



Agricultural Land Classification (ALC) Report

Land at Knowle Lane, Cranleigh

June 2023

Gleeson Strategic Land Limited

Reference: 230622.R.001



Agricultural Land Classification (ALC) Report


Land at Knowle Lane,
Cranleigh

Client: Gleeson Strategic Land
Limited

Reference:	Current Version:	Date:
230622.R.001	Version 1.0	June 2023

Reference:	Previous Versions	Date

Author:	Checked / Approved by:
Phoebe Sowerby BA(Hons) MSc GradIEMA	Lauren Manning BSc(Hons) MEnvSc M.I. Soil Sci
	
Position: Graduate Consultant	Position: Principal Consultant

	Roberts Environmental Ltd., 1 Croft Stairs, Newcastle upon Tyne, NE1 2HG	0191 230 4521
		enquiries@robertsenvironmental.co.uk
		www.robertsenvironmental.co.uk

This report has been prepared by Roberts Environmental Limited (REL), with all reasonable skill, care and diligence within the terms of the Contract with the client, incorporation of our General Terms and Condition of Business and taking account of the resources devoted to us by agreement with the client.

We disclaim any responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at its own risk.

The Report has been prepared in accordance with the Agreement and is subject to all terms contained therein. The Report is addressed to and is for the sole use and reliance of the Client. REL accepts no liability for:

- A) any use of or reliance upon the Report by the Client other than in accordance with the Agreement; and
- B) any use of or reliance upon the Report by any third party who is not a party to the Agreement.

Contents

1.	SCOPE & OBJECTIVES	1
2.	SITE DETAILS	2
3.	METHODOLOGY	3
4.	DESK BASED RECONNAISSANCE	4
5.	INTRUSIVE SURVEY FINDINGS	9
6.	CONCLUSIONS AND RECOMMENDATIONS	11

Figures

Figure 1: Site Boundaries (defined in red)	2
Figure 2: Soils Mapping for the Site and Surrounding Area (site location indicated in red)	5
Figure 3: Flood Risk Present from Rivers and the Sea for the Site (site boundary defined in red)	6
Figure 4: Flood Risk Present from Surface Water for the Site (centre of site shown with cross) ...	7

Tables

Table 1: Summary of Agroclimatic Data for the site	4
Table 2: Summary of Flood Risk in Accordance with MAFF Guidance	6
Table 3: Summary of Flood Risk for Bassingham Site from EA Data	8
Table 4: Summary of Soils Identified on Site	9
Table 5: Wetness Class assessment for Soil Type Encountered on Site	10
Table 6: ALC Classification	11

Appendices

I	-	Site Plans
II	-	Site Survey Logs
III	-	Site Survey Photographs
IV	-	Summary of Findings
V	-	Terminology

1. Scope & Objectives

The Services	Agricultural Land Classification (ALC) Report	
The Client	Gleeson Strategic Land Limited	
Appointment Details	The Services have been carried out in accordance with the revised Proposal dated 21 June 2023 and REL's Terms and Conditions of Engagement, (together " the Agreement ") as accepted by the Client on 21 June 2023.	
Site Name	Land at Knowle Lane	
Site Address	Land at Knowle Lane, Cranleigh, GU6 8JN (" the Property ")	
Proposed Use	It is understood that the site is to be developed for 162 No. residential dwellings with associated landscaped areas, children's play area and wildflower meadow/public open space.	
Planning Application	WA/2023/00294 as submitted to Waverley Borough Council on 19 January 2023.	
Information Sources (Where appropriate documents are contained in Appendix II with data extracts provided and summarised within pertinent sections of this report. List not exhaustive)	Online Source	Magic Web Mapping Service, DEFRA, 2023.
		British Geological Survey (BGS) Database and Mapping.
		BGS Geoindex Web Mapping Service.
		BGS 1: 50,000 scale Provisional Series, Geological Map, England and Wales, Sheet 301 (Haslemere), available on the BGS map portal.
		Ministry of Agriculture, Fisheries and Food (MAFF), Post-1988 Agricultural Land Classification Surveys Database and Mapping.
		Google Historic Aerial Imagery.
		National Library of Scotland Historical Ordnance Survey England and Wales, 1855-1956 Maps.
	Documentation Source	Soil Classification for Soil Survey, Monographs on Soil Survey, Butler, B E (1980), Clarendon Press, Oxford.
		Soil Survey Field Handbook, Describing and Sampling Soil Profiles, Soil Survey of England and Wales, Technical Monograph No. 5, 1976.
		Meteorological Office (Met Office), 1989, Climatological Data for Agricultural Land Classification – Gridpoint Datasets of Climatic Variables, at 5km intervals, for England and Wales.
		MAFF, 1988, Agricultural Land Classification of England and Wales – Revised Guidelines and Criteria for Grading the Quality of Agricultural Land.
		Soils and their use in South East?? England, 1984, Soil Survey of England and Wales Memoir and accompanying 1:250,000 scale map.
	Previous Reports	No previous reports, including Post-1988 ALC surveys, are available for the site.
	Site Works	The site works were undertaken by REL during June 2023.

2. Site Details

National Grid Ref.	Approximate centre of surveyed site area: 505867, 138328
Ground Level Topography	Range 53-68m AOD, average for site: c.60.5m AOD.
Site Area	Total: 11.70 hectares.
Usage	Agricultural rotation for crop and open public access land.
Location	The subject site is located south-west of Cranleigh village centre.

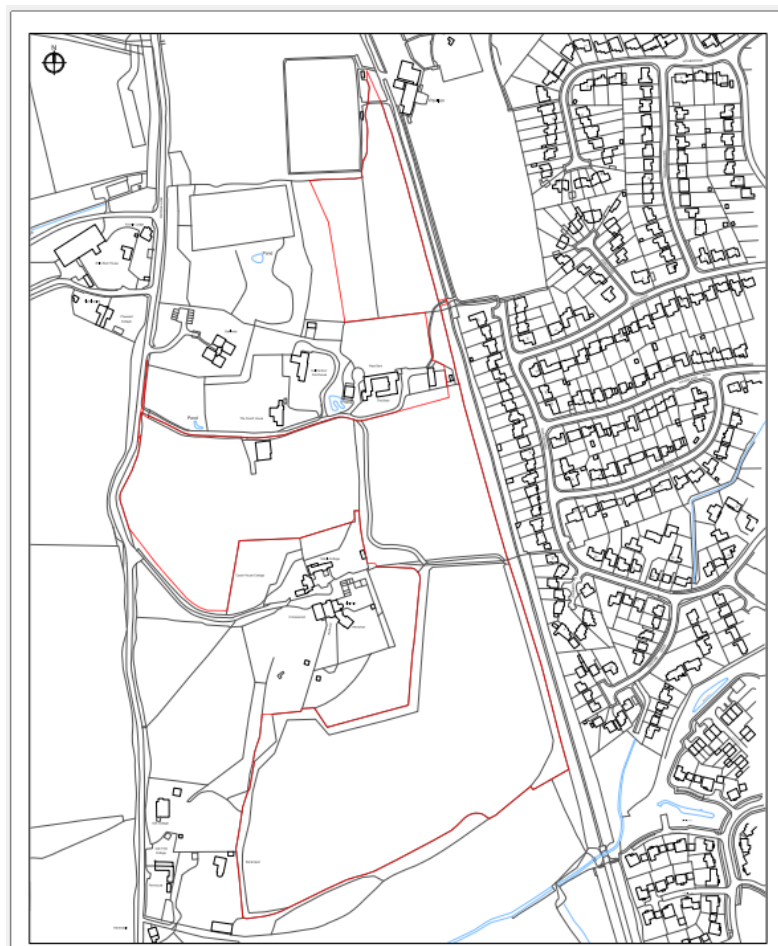


Figure 1: Site Boundaries (defined in red)

Current Site Description and Activities	The subject site comprises agricultural fields which are currently in use for arable crop (based on observations made during the site visit) and woodland.
Surrounding land uses	Surrounding land uses comprise mainly agricultural fields to the south and west, interspersed with residential properties to the north and east of the site.
Site History	From earliest mapping dated 1885, the site is shown as agricultural land.
Current Grading	The site is currently mapped as Grade 3 on the provisional 1: 250,000 scale ALC map (MAFF, 1983) see Appendix V for key to the gradings.

3. Methodology

Desk Study

An initial desk-based study has been undertaken to provide a reconnaissance of the general site characteristics, including soil type(s) and agricultural classification, using published data sources.

Where available, Post-1988 ALC Surveys (undertaken at varying scales and levels of detail, ranging from 1:5,000 to 1:50,000 scale) have been consulted. Surveys included on this map provide the most detailed and up to date ALC grading following surveys between 1989 and 1999 by MAFF (now part of DEFRA).

Climatological data provided by the Met Office has been used to determine the overriding agroclimatic site limitations, using interpolated values based on the central point of the site.

Intrusive Soil Survey

The intrusive soil survey comprised at least one hand auger boring per hectare to a depth of 1.20m below ground level (where achievable) in accordance with current guidance. These were undertaken to examine the soil profiles, using standard soil survey methods.

In addition, in order to determine subsoil structure, at least one inspection pit has been excavated for each soil type encountered.

ALC Grade Assessment

All factors have been considered (listed in **Appendix V**), including those which pose no limitation on the ALC grading for the site.

Using the information collected during the site survey and the MAFF ALC guidance document, an ALC grade was then determined for the site (**Appendix I**). A brief overview of relevant terminology is included in **Appendix V**.

4. Desk Based Reconnaissance

Prior to the intrusive site investigation, a review of available desk-based information was undertaken. Pertinent information has been summarised below.

Climate Data

Using the climatological data set (Met Office, 1989) the following information (**Table 1**) has been calculated for the site. Calculations comprised altitude adjustment and interpolation, using the formula presented within the data set.

Table 1: Summary of Agroclimatic Data for the site

Land at Knowle Lane (Site Centre Grid Reference: 505867, 138328)		
Average Annual Rainfall (mm)	AAR	788.47
Accumulated Temperature (°C)	ATO	1462.15
Field Capacity Duration (Days)	FCD	166.04
Moisture Deficit Wheat (mm)	MDWHT	106.50
Moisture Deficit Potatoes (mm)	MDPOT	99.58

The site is identified to have below average AAR and FCD, with an above average ATO when compared to the mapped values for the area east of Crawley (Soils and their Use in South East England, 1984).

Using the AAR and ATO values within **Table 1**, the site is considered to be Grade 1 according to climate (Figure 1, MAFF 1988). Therefore, climate is considered to not be a limiting factor on the site.

Topography

The site was identified to have a gradient between 0° and 2°, therefore topography is identified to not be a limiting factor of the ALC grade of the site (Table 1, MAFF 1988).

BGS Published Data

A review of BGS information has identified that no Made Ground areas or superficial deposits are indicated across the site. The bedrock geology is indicated as the Weald Clay Formation (Mudstone or Sandstone) across the site.

Published Soils Data

The approximate site location is indicated below in **Figure 2**, an extract of the Soil Mapping plan (Soils and their use in South East England, 1984).

The site is recorded as having soils of the Wickham 5 Association (711i), described as slowly permeable seasonally waterlogged fine loamy over clayey, fine silty over clayey and clayey soils, locally reddish. Some coarse loamy soils with slowly permeable subsoils and slight seasonal waterlogging over sandstone.



Figure 2: Soils Mapping for the Site and Surrounding Area (site location indicated in red)

Previous Reports

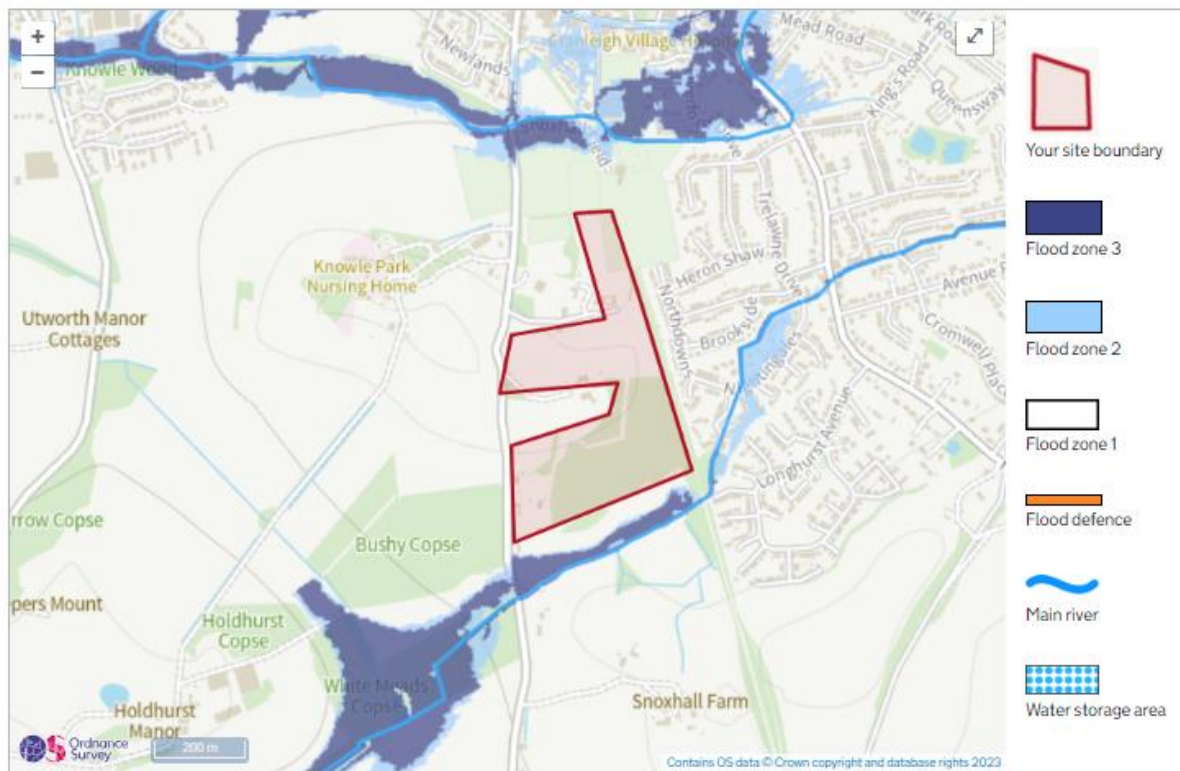
No previous ALC reports are available for the site.

Flood Risk Assessment

Since the ALC guidance document was published in 1988, the Environment Agency (EA) has updated the way the risk of flooding is assessed. Therefore, the terms used in the 1988 guidance (Table 2, MAFF 1988) have been paired to the current EA flood risk classifications below. The impact of flood risk is then assessed to confirm if it can pose a limitation to the ALC grade of the site, in accordance with the guidance available (MAFF, 1988).

Table 2: Summary of Flood Risk in Accordance with MAFF Guidance

EA Flood Classification	MAFF Flood Classifications
Zone 3a High Probability	Frequent
Zone 3b Functional Floodplain	Frequent
Zone 2 Medium Probability	Occasional
Zone 1 Low Probability	Rare to Very Rare



► [What the flood map shows](#)

Figure 3: Flood Risk Present from Rivers and the Sea for the Site (site boundary defined in red)

The interactive EA Flood Map for Planning on the UK Government website identifies the site to be within Flood Zone 1, Low Probability (**Figure 3**).

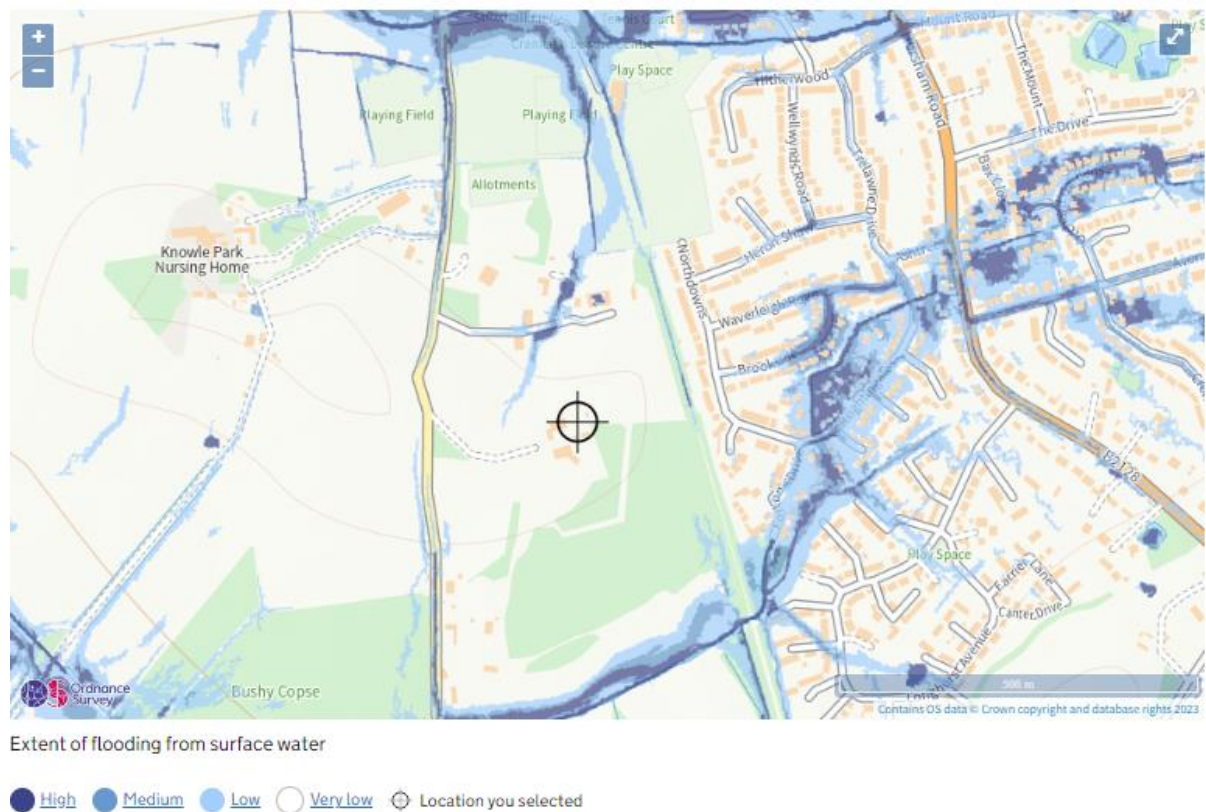


Figure 4: Flood Risk Present from Surface Water for the Site (centre of site shown with cross)

Small areas across the site, associated with an unnamed watercourse present, are denoted as having a Low risk of flooding from surface water/watercourses (**Figure 4**), it is seen that this is in the north of the site and runs towards the south-west.

The impact of flood risk is assessed to confirm if it can pose a limitation to the ALC grade of the site, in accordance with the guidance available (MAFF, 1988). For the purpose of grading, due to the lack of detailed information relating to duration of flooding, the areas impacted by flooding are considered to be impacted on an Occasional frequency and Medium duration and a Frequent frequency and Short duration (**Table 3**).

Table 3: Summary of Flood Risk for Bassingham Site from EA Data

ALC Grade	Frequency and Duration	Area Affected (ha)
1	Rare (short)	0.00
2	Rare (medium)	0.00
2	Occasional (short)	0.00
3a	Rare (long)	0.00
3a	Occasional (medium)	1.50
3a	Frequent (short)	
3b	Occasional (long)	0.00
3b	Frequent (medium)	0.00
4	Frequent (long)	0.00

It is considered that due to the impacted areas being so small in comparison to the size of the site, it is unlikely that it would be possible to cultivate these areas using different techniques to the rest of the field. Therefore, the flood risk is not considered to pose enough of a limitation to the cultivation of the surrounding areas to reduce the ALC Grade outside of these discrete areas.

5. Intrusive Survey Findings

The survey identified One Soil Type across the entire site. A generalised profile of the soil type encountered has been described below (**Table 4**) however, some localised variations were recorded. Complete soil logs are provided in **Appendix II** and photographs of the surveyed soils are presented in **Appendix III**.

Table 4: Summary of Soils Identified on Site

	Depth (cm)	Texture	Munsell Colour	Stones (%)	Mottles	Structure
Soil Type 1	0-30	Heavy Silty Clay Loam (HZCL)	Strong Brown (7.5 YR 5/8)	15	No Mottles	Moderate Medium Angular Blocky
	30-70	Silty Clay (ZC)	Strong Brown (7.5YR 4/6)	15	Grey (GLEY 1 7/N) and Ochreous (5YR 5/8) Mottles	Moderate Coarse Prismatic
	70-110	Silty Clay (ZC)	Reddish Brown (5YR 5/8)	5	Grey (GLEY 1 8/N) Mottles	Strong Coarse Prismatic

The general profile for the soil type identified on the Site has been used to assess the Wetness Class (WC). The general profile is reflective of the findings in the soil pit associated with the Soil Type identified on site. The assessment process and results of the in-field wetness assessment is provided within **Table 5** below.

Table 5: Wetness Class assessment for Soil Type Encountered on Site

Parameters	Findings				
Soil Type	Type 1				
Disturbed	Yes ✓ No				
FCD	166.04				
SPL < 80cm	✓ Yes No				
Justification	At a depth of 30cm, the SPL was identified to be present due to the following characteristics: Silty Clay (ZC) coarse prismatic structure moderately developed less than 0.50% biopores greater then 0.50 mm diameter evidence of wetness in the layer; ochreous mottles				
Soil Type	Peat ✓ Red Other				
Gleyed	Yes ✓ No				
Depth to Gleying	<40cm	>40cm <70cm	>70cm		
Justification	NA				
Resulting Reference	✓ Figure 7	Figure 8	Table 12	Table 13	NA
Wetness Class	IV				

Notes: This Table follows the flow chart of Figure 6 (MAFF, 1988) to identify the wetness classification per Soil Type, with the selected parameters shown in **bold**.

6. Conclusions and Recommendations

The ALC grading for the site area is summarised below within **Table 6**, overall findings of this assessment can be found in **Appendix IV**. The table identifies the grade of the areas of agricultural land present across the site (**Appendix I**).

Table 6: ALC Classification

ALC Grade	Area (Ha)	Percentage
Grade 1	0.00	0.00%
Grade 2	0.00	0.00%
Subgrade 3a	0.00	0.00%
Subgrade 3b	11.70	100.00%
Grade 4	0.00	0.00%
Grade 5	0.00	0.00%
Non-Agricultural	0.00	0.00%
Total BMV	0.00	0.00%
Total Non-BMV	11.70	100.00%
Total Surveyed Area	11.70	100.00%

The site has been identified to comprise of One Soil Type, summarised in **Table 4**.

Soil Type 1

Wetness Limitation

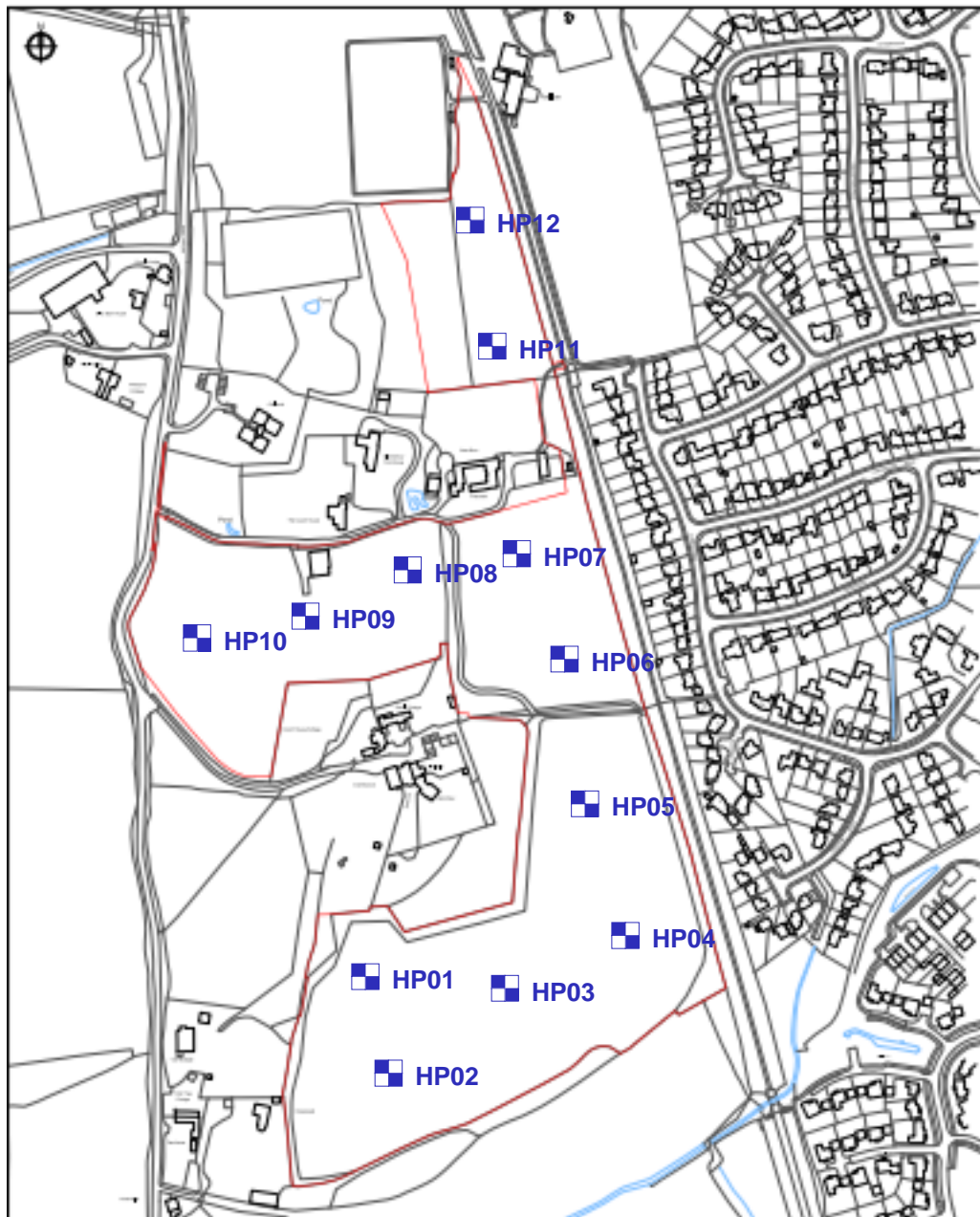
The combination of the topsoil texture (Heavy Silty Clay Loam), Wetness Class IV and the number of Field Capacity Days (166.04) results in **ALC Grade 3b** for Soil Type 1.

Overall Site ALC Grade and Conclusions

Best and Most Versatile (BMV) agricultural land has not been identified on the site, the site is indicated as ALC Grade 3b.

APPENDIX I

SITE PLANS



DO NOT SCALE

Key

 **HP00** Hand Pit

CLIENT:

Gleeson Strategic Land
Limited

PROJECT:

Land at Knowle Lane, Cranleigh

TITLE:

Exploratory Hole Location Plan

DESIGN / DRAWN:

BL

DATE:

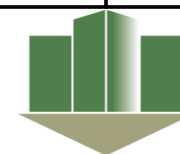
June 2023

PROJECT NO:

230622

DRAWING NO:

230622.01

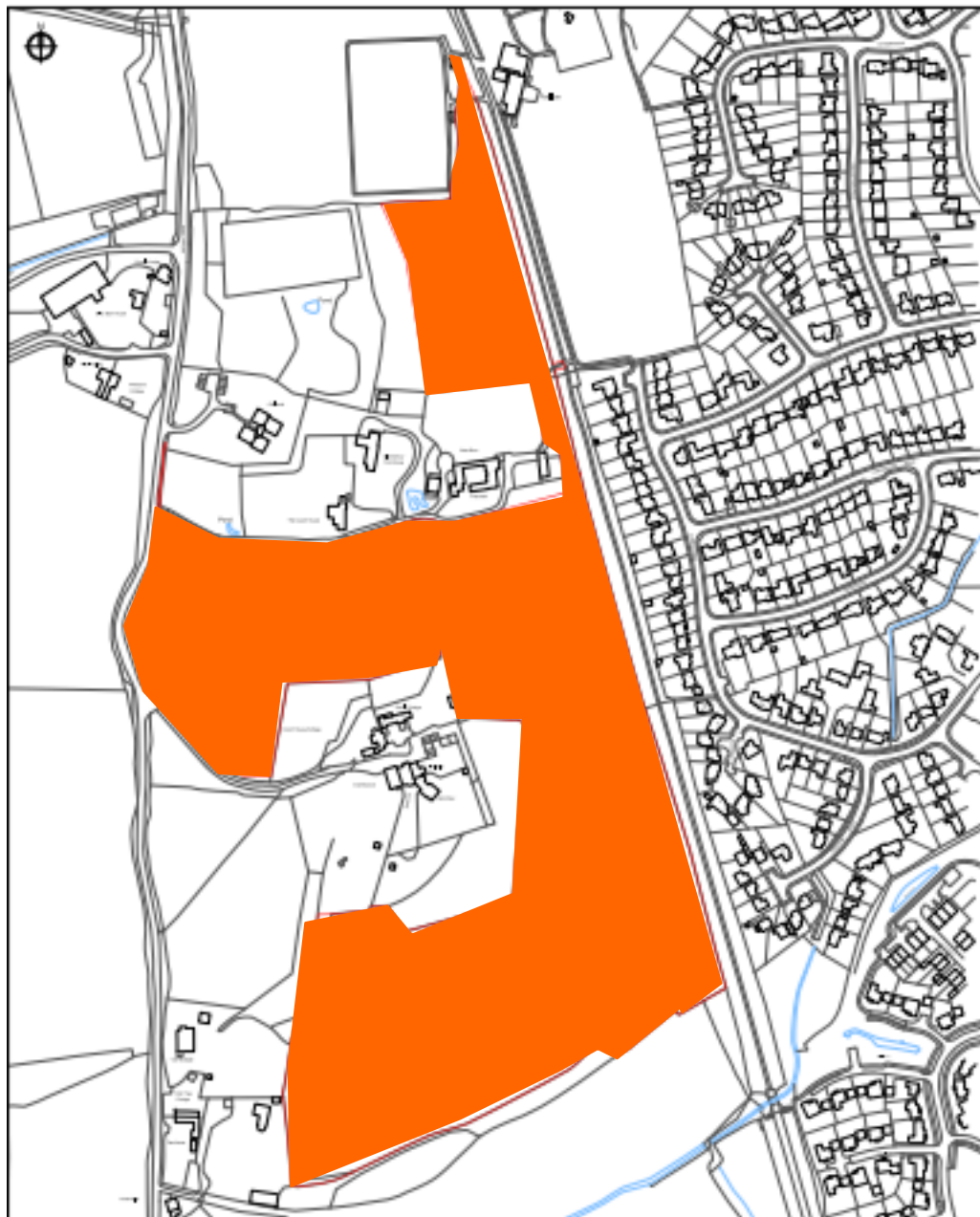


ROBERTS
ENVIRONMENTAL LTD

1 Croft Stairs, Newcastle upon Tyne NE1 2HG

Tel: +44 (0) 191 2304521

[http:// www.robertsenvironmental.co.uk](http://www.robertsenvironmental.co.uk)



DO NOT SCALE

Key



Soil Type One

CLIENT:

Gleeson Strategic Land
Limited

PROJECT:

Land at Knowle Lane, Cranleigh

TITLE:

ALC Soil Types

DESIGN / DRAWN:

PS

DATE:

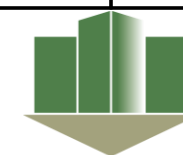
June 2023

PROJECT NO:

230622

DRAWING NO:

230622.02

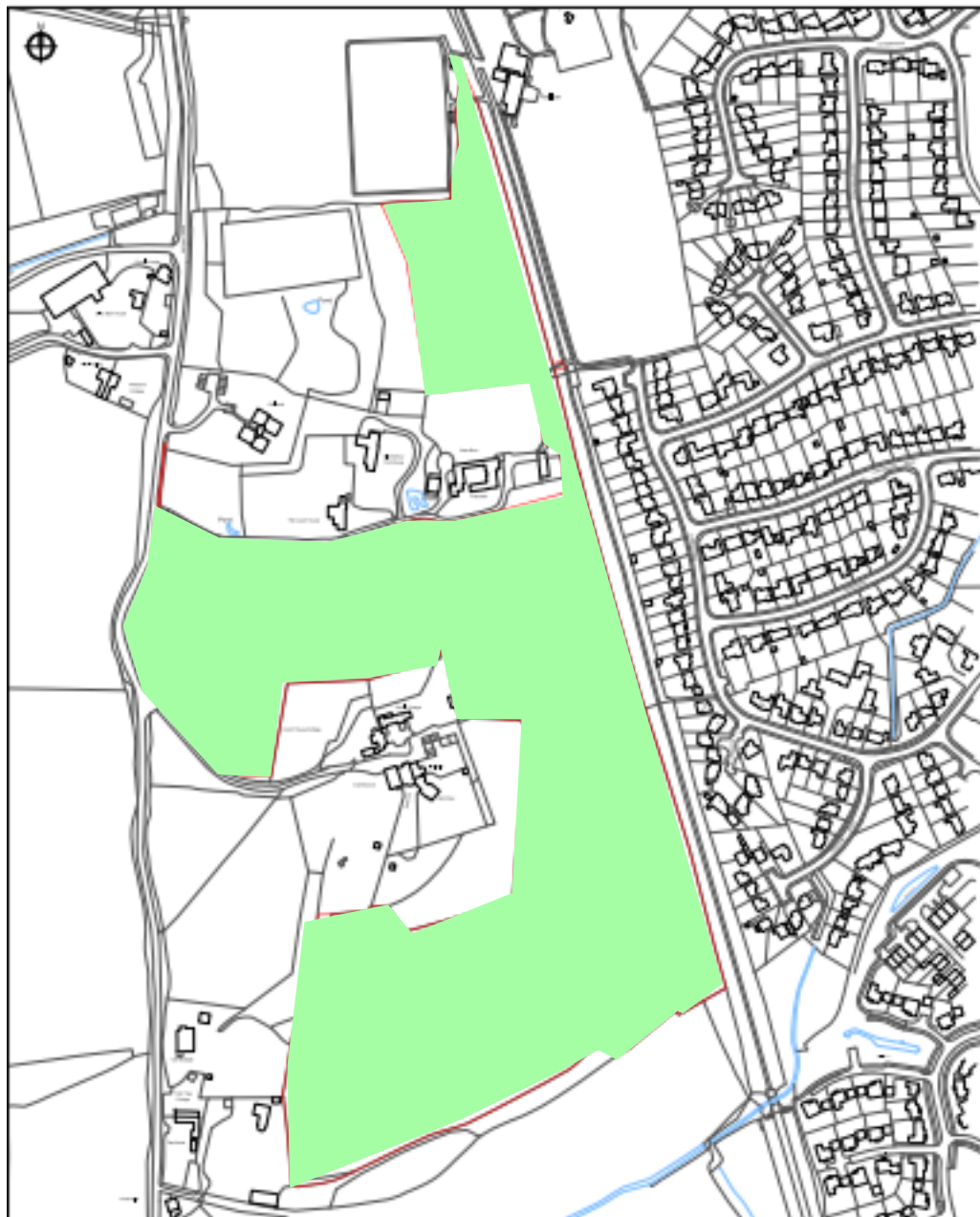


ROBERTS
ENVIRONMENTAL LTD

1 Croft Stairs, Newcastle upon Tyne NE1 2HG

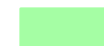
Tel: +44 (0) 191 2304521

[http:// www.robertsenvironmental.co.uk](http://www.robertsenvironmental.co.uk)



DO NOT SCALE

Key



ALC Grade 3b

CLIENT:

Gleeson Strategic Land
Limited

PROJECT:

Land at Knowle Lane, Cranleigh

TITLE:

ALC Grades

DESIGN / DRAWN:

PS

DATE:

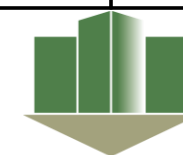
June 2023

PROJECT NO:

230622

DRAWING NO:

230622.03



ROBERTS
ENVIRONMENTAL LTD

1 Croft Stairs, Newcastle upon Tyne NE1 2HG

Tel: +44 (0) 191 2304521

[http:// www.robertsenvironmental.co.uk](http://www.robertsenvironmental.co.uk)



APPENDIX II



SITE SURVEY LOGS

BH No.	Depth (cm)	Texture	Stones	Mottling	Structure	Depth (cm)	Texture	Stones	Mottling	Structure	Depth (cm)	Texture	Stones	Mottling	Structure
1	0-30	HZCL	5	*	MAB	30-55	ZC	5	F-X	CP					
2	0-30	HZCL	5	*	MAB	30-50	ZC	5	F-X	CP	50-100	ZC	5	*	CP
3	0-30	HZCL	5	*	MAB	30-40	ZC	5	F-X	CP	40-90	ZC	5	F-X	CP
4	0-40	HZCL	5	*	MAB	40-100	ZC	15	*	CP					
5	0-20	HZCL	5	*	MAB	20-60	ZC	5	*	CP	60-110	ZC	5	F-X	CP
6	0-30	HZCL	15	*	MAB	30-70	ZC	15	*	CP	70-115	ZC	15	F-X	CP
7	0-35	HZCL	15	F-X	MAB	35-50	ZC	5	F-X	CP	50-100	ZC	5	*	CP
8	0-30	HZCL	5	*	MAB	30-45	ZC	5	F-X	CP	45-100	ZC	5	F-X	CP
9	0-35	HZCL	5	*	MAB	35-100	ZC	15	F-X	CP					
10	0-20	HZCL	15	*	MAB	20-40	ZC	35	*	CP	40-90	ZC	5	F-X	CP
11	0-25	HZCL	15	*	MAB	25-45	ZC	15	*	CP	45-100	ZC	15	F-X	CP
12	0-35	HZCL	15	*	MAB	35-55	ZC	15	*	CP	55-110	ZC	5	F-X	CP

APPENDIX III

SITE SURVEY PHOTOGRAPHS

Photograph Number	Photograph Description	Photograph
1.	<p>Land at Knowle Lane, Cranleigh</p> <p>Location 1</p> <p>Photograph showing the pit at Location 1. This image shows Soil Type 1.</p>	
2.	<p>Land at Knowle Lane, Cranleigh</p> <p>Location 8</p> <p>Photograph showing the topsoil and subsoil at Location 8 in Soil Type 1.</p>	
3.	<p>Land at Knowle Lane, Cranleigh</p> <p>Location 2</p> <p>Photograph showing the topsoil structure at Location 2 in Soil Type 1.</p>	

Photograph Number	Photograph Description	Photograph
4.	<p>Land at Knowle Lane, Cranleigh</p> <p>Location 2</p> <p>Photograph showing the subsoil structure at location 2 in Soil Type 1.</p>	
5.	<p>Land at Knowle Lane, Cranleigh</p> <p>Photograph showing the site.</p>	

APPENDIX IV

SUMMARY OF FINDINGS

Job Name:	Cranleigh
Job Number:	230622
Date:	30/06/2023
Completed By:	Lauren Manning

Site Altitude:	60
Centre Grid Ref:	5058 1383

AAR	788.47
ATO	1462.15
FCD	166.04
MDMWHT	106.50
MDMPOT	99.58

Soil Type 1	
AP WHT	119.00
MB WHT	12.50
AP POT	100.5
MB POT	0.92



Site Limitations Summary	
	Soil Type 1
Wetness Class	IV
Wetness Grading	3b
Droughtiness Wheat	2
Droughtiness Potato	2
Gradient Limitaion	1
Soil Depth Limitation	1
Stoniness Limitation	1
	Overall
Site Climatic Limitation	1
Flooding Limitation	1
Overall Grade	3b

Agricultural Land Classification (ALC)

The Agricultural Land Classification (ALC) provides a framework for classifying land according to the extent to which its physical or chemical characteristics impose long- term limitations on agricultural use. The limitations can operate in one or more of four principal ways: they may affect the range of crops which can be grown; the level of yield; the consistency of yield and the cost of obtaining it. The classification system gives considerable weight to flexibility of cropping, whether actual or potential, but the ability of some land to produce consistently high yields of a somewhat narrower range of crops is also taken into account.

These factors form the basis for classifying agricultural land into one of five grades (with Grade 3 land divided into Subgrades 3a and 3b since the guidelines were revised in 1988), ranked from Excellent (Grade 1) to Very Poor (Grade 5). ALC grading is determined using the Ministry of Agriculture Food and Fisheries (MAFF) "*Agricultural Land Classification of England and Wales – Revised guidelines and criteria for grading the quality of agricultural land*".

Definition of Agricultural Land Classification Grades

ALC Grade	Description
Grade 1	Excellent quality agricultural land No or very minor limitations to agricultural use.
Grade 2	Very good quality agricultural land Minor limitation which affect crop yield, cultivation or harvesting.
Subgrade 3a (pre-1988 Grade 3)	Good quality agricultural land Capable of producing moderate to high yields of a narrow range of arable crops or moderate yields of a wider range of crops.
Subgrade 3b (pre-1988 Grade 3)	Moderate quality agricultural land Capable of producing moderate yields of a narrow range of arable crops and/or lower yields of a wider range of crops.
Grade 4	Poor quality agricultural land Severe limitations which significantly restrict the range of crops and/or levels of yield.
Grade 5	Very poor quality agricultural land Very severe limitations which restrict use to permanent pasture or rough grazing.

Best and Most Versatile (BMV) Agricultural Land

The National Planning Policy Framework (NPPF) (Department for Communities and Local Government, 2012) defines Best and Most Versatile (BMV) agricultural land as land of Excellent (ALC Grade 1), Very Good (Grade 2) and Good (Grade 3a) agricultural quality. BMV land is provided a degree of protection against development within planning policy, with most Local Plans including specific policies which refer to the protection of BMV agricultural land.

Non-BMV agricultural land, i.e. Moderate, Poor and Very Poor quality agricultural land is designated subgrade 3b or Grades 4 and 5 respectively, and is restricted to a narrower range of agricultural uses. Limited to no protection is provided against development on this grade land within planning policy.

Limiting Factors

Main Factor	Sub Factor	Explanation
Climatic Limitations	Overall Climatic Limitation	Using a dataset of five parameters, as set on a 5km grid for the whole of the UK, the site climatic values are used to determine if there is an overriding limiting factor for the site with regard to the wider climate.
	Local Climatic Factors	Where the above climatic factors are liable to be modified by local factors such as aspect, gradient and elevation then one or more of these factors may become a limiting factor for the site.
Site Limitations	Gradient	Gradient may have an impact on mechanised farm operations and also on soil erosion. The ALC grade limitations with reference to gradient are given in Table 1 of the MAFF guidance.
	Microrelief	Complex changes in slope angle and direction over short distances may have an impact on agricultural machinery. The effect of microrelief is considered in conjunction with overall gradient.
	Flooding	The extent, duration, frequency and timing of flooding may have an influence over the ALC Grade and could become the limiting site factor. The ALC grade limitations with reference to flooding are given in Tables 2 and 3 of the MAFF guidance.
Soil Limitations	Soil Texture and Structure	Soil texture and structure can influence the water retention, water movement and aeration of the soil and therefore affect the workability, trafficability, poaching risk and suitability for plant growth. Soil texture is determined by the proportions of sand, silt and clay and is used to assess the wetness class of the soil.
	Soil Depth	Soil depth can influence the available water capacity of the soil, restrict nutrient uptake, root growth and root anchorage. The ALC grade limitations with reference to soil depth are given in Table 4 of the MAFF guidance.
	Stoniness	Stone content can influence the cultivation, harvesting and crop growth and may negatively impact machinery. The ALC grade limitations with reference to stoniness are given in Table 5 of the MAFF guidance.
	Chemical Limitations	Certain physical limitations may limit soil chemical properties, such as saline conditions, organic matter and toxic elements.
Interactive Limitations	Soil Wetness	Soil wetness is assessed using a combination of factors including climate, soil water regime and soil texture. The ALC grade limitations with reference to soil wetness are given in Tables 6 and 7 of the MAFF guidance.
	Droughtiness	Soil droughtiness is assessed using a combination of factors including available water capacity, moisture deficit, moisture balance and irrigation. The ALC grade limitations with reference to droughtiness are given in Table 8 of the MAFF guidance.
	Soil Erosion	Soil erosion may be caused by wind or water action and is determined by interactions between weather, soil type, topography and vegetation cover.

Soil Series

Soil series is the lowest categorical level used for classifying soils in England and Wales. According to the Soil Survey of England and Wales 1984:

"Soil series are defined using a combination of three main properties, the broad type of parent material present (substrate type), the texture of the soil material (textural grouping) and the presence or absence of material with a distinctive mineralogy."

Higher categories are: Major Soil Group, Soil Group, and Soil Subgroup, which are not explicitly used in this report.

Soil Association

A soil association is a geographic grouping of soils identified by the name of the most frequently occurring soil series and by the combination of additional soil series.

Gleying

Gleying is the process of iron reduction (opposite to oxidation) in soils from ferric (reddish in colour) to ferrous compounds (grey or colourless), by microorganisms or by-products of decomposing organic matter. Gleying occurs in areas devoid of oxygen when the soil is waterlogged. The resulting mottling (spots or blotches of colour) can therefore be used to identify the existence of a Slowly Permeable Layer (SPL); as defined within the MAFF ALC guidance.