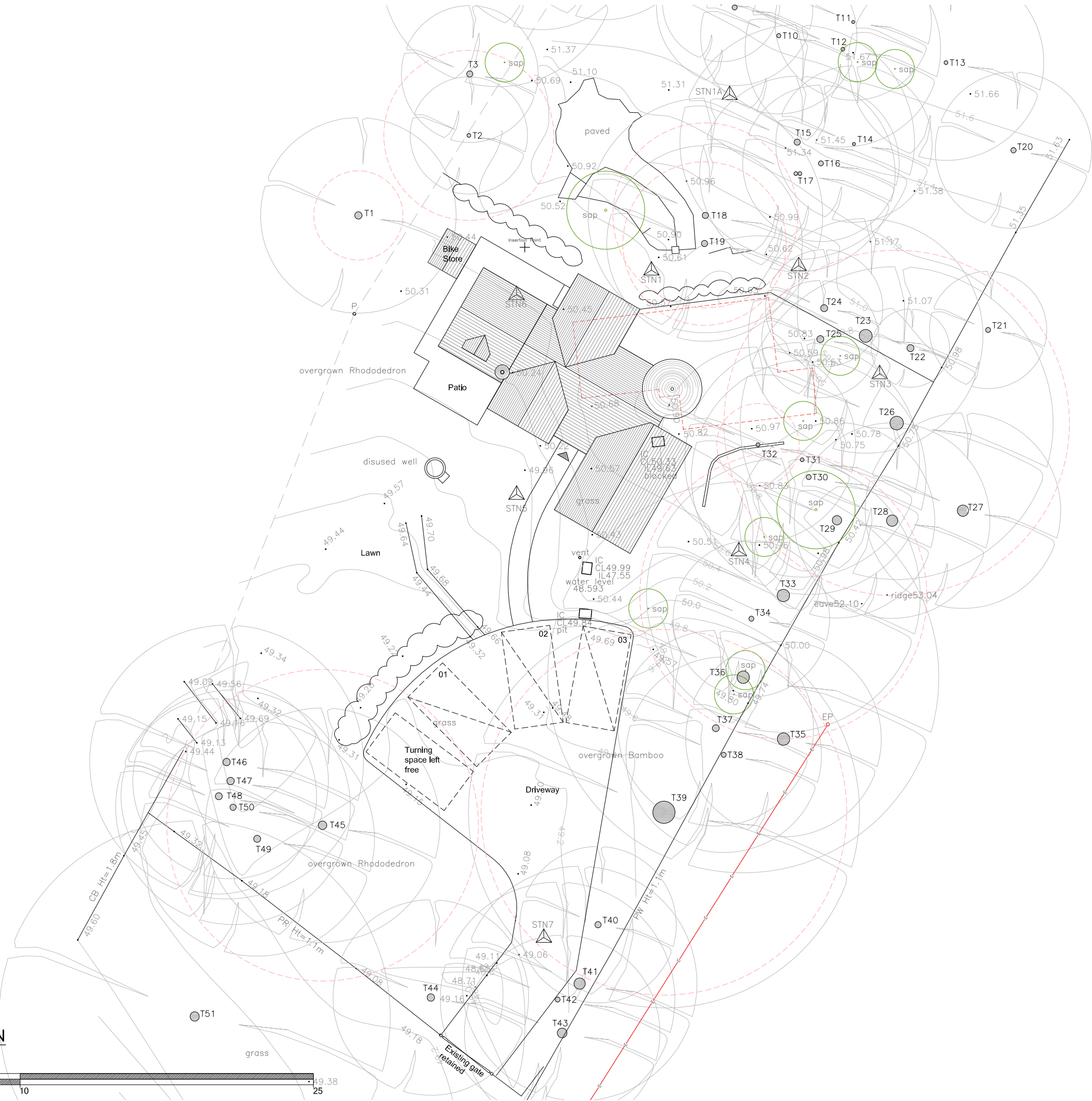
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1:500 @A3	PRELIMINARY	
job no.	dwg no.	status/revision
1001	SK06	PR00

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Appendix B – Proposed Site Plan

01 PROPOSED SITE PLAN

1:200
Scale Bar, 1:200



revision/date	note
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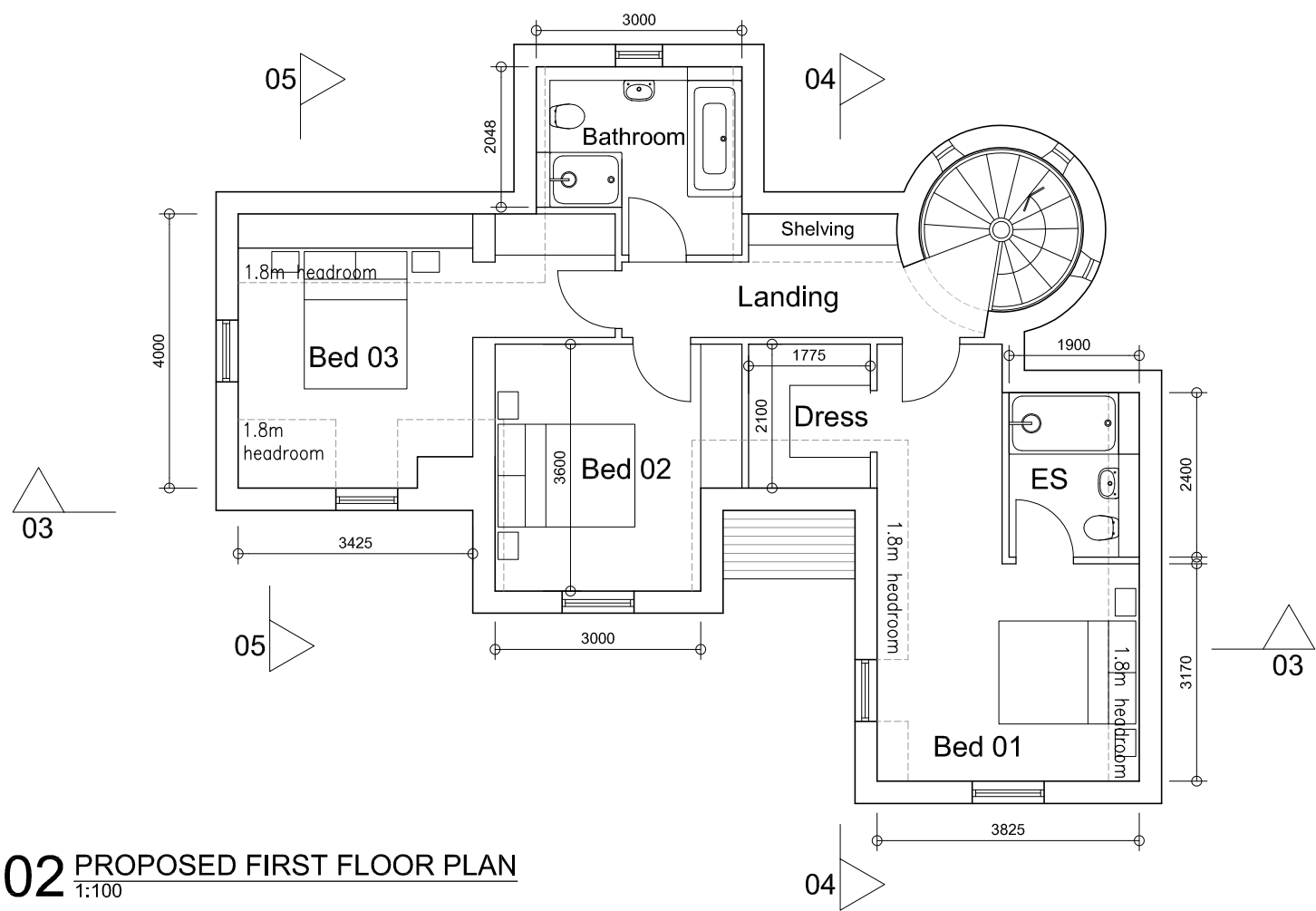


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project
Louma Cottage Finchampstead
title
Proposed Site Plan

scale	status	
1:200 @A3	PRELIMINARY	
job no.	dwg no.	status/revision
1001	SK04	PR00
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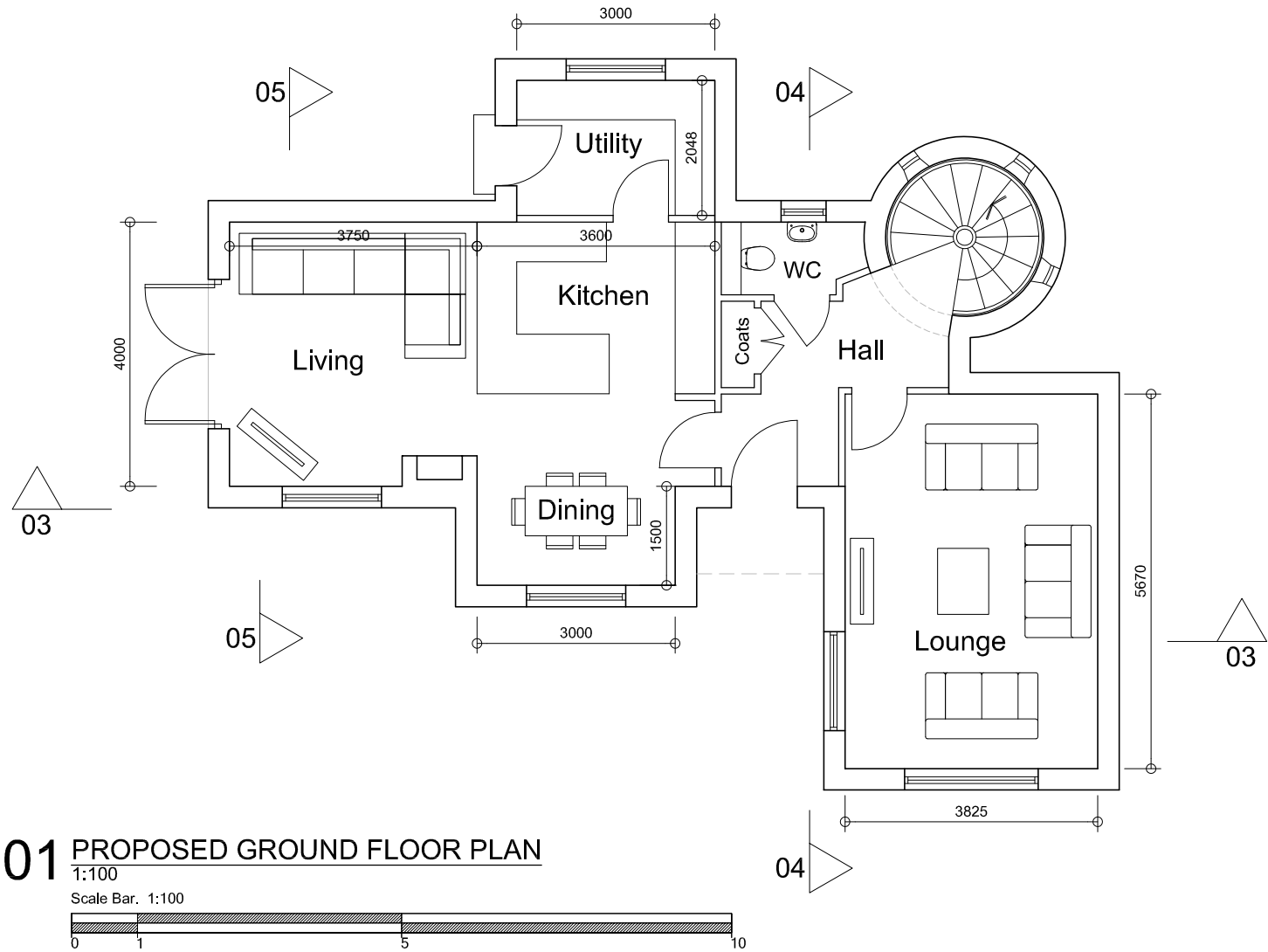


02 PROPOSED FIRST FLOOR PLAN
1:100



03 PROPOSED MODEL VIEW
NTS

	Gross Internal Area (m²)	Gross External Area (m²)
GF	78	95
FF	77	95
Total	155	190



01 PROPOSED GROUND FLOOR PLAN
1:100

01/28.06.2024 General amendments and room dimensions added.
revision/date note



project
Louma Cottage
Finchampstead

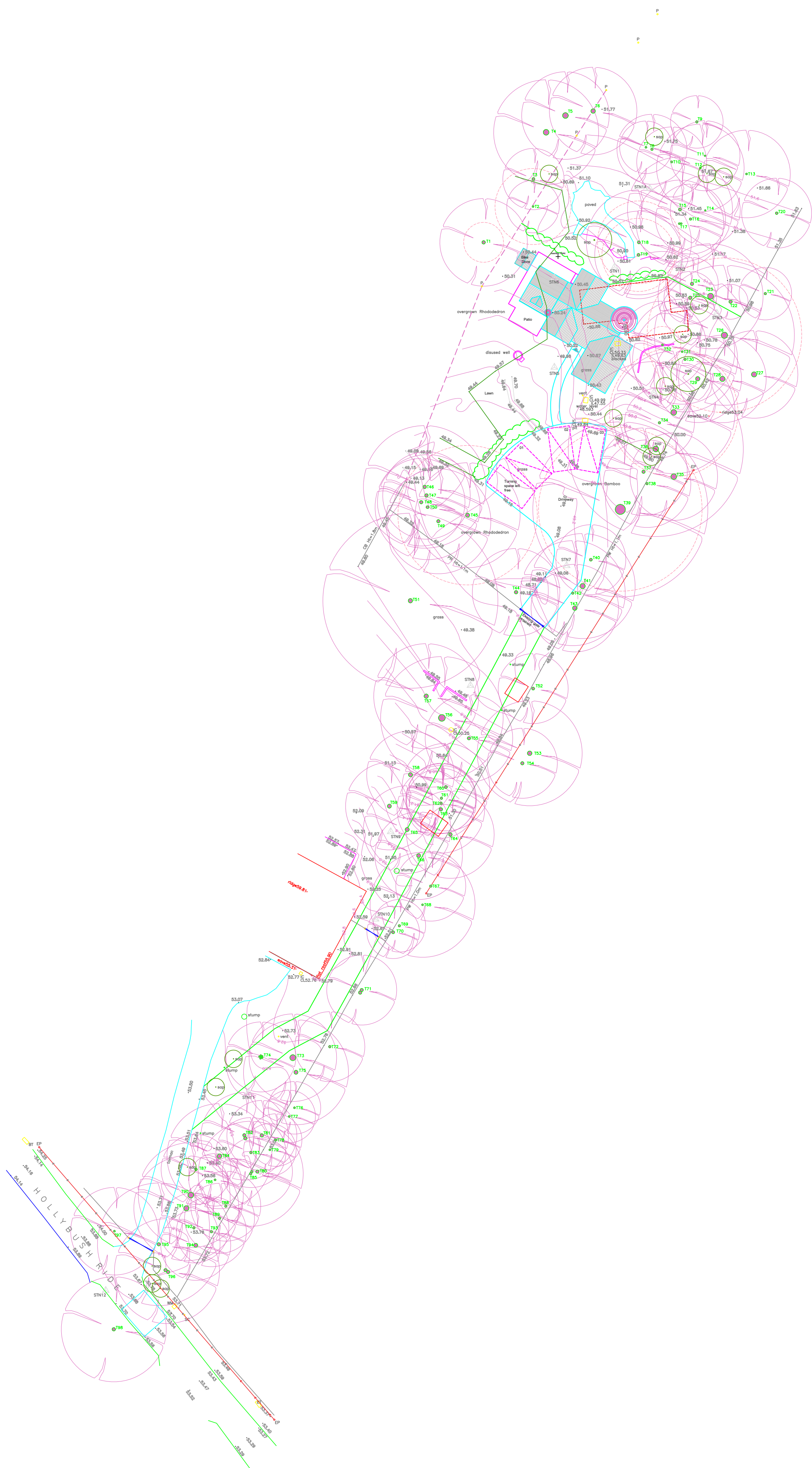
title
Proposed Floor Plans &
Model View

scale 1:100 @A3	status PRELIMINARY	
job no. 1001	dwg no. SK03	status/revision PR01

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Appendix C – Existing Topographic Survey



Appendix D – Photos of on site ditch



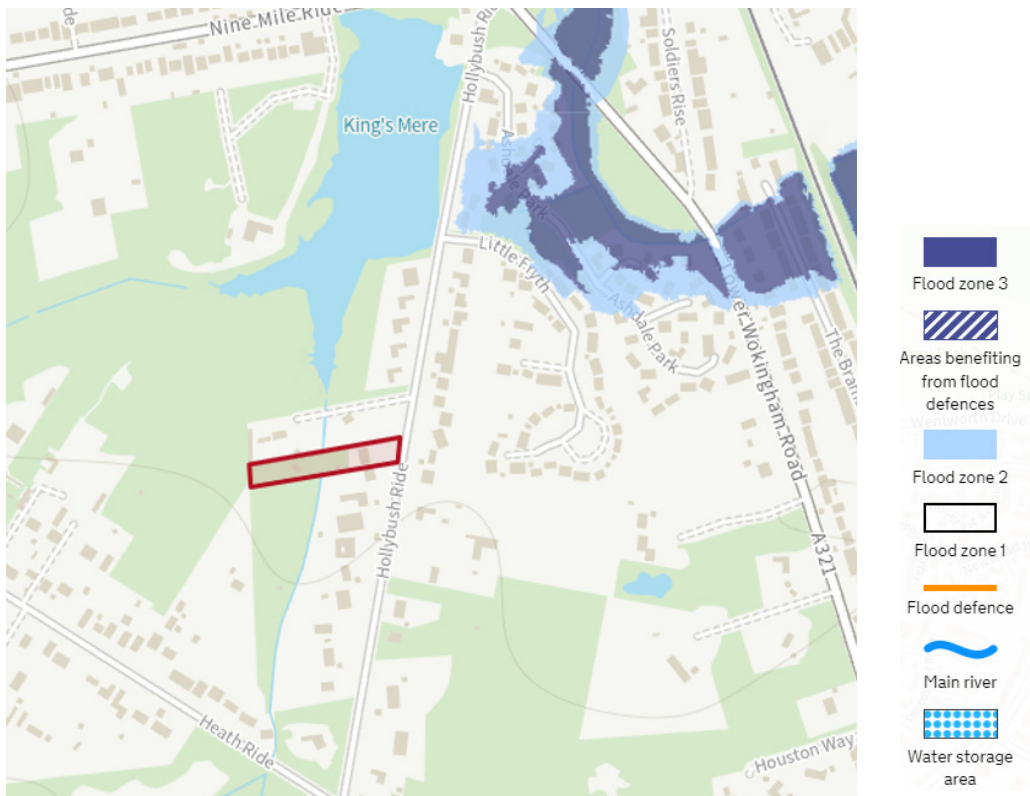
Showing small 'bridge' over the ditch and the water in the ditch



Area surrounding the gate and ditch looking eastwards towards Brooklands.

Appendix E – EA Flood Map Extracts

River and Sea Flooding



Flood Map For Planning

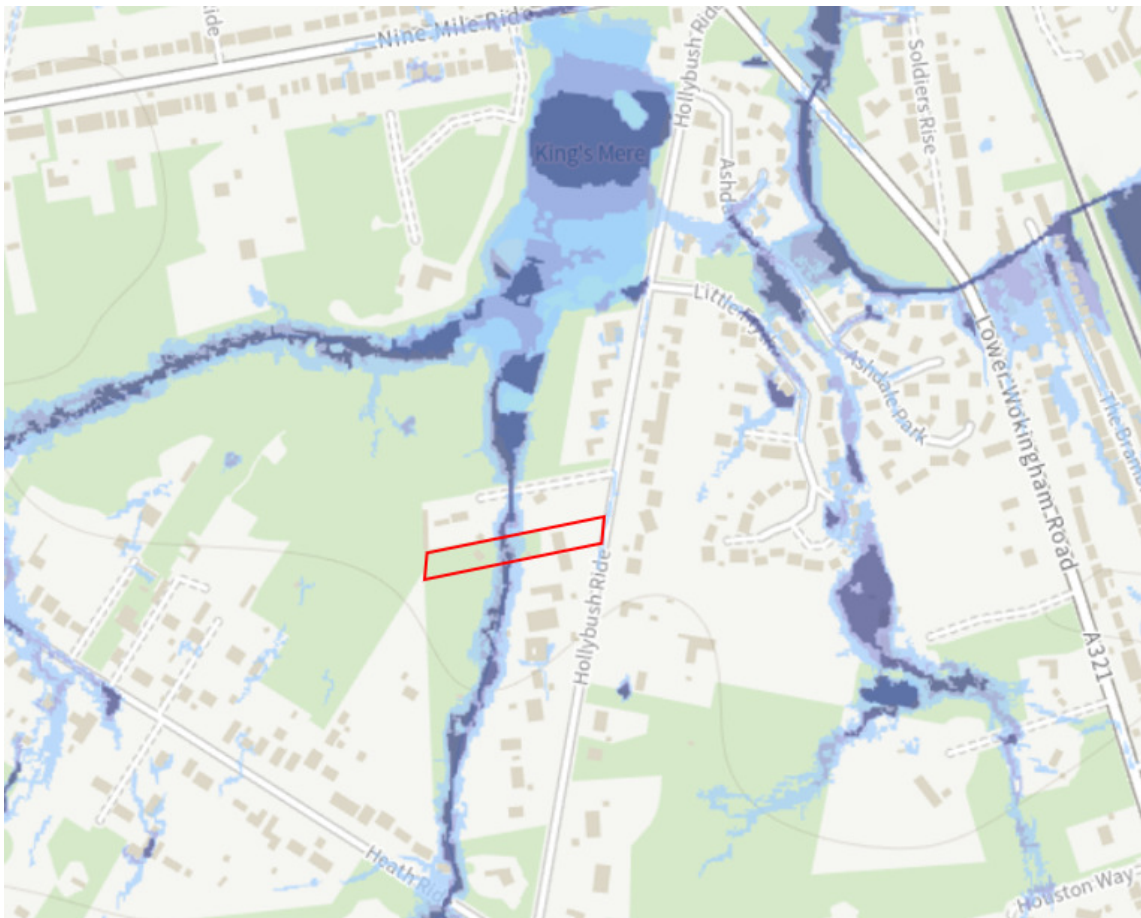
Flood risk from rivers or the sea

Low Probability (Flood Zone 1) means that each year this area has a chance of flooding of less than 0.1%. This takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

Medium Probability (Flood Zone 2) means that each year this area has a chance of flooding of between 0.1% and 1%. This takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

High Probability (Flood Zone 3) means that each year this area has a chance of flooding of greater than 1%. This takes into account the effect of any flood defences in the area. These defences reduce but do not completely stop the chance of flooding as they can be overtopped, or fail.

Surface Water Flooding



Extent of flooding from surface water

[High](#)
 [Medium](#)
 [Low](#)
 [Very low](#)

Flood Map – Surface Water

Flood risk from surface water

Very low risk means that each year this area has a chance of flooding of less than 0.1%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

Low risk means that each year this area has a chance of flooding of between 0.1% and 1%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

Medium risk means that each year this area has a chance of flooding of between 1% and 3.3%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

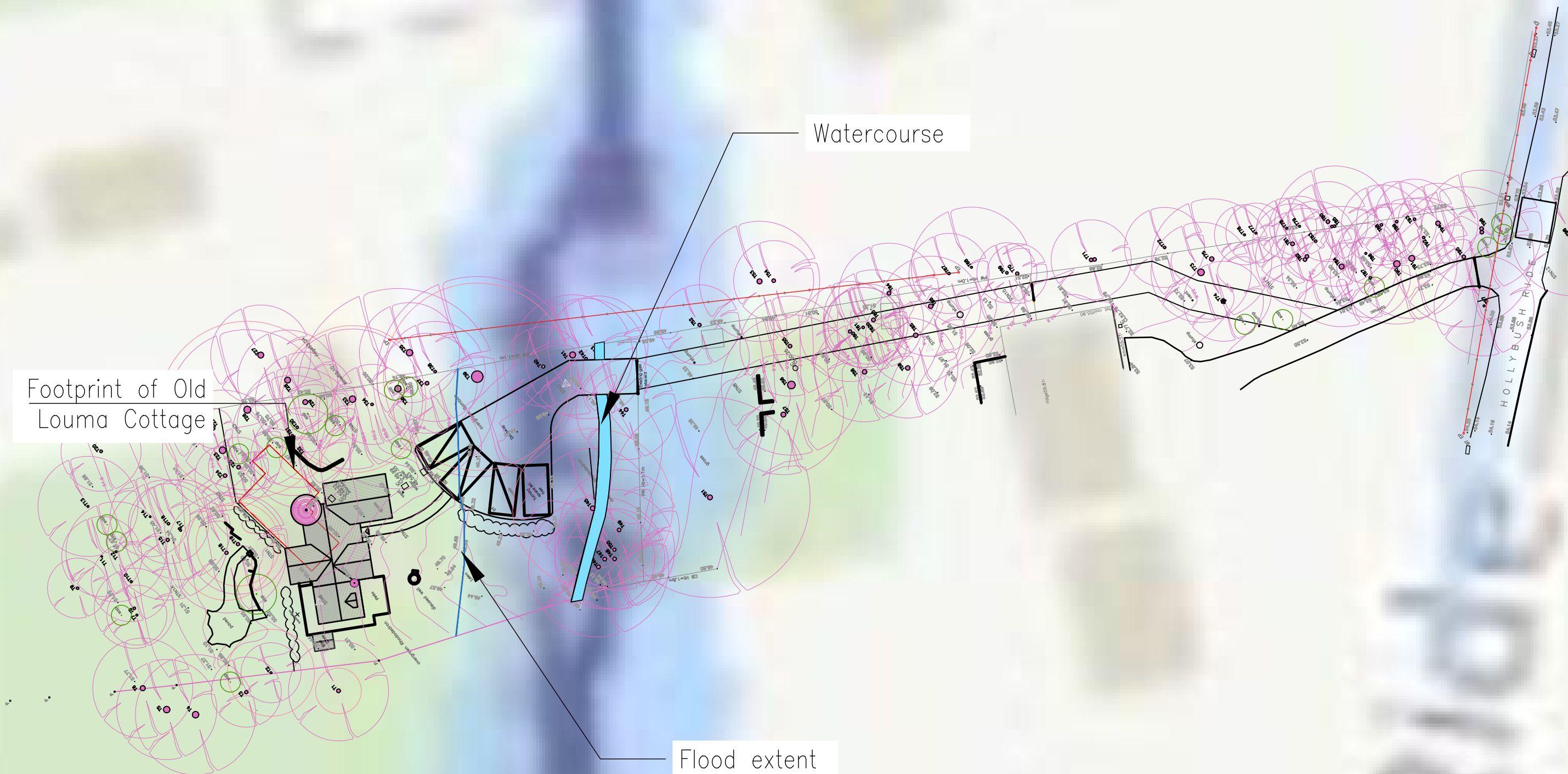
High risk means that each year this area has a chance of flooding of greater than 3.3%. Flooding from surface water is difficult to predict as rainfall location and volume are difficult to forecast. In addition, local features can greatly affect the chance and severity of flooding.

Appendix F – Surface Water Map superimposed onto proposed site layout

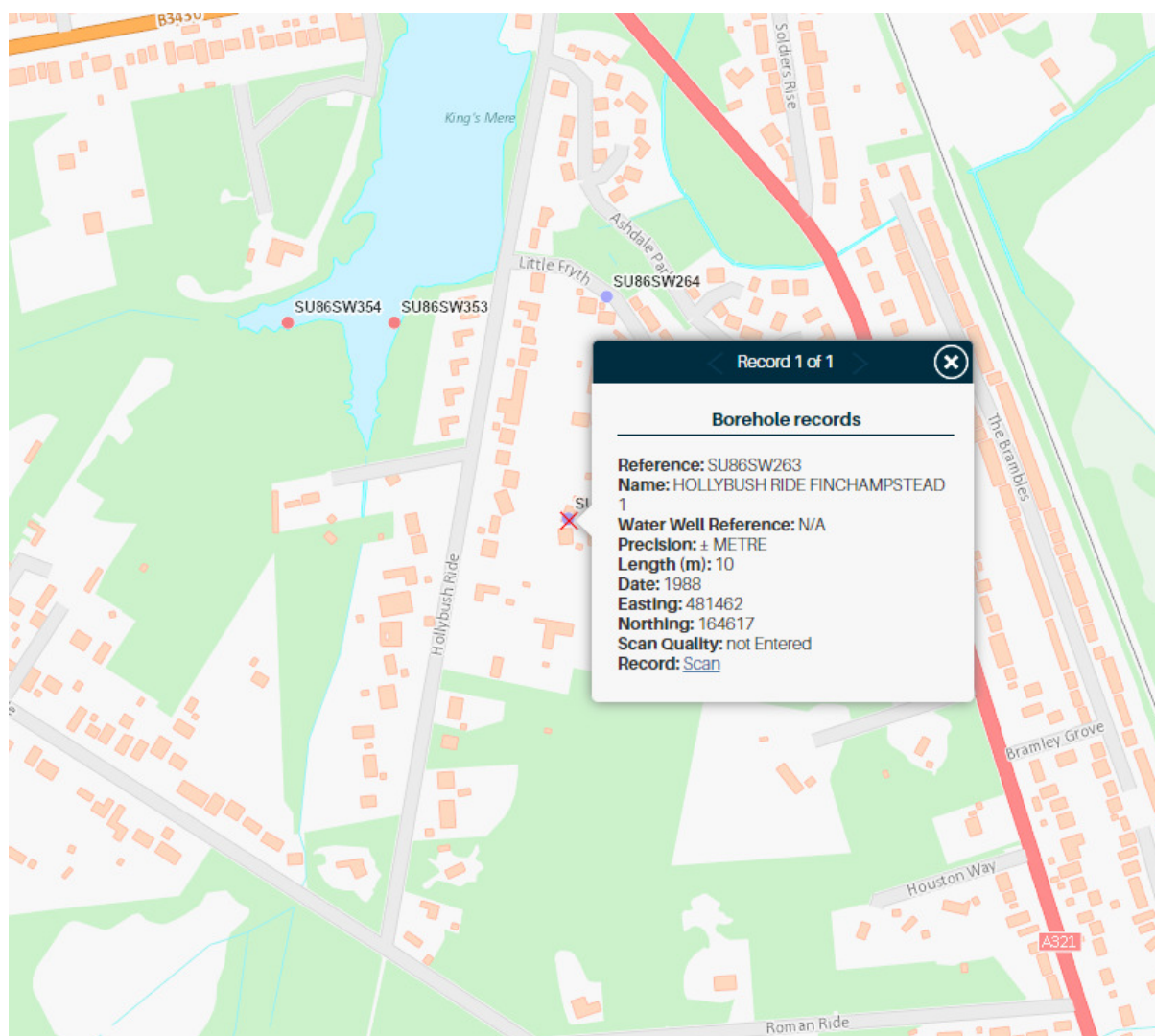
Footprint of Old
Louma Cottage

Watercourse

Flood extent



Appendix G – British Geological Survey Records



Source: <https://www.bgs.ac.uk/information-hub/borehole-records/>

PAGE: 2		LOCATION 481462 164617		BOREHOLE 1				
DATE: 24.10.88		HOLLYBUSH RIDE - FINCHAMPSTEAD						
DESCRIPTION	REDUCED	DEPTH	LEGEND	SAMPLE		THICKNESS	SPT	REMARKS
	LEVEL m	m		TYPE	DEPTH			
TOPSOIL Loose clayey SAND with a little gravel. ...		0.00 0.10	X X			0.10		The hole remained dry.
Firm to stiff brown grey mottled sandy ... CLAY		0.80	U100	0.80				-855 /1 / 0.80
			D	1.30				-855 /1 / 1.30
			U100	2.00				-855 /1 / 2.00
			SPT D	2.50		38		-855 /1 / 2.50
Dense clayey SAND with a little gravel. ...		2.50						
Stiff laminated sandy CLAY			SPT B	4.00		2.50	31	-855 /1 / 4.00
			U100	5.50				-855 /1 / 5.50
			B	6.00	2.00			-855 /1 / 6.00
			U100	7.00				-855 /1 / 7.00
Medium dense clayey SAND		7.00						
			SPT D	8.50		3.00	29	-855 /1 / 8.50
			SPT D	9.50			28	-855 /1 / 9.50
		10.00						
TERRAMECH INVESTIGATIONS LIMITED 183 LONG LANE TILEHURST READING		REMARKS:						
U100=100mm dia. UNDISTURBED SAMPLE B=BULK SAMPLE		U38=38mm dia. UNDISTURBED SAMPLE SPT=STANDARD PENETRATION TEST		D=SMALL DISTURBED SAMPLE CPT=CONE PENETRATION TEST				

Appendix H – SFRA Flood Map Extracts

Wokingham Borough Council Preliminary Flood Risk Assessment

Historical Flooding incidents from local sources of flooding

