



Agricultural Land Classification (ALC) Desk-Based Assessment

Land South of Longfield Road, Meopham

October 2025

Richborough Estates Ltd

Reference: 250506.01.PA.01

Agricultural Land Classification (ALC) Desk-Based Assessment

Land South of Longfield Road, Meopham

Client: Richborough Estates Ltd

Reference:	Current Version:	Date:
250506.01.PA.01	Version 1.0	October 2025

Author:	Checked by:	Approved by:
Sofie Stikbakke BSc (Hons)	Emelia Hewett BSc(Hons) MSc	Emily Broughton BSc(Hons) MSc MIEnvSc M.I. Soil Sci.
Position: Graduate Consultant	Position: Consultant	Position: Technical Operations Manager and Principal Geo-Environmental 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.....	4
4. CLIMATE DATA	6
5. BRITISH GEOLOGICAL SURVEY AND SOILS PUBLISHED DATA	7
6. FLOOD RISK LIMITATIONS.....	9
7. AVAILABLE ALC DATA	10
8. PUBLISHED SOIL DESCRIPTIONS.....	11
9. INDICATIVE ALC GRADE AND CONCLUSIONS.....	12

Figures

Figure 1: Site Boundaries (highlighted in red)	2
Figure 2: Soils Mapping for the Site and Surrounding Area (site location indicated in red)	8
Figure 3: Flood Risk Present from Rivers and the Sea for the Site (site boundary defined in red)	9
Figure 4: Predictive BMV Land Map Extract (site location indicated in red)	10

Tables

Table 1: Definition of Agricultural Land Classification Grades.....	5
Table 2: Summary of Agroclimatic Data for the Site	6
Table 3: Generalised Soil Profiles on Site	11

Appendices

I - ALC Grade Calculations Data Sheets	
--	--

1. Scope & Objectives

The Services	Agricultural Land Classification (ALC) Desk-Based Assessment
The Client	Richborough Estates Ltd
Appointment Details	The Services have been carried out in accordance with the Proposal dated 4 April 2025 and REL's Terms and Conditions of Engagement, (together " the Agreement ") as accepted by the Client on 6 May 2025.
Site Name	Land South of Longfield Road.
Site Address	28-30 Longfield Road, Meopham, Gravesend DA13 0JW (" the Property ").
Proposed Use	<p>It is understood that the site is to be developed for residential end use, comprising approximately 38 dwellings per hectare.</p> <p>Natural England Provisional Agricultural Land Classification Grade (pre-1988), accessed via Magic Web Mapping Service, DEFRA, 2025.</p> <p>Natural England Agricultural Land Classification Grades Post-1988 Surveys (Polygons) Database and Mapping, accessed via Magic Web Mapping Service, DEFRA, 2025.</p> <p>Natural England Likelihood of 'Best and Most Versatile' (BMV) Agricultural Land Database and Mapping – London and South East Region Region (ALC019), DEFRA, 2017.</p> <p>British Geological Survey (BGS) Database and Mapping.</p> <p>BGS GeolIndex Web Mapping Service.</p> <p>BGS 1: 50,000 scale Provisional Series, Geological Map, England and Wales, Sheet 271 (Dartford), available on the BGS map portal.</p> <p>Google Historic Satellite Imagery.</p> <p>National Library of Scotland Historical Ordnance Survey England and Wales, 1830s-1974 Maps.</p>
Information Sources	<p>(Where appropriate documents are contained in appendices with data extracts provided and summarised within pertinent sections of this report. List not exhaustive)</p>
Documentation Source	<p>Soil Classification for Soil Survey, Monographs on Soil Survey, Butler, B E (1980), Clarendon Press, Oxford.</p> <p>Hodgson, J.M (ed.) (2022). <i>Soil Survey Field Handbook</i>. Soil Survey Technical Monograph No. 5, Cranfield.</p> <p>Meteorological Office (Met Office), 1989, Climatological Data for Agricultural Land Classification – Gridpoint Datasets of Climatic Variables, at 5km intervals, for England and Wales.</p> <p>MAFF, 1988, Agricultural Land Classification of England and Wales – Revised Guidelines and Criteria for Grading the Quality of Agricultural Land.</p> <p>Natural England, Technical Information Note TIN049 Second Edition, 2012.</p> <p>Soils and their use in South East England, 1984, Soil Survey of England and Wales Memoir and accompanying 1:250,000 scale map.</p>
Previous Reports	No previous reports, including Post-1988 ALC surveys, are available for the site.
Site Works	No site works were undertaken by REL during the compilation of this report.

2. Site Details

National Grid Ref.	Approximate centre of the site: 564023, 166765.
Location	The subject site is located adjacent south of Longfield Road (B260), approximately 800m northwest of Meopham village centre. Wrotham Road (A227) is located approximately 270m east of the site, providing a link to London city centre 39.8km northwest of the site. A site boundary plan is provided below.



Figure 1: Site Boundaries (highlighted in red)

Document Purpose

An initial desk-based study has been undertaken to provide a reconnaissance of the general site characteristics, including soil type(s) and Agricultural Land Classification, using published data sources. This assessment has been made using available indicative soils and geology data to provide a predictive ALC grade for the site.

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 (if any), using interpolated values based on the central point of the site.

Publicly available Flood Risk mapping data, produced by the Environment Agency, has been reviewed as part of the assessment. No site-specific Flood Risk Assessment has been provided to inform this assessment.

A review of publicly available historic maps and Google Earth imagery has been undertaken to assess if significant Made Ground deposits may be anticipated as part of the site survey works.

3. Methodology

Agricultural Land Classification Survey Guidance

Ministry of Agricultural, Food and Fisheries (MAFF), Agricultural Land Classification of England and Wales – Revised October 1988

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.

ALC grading is determined using the MAFF 'Agricultural Land Classification of England and Wales – Revised guidelines and criteria for grading the quality of agricultural land, October 1988'. The above 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) (see **Table 1**).

Table 1: Definition of Agricultural Land Classification Grades

ALC Grade	Description
Grade 1	Excellent Quality Agricultural Land 'Land with no or very minor limitations to agricultural use. A very wide range of agricultural and horticultural crops can be grown and commonly includes top fruit, soft fruit, salad crops and winter harvested vegetables. Yields are high and less variable than on land of lower quality'.
Grade 2	Very Good Quality Agricultural Land 'Land with minor limitations which affect crop yield, cultivations or harvesting. A wide range of agricultural and horticultural crops can usually be grown but on some land in the grade there may be reduced flexibility due to difficulties with the production of more demanding crops such as winter harvested vegetables and arable root crops. The level of yield is generally high but may be lower or more variable than Grade 1'.
Subgrade 3a (pre-1988 Grade 3)	Good Quality Agricultural Land 'Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops'.
Subgrade 3b (pre-1988 Grade 3)	Moderate Quality Agricultural Land 'Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year'.
Grade 4	Poor Quality Agricultural Land 'Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land'
Grade 5	Very Poor Quality Agricultural Land 'Land with very severe limitations which restrict use to permanent pasture or rough grazing, except for occasional pioneer forage crops'.

Best and Most Versatile (BMV) Agricultural Land

The National Planning Policy Framework (NPPF, Department for Levelling Up, Housing and Communities, September 2023) is followed in the UK. The NPPF sets out national planning practice guidance with reference to agricultural land, which regulators need to consider when making planning decisions about applications involving agricultural land.

The NPPF Annex 2 – Glossary defines Best and Most Versatile (BMV) agricultural land as '*Land in grades 1, 2 and 3a of the Agricultural Land Classification*'. 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.

4. Climate Data

Using the climatological data set (Met Office, 1989) the following information (**Table 2**) has been calculated for the site. Calculations comprised altitude adjustment and interpolation, using the formula presented within the data set.

Table 2: Summary of Agroclimatic Data for the Site

(Site Centre Grid Reference: 564023, 166765)		
Average Annual Rainfall (mm)	AAR	655.12
Accumulated Temperature (°C)	ATO	1380.61
Field Capacity Duration (Days)	FCD	131.02
Moisture Deficit Wheat (mm)	MDWHT	111.36
Moisture Deficit Potatoes (mm)	MDPOT	104.80

The site is identified to have below average AAR and ATO, with a slightly above average FCD when compared to the mapped values for the area south of Southend on Sea (Soils and their Use in South East England, 1984).

Using the AAR and ATO values within **Table 2**, the site is considered to be Grade 1 according to climate (Figure 1 of the MAFF guidance document). Therefore, climate is considered to not be a limiting factor on the site.

5. British Geological Survey and Soils Published Data

Geology

Information gathered from the British Geological Survey (BGS) Geology Sheet 271 (Dartford) and the BGS Onshore GeoIndex suggests the site is located in an area mapped as being absent of significant Artificial/Made Ground.

In addition, the site is denoted as being situated within an area free of superficial deposits.

The bedrock geology for the majority of the site is indicated as the Lewes Nodular Chalk Formation, Seaford Chalk Formation and Newhaven Chalk Formation (Undifferentiated, chalk), with the Tanet Formation (sand) indicated to be present in the southeastern corner of the site.

Published Soils Data

Soils mapping for the area as shown on *Soils and their use in South East England*, 1984, Soil Survey of England and Wales Memoir and accompanying 1:250,000 scale map has been reviewed as part of this assessment. The location of the site is shown in the soils mapping extract below in **Figure 2**.

The soils mapping suggests the soils on site comprise the Andover 1 Association, with the potential for soils of the Batcombe Association to encroach on the southeast of the site. The soils are described as follows:

- **Andover 1 Association (343h)** - Deep calcareous and non-calcareous fine silty soils in valley bottoms. Striped soil patterns locally.
- **Batcombe Association (582a)** - Fine silty over clayey and fine loamy over clayey soils with slowly permeable subsoils and slight seasonal water logging. Some well drained clayey soils over chalk. Variably flinty.

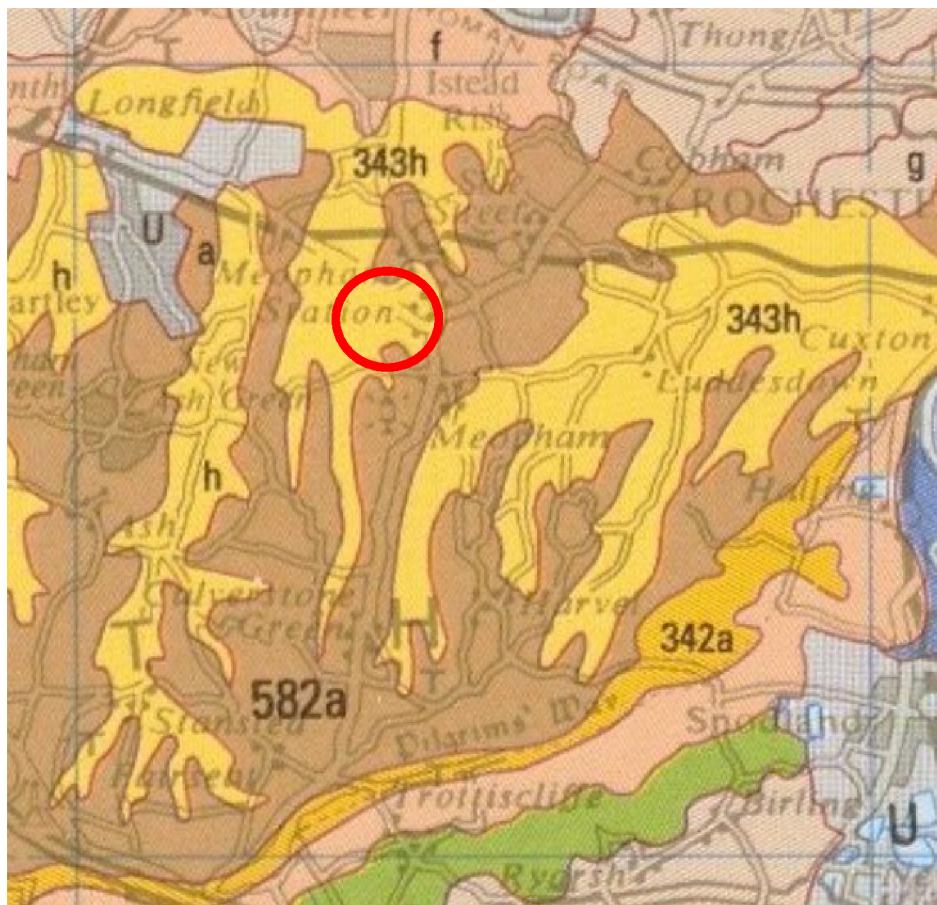


Figure 2: Soils Mapping for the Site and Surrounding Area (site location indicated in red)

6. Flood Risk Limitations

A preliminary assessment of the potential flood risks on site is provided below.



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 a Flood Zone 1 (Low Probability) area (**Figure 3**). After reviewing the flood risk map, REL considers that the site is not in an area at risk from flooding.

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 in Tables 2 and 3 (MAFF, 1988).

The mapping identifies a Low risk of flooding within the boundary of the site and as such, the flood risk is not considered to pose enough of a limitation to the cultivation of the site to reduce the overall site ALC Grade.

7. Available ALC Data

Pre-1988 ALC Grade

The grade is indicated as ALC Grade 2 on the majority of the site, with the northeastern corner indicated as ALC Grade 3.

Post-1988 ALC Grade

No post-1988 surveys are available for or adjacent to the site.

Predictive BMV Map

The Natural England predictive BMV land map would indicate the site falls within the High (>60% area BMV) category.

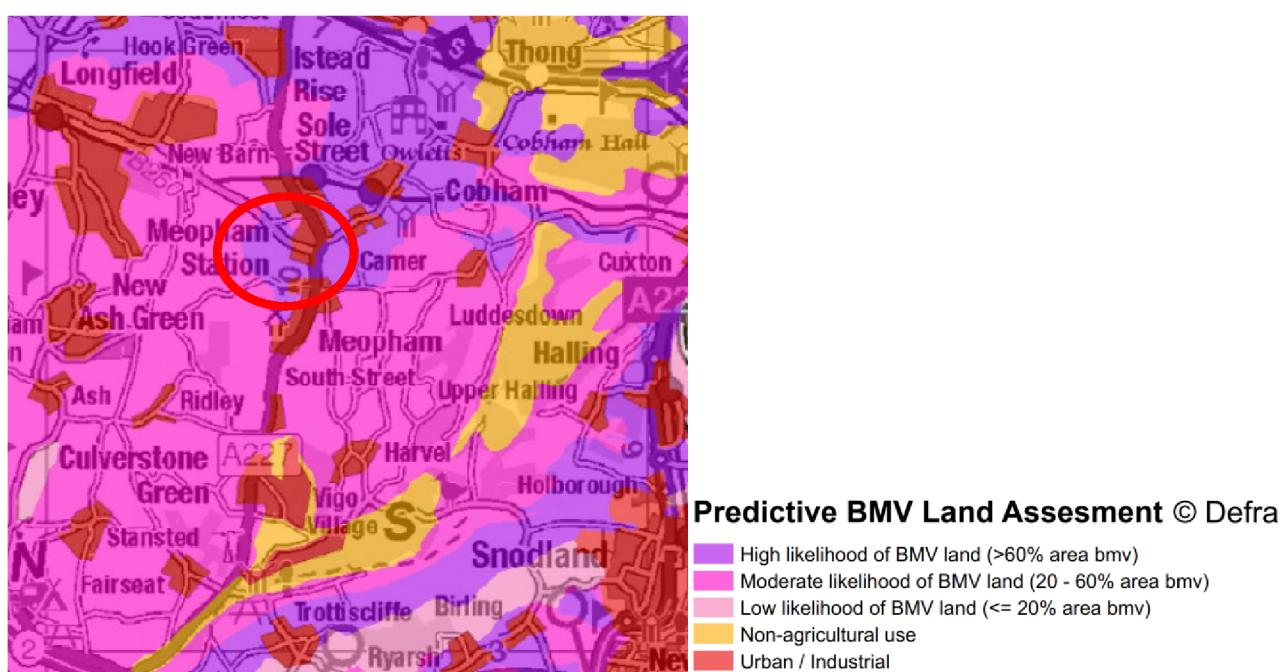


Figure 4: Predictive BMV Land Map Extract (site location indicated in red)

Previous Site Reports

No previous ALC reports have been made available to REL during the compilation of this report.

8. Published Soil Descriptions

A generalised profile of the anticipated Soil Types, based on available published mapping is described as below (**Table 3**).

Table 3: Generalised Soil Profiles on Site

	Depth (cm)	Texture	Colour	Stones (%)	Mottles	Structure	Wetness Class
Soil Type 1 (Andover 1)	0-20	Silty Clay Loam (ZCL)	Dark Brown	5-10	No	Strong Fine Subangular Blocky Structure	I
	20-40	Fragmented Chalk with Brown Soil Between Chalk and Flint Fragments	NA	100	NA	NA	
	40	Bedded Chalk with Flints	NA	100	NA	NA	
Soil Type 2 (Batcombe)	0-25	Silt Loam (ZL) or Silty Clay Loam (ZCL)	Brown	5-10	No	NA	II
	25-60	Silty Clay Loam (ZCL)	Brown	5-10	No	Moderate Medium Angular Blocky	
	60-100	Clay (C)	Yellowish Brown	5-10	Yellowish Red Mottles	Weak Medium Prismatic	

9. Indicative ALC Grade and Conclusions

Using the MAFF 1988 guidance, the following ALC Grades have been calculated (see **Appendix 1** for calculations):

Soil Type 1 (Andover 1 Series)

Droughtiness Limitation

The combination of the topsoil texture (Silty Clay Loam), Wetness Class (I), the number of Field Capacity Days (131.02), together with the climate calculations result in ALC Grade 3b for Andover 1 soils.

Soil depth Limitation

The potential for the presence of shallow rock at c.20cm will limit the ALC grade of the site based on soil depth. If shallow rock is identified at 20cm, the soils will be limited to ALC Grade 3b. Variants with shallower rock is likely to limit the ALC grade further.

Soil Type 2 (Batcombe Series)

Wetness Limitation

The combination of the topsoil texture (Silt Loam), Wetness Class (II) and the number of Field Capacity Days (131.02) results in ALC Grade 2 for Batcombe soils.

Conclusions

Based on the available information, the indicative desk-based assessment for the site is majority **ALC Grade 3b**, with areas in the southeastern corner of the site indicated as **ALC Grade 2**. Limitations relate to either wetness, droughtiness or depth of the soils.

Intrusive survey works are recommended, after which the ALC Grade for the site can be confirmed in an accompanying report.

APPENDIX 1

ALC GRADE CALCULATIONS DATA SHEETS

Job Name:	Land South of Longfield Road
Job Number:	250506.01
Date:	14/10/2025
Completed By:	SSt



Site Altitude:	109
Centre Grid Ref:	564023 166765

AAR	655.12
ATO	1380.61
FCD	131.02
MDMWHT	111.36
MDMPOT	104.80

	Soil Type 1	Soil Type 2
AP WHT	66.55	135.20
MB WHT	-44.81	23.84
AP POT	86.2	126.7
MB POT	-18.60	21.90

	Soil Type 1	Soil Type 2	
Wetness Class	I	II	
Wetness Grading	1	2	
Droughtiness Wheat	3b	2	
Droughtiness Potato	3a	1	
Gradient Limitation	1	1	
Soil Depth Limitation	3b	1	
Stoniness Limitation	1	1	
			Overall
Site Climatic Limitation	1	1	
Flooding Limitation	1	1	
Overall Grade	3b	2	