



Agricultural Land Classification (ALC) Report

Land at Peafield Lane, Mansfield

February 2026

Mansfield District Council

Reference: 250905.03.AC.02

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Client: Mansfield District Council

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1. Scope & Objectives

The Services	Agricultural Land Classification (ALC) Report	
The Client	Mansfield District Council	
Appointment Details	The Services have been carried out in accordance with the Proposal dated 4 September and REL's Terms and Conditions of Engagement, (together " the Agreement ") as accepted by the Client on 5 September 20205.	
Site Name	Land at Peafield Lane, Mansfield.	
Site Address	Peafield Lane, Mansfield NG19 9EG (" the Site ").	
Information Sources (Where appropriate documents are contained in appendices with data extracts provided and summarised within pertinent sections of this report. List not exhaustive)	Online Source	Natural England Provisional Agricultural Land Classification Grade (pre-1988), accessed via Magic Web Mapping Service, DEFRA, 2025.
		Natural England Agricultural Land Classification Grades Post-1988 Surveys (Polygons) Database and Mapping, accessed via Magic Web Mapping Service, DEFRA, 2025.
		British Geological Survey (BGS) Database and Mapping.
		BGS GeolIndex Web Mapping Service.
		BGS 1: 50,000 scale Provisional Series, Geological Map, England and Wales, 113 (Ollerton), available on the BGS map portal.
		Google Historic Satellite Imagery.
	Documentation Source	National Library of Scotland Historical Ordnance Survey England and Wales, 1830s-1974 Maps.
		Soil Classification for Soil Survey, Monographs on Soil Survey, Butler, B E (1980), Clarendon Press, Oxford.
		Hodgson, J.M (ed.) (2022). <i>Soil Survey Field Handbook</i> . Soil Survey Technical Monograph No. 5, Cranfield.
		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.
		Natural England, Technical Information Note TIN049 Second Edition, 2012.
	Previous Reports	Soils and their use in Midland and Western England, 1984, Soil Survey of England and Wales Memoir and accompanying 1:250,000 scale map.
		A Post-1988 ALC survey is available for the southern portion of the site. This report has classified aforementioned areas as either Grade 2 or Grade 3a. See further details in Section 4 .
	Site Works	The site works were undertaken by REL in October 2025.

2. Site Details

National Grid Ref.	Approximate centre of the site: 455602, 364214.
Ground Level Topography	Range 75-98m AOD, average for site: c.87m AOD.
Site Area	66.3 hectares (ha).
HELAA Reference	For the purpose of this report, the 'site' corresponds to the red line boundary outlined in Figure 1 below and incorporates all relevant land parcels identified within the Council's Housing and Economic Land Availability Assessment (HELAA), namely HELAA sites 50/325 , 48 to the north of Peafield Lane and 67 , 187 to the south of Peafield Lane.
Location	The subject site is located directly east of the town of Mansfield Woodhouse in Nottinghamshire, approximately 3.4km northeast of Mansfield town centre. Peafield Lane (A6075) intersects the site centrally and the River Maun is present along the southern boundary of the site.



Figure 1: Site Boundaries (highlighted in red)

Current Site Description and Usage	The subject site comprises agricultural fields which are currently used for arable crop (based on observations made during the site visit), the crop was viewed as Wheat.
Surrounding Land Uses	Surrounding land uses comprises agricultural fields to the north, east and south, with residential development of Mansfield Woodhouse adjacent to the west. The River Maun runs along the southern boundary of the site.
Site History	From the earliest mapping dated 1830s, the site is shown as agricultural land.
Current Grading	The majority of the site is currently mapped as Grade 3 , with areas in the northwestern corner of the site mapped as Grade 2 , and a discrete area in the west mapped as Urban on the provisional 1: 250,000 scale ALC map (MAFF, 1983) see Appendix V for key to the gradings.

3. Methodology

Desk Study

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

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 potential limiting ALC grade factors (listed in **Appendix V**) have been considered as part of the assessment, 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 documents, an ALC grade was then determined for the site, or for each soil type based on the most limiting ALC grade (**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

(Site Centre Grid Reference: 455602, 364214)		
Average Annual Rainfall (mm)	AAR	675.95
Accumulated Temperature (°C)	ATO	1343.66
Field Capacity Duration (Days)	FCD	148.34
Moisture Deficit Wheat (mm)	MDWHT	100.58
Moisture Deficit Potatoes (mm)	MDPOT	89.65

The site is identified to have a slightly below average AAR, with average ATO and FCD when compared to the mapped values for the area northeast of Mansfield (Soils and their Use in Midland and Western England, 1984).

Using the AAR and ATO values within **Table 1**, the site is not considered to be limited by climate (Figure 1, MAFF 1988).

Topography

The site was identified to have an estimated average gradient of 1.95°, 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 are indicated across the site.

The majority of the site is situated within an area free of superficial deposits, however superficial Alluvium deposits (clay, silt, sand and gravel) from the River Maun may encroach onto the southern boundary of the site.

The bedrock geology for the majority of the site is indicated as the Lenton Sandstone Formation (Sandstone), with areas along the eastern boundary indicated as the Chester Sandstone Formation (Pebbly, gravelly Sandstone).

Published Soils Data

Soils mapping for the area as shown on *Soils and their use in Midland and Western 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 the majority of the site comprise the Cuckney 1 Association, with the potential for soils of the Bearsted 2 and Wick 1 Associations to encroach on the north of the site. The soils are described as follows:

- **Cuckney 1 Association (551b)** – Well drained sandy and coarse loamy soils, often over soft sandstone. Risk of wind erosion.
- **Bearsted 2 Association (541b)** – Deep well drained coarse loamy soils mainly on steep scarps, locally very stony. Permeable peaty-topped and non-peaty soils affected by groundwater on some footslopes. Landslips and associated irregular terrain locally.
- **Wick 1 Association (541r)** – Deep well drained coarse loamy and sandy soils locally over gravel. Some similar soils affected by groundwater. Slight risk of water erosion.

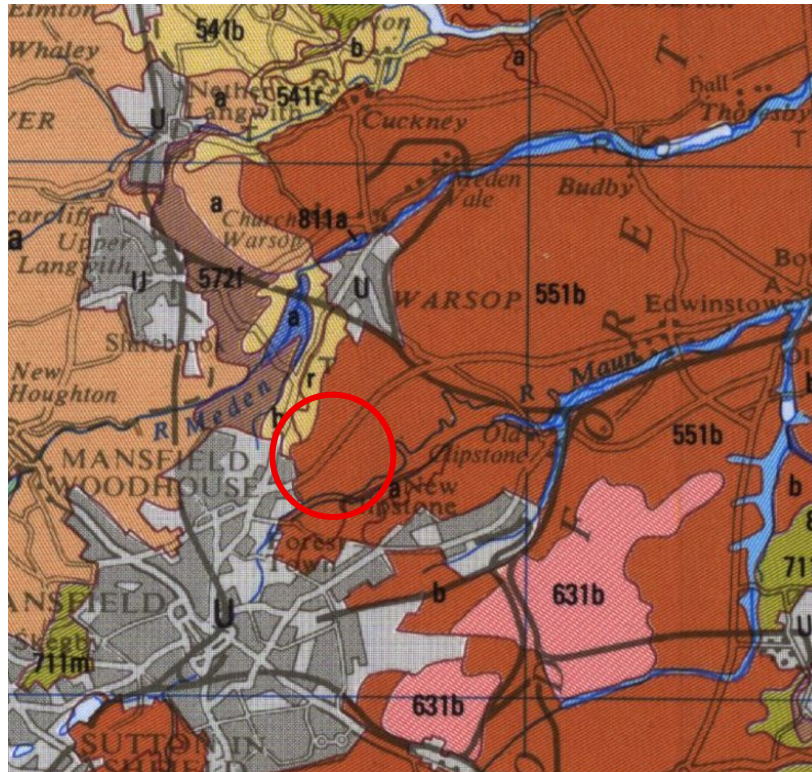


Figure 2: Soils Mapping for the Site and Surrounding Area (site location indicated in red)

Previous Reports

A Post-1988 ALC report is available for the southern portion of the site and surrounding land adjacent to the east. This report would indicate that these areas are **ALC Grade 2** and **Grade 3a**. Further, these areas are understood to be in a similar geological sequencing to the subject 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 MAFF 1988 guidance (**Table 2**) have been paired to the current EA flood risk classifications below.

Table 2: Summary of Flood Risk for the Site

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

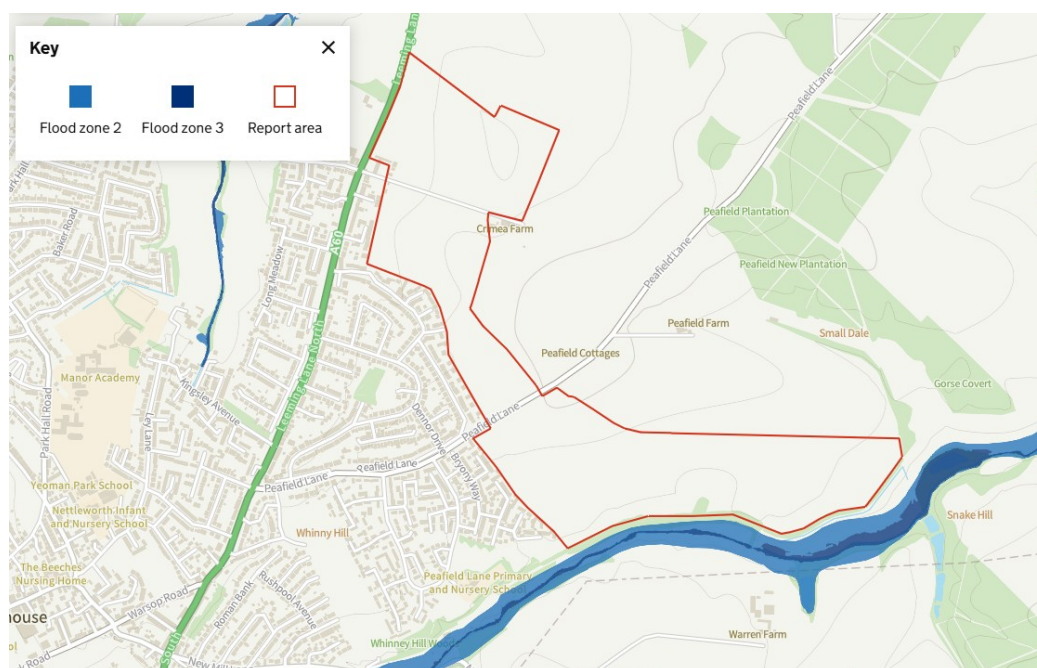


Figure 3: Flood Risk Present for the Site (site boundary defined in red)

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 of 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.

5. Intrusive Survey Findings

The survey identified Three similar Soil Types across the entire site. Generalised profiles of the soil types encountered have been described as below (**Table 3**) however, please note 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 3: Summary of Soils Identified on Site

	Depth (cm)	Texture	Colour	Stones (%)	Mottles	Structure
Soil Type 1a	0-40	Medium Sandy Silt Loam (MSZL)	Very Dark Greyish Brown (10YR 3/2)	0	No	Medium Subangular Blocky
	40-70	Fine Sandy Silt Loam (FSZL)	Yellowish Brown (10YR 5/4)	0	Medium Ochreous (10YR 5/6) Mottles	Medium Subangular Blocky
	70-120	Fine Sand (FS)	Reddish Brown (5YR 5/4)	0	Medium Ochreous (5YR 5/8) and Greyish (5YR 4/1) Mottles	Medium Subangular Blocky
Soil Type 1b	0-35	Sandy Clay Loam (SCL)	Brown (10YR 4/3)	5	No	Medium Subangular Blocky
	35-90	Fine Sandy Silt Loam (FSZL)	Light Brown (7.5YR 6/4)	0	No	Coarse Subangular Blocky
	90-120	Fine Sand (FS)	Reddish Brown (5YR 5/4)	0	Few Fine Ochreous (10YR 5/8) Mottles	Fine Subangular Blocky
Soil Type 1c	0-35	Sandy Clay Loam (SCL)	Brown (7.5YR 4/3)	10	No	Medium Subangular Blocky
	35-50	Fine Sandy Silt Loam (FSZL)	Light Brown (7.5YR 6/4)	0	No	Fine Subangular Blocky
	50-120	Sandy Clay	Reddish Brown (2.5YR 5/4)	5	Medium Ochreous (10YR 5/6) and Grey (10YR 5/1) Mottles	Weak Coarse Prismatic

Soil Descriptions

The soil on site comprised deep, non-calcareous, sandy soils, stoneless to moderately stony in the north of the site. The profiles varied in topsoil textures from sandy silt loam to sandy clay loam, with subsoil textures varying from sand to sandy clay.

Soil Type 1a consist of stoneless to slightly stony very dark greyish brown sandy silt loam (10YR 3/2) Ap horizon of the medium to fine textured classification, with a singular sample observed with dark reddish grey (5YR 4/2) topsoil colour. The structure was moderately developed medium subangular blocky to coarse subangular blocky in places with a friable consistency. Discrete areas of this soil type have been identified with the absence of one or more subsoils, and the presence of shallow bedrock at depth between c.35-90cm bgl.

This was underlain by a yellowish brown sandy silt loam (10YR 5/4) B horizon of the fine textured classification from c.40-70cm bgl, stoneless to slightly stony with medium distinct mottles of Ochreous colours. Discrete areas of this horizon were observed with brown (7.5YR 4/3) or reddish brown (2.5YR 4/4) munsell colours dominant in the matrix. The structure was identified as moderately developed medium subangular blocky to coarse subangular blocky in places, with a friable consistency.

From c.70-120cm bgl, a second subsoil was identified as reddish brown sand (5YR 5/4) of the fine textured classification, stoneless to slightly stony with medium distinct mottles of Grey and Ochreous colours. A singular sample was observed with reddish brown (2.5YR 5/4) munsell colour dominant in the matrix. The structure was identified as moderately developed medium subangular blocky, with some samples observed as single grained or coarse subangular blocky structure, with a friable consistency.

Soil Type 1b comprised stoneless to slightly stony brown sandy clay loam (10YR 4/3) Ap horizon, stoneless with no mottling visible to an average depth of 35cm bgl. Discrete areas of this soil type were observed with few distinct mottles of Ochreous colours. The structure was identified as moderately developed medium subangular blocky, with one sample identified as coarse subangular blocky, with a friable consistency. Discrete areas of this soil type have been found with the absence of subsoils, and the presence of shallow bedrock at depth between c.35-45cm bgl.

The subsoil was observed c.35-90cm bgl. This horizon was identified as a light brown sandy silt loam (7.5YR 6/4) B horizon of the fine textured classification, stoneless with no mottling visible. Three samples were observed to consist of a reddish brown (2.5YR 4/4) munsell colour in the matrix. The structure was identified as moderately developed coarse subangular blocky with a friable consistency. Discrete areas of this soil type were observed with the absence of the

fine sand in the lower subsoil, with the light brown fine sandy silt loam B horizon extending to depths of 120cm bgl. One sample was identified with a subsoil comprising sandy clay loam texture.

From c.90-120cm bgl, a second subsoil was identified as reddish brown sand (5YR 5/4) of the fine textured classification, stoneless with a few distinct mottles of Ochreous colours. The structure was identified as weakly developed fine subangular blocky with a friable consistency.

Soil Type 1c was observed with similar topsoil Ap and B horizon of Soil Type 2, with the absence of sand in the lower subsoil and instead the presence of Gleyed sandy clay. The Ap horizon consisted of slightly stony brown sandy clay loam (7.5YR 4/3) with no mottling visible. A single sample of this soil type was identified with a dark reddish grey (5YR 4/2) Munsell colour dominant in the matrix. The structure was identified as moderately developed medium subangular blocky, to coarse subangular blocky in places, of the friable consistency.

This was underlain by a stoneless to slightly stony light brown sandy silt loam (7.5YR 6/4) B horizon of the fine textured classification, from c.35-50cm bgl, with no mottling visible. The structure was identified as moderately developed fine subangular blocky, to medium subangular blocky in places, with a friable consistency.

From c.50-120cm bgl, a second subsoil was identified as slightly stony reddish brown (2.5YR 5/4) slowly permeable, gleyed sandy clay with a weakly developed coarse prismatic structure of firm consistency. Medium distinct mottles of Ochreous and Grey colours were identified in the Gleyed horizon.

The general profiles for the soil types identified on the Site has been used to assess the Wetness Class (WC) for the Soil Type (see **Appendix V** for the MAFF decision flow chart). 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 4** below with a plan of the distribution of the soil types across the site shown in **Appendix I**.

Table 4: Wetness Class Assessment for Soil Types Encountered on Site

Soil Type	Parameters (Figure 6, MAFF)						Wetness Class
	Disturbed	FCD	SPL (depth cm) Justification	Colour	Gleying (depth cm) Justification	Ref	
Soil Type 1a	No	148.65	No SPL layer was identified to be present within the top 120cm.	Red Soils Not Gleyed	Gleying was not identified to be present within the top 120cm.	N/A	I
Soil Type 1b	No	148.65	No SPL identified within 120cm	Red Soils Not Gleyed	No Gleying identified within 120cm	N/A	I
Soil Type 1c	No	148.65	At a depth of 35cm, the SPL was identified to be present due to the following characteristics: Sandy Clay Loam (SCL) coarse prismatic structure weakly developed less than 0.50% biopores greater than 0.50mm diameter evidence of wetness in the layer; gleying	Other	At a depth of 50cm, gleying was identified to be present due to the following characteristics: Reddish colours dominant in the matrix and at least 2% ochreous mottles	Figure 7	III

Notes: This Table follows the flow chart of Figure 6 of the MAFF ALC guidance to identify the wetness classification per Soil Type.

Soil Limitations

Soil Type 1a – Wetness Limitation

The combination of the topsoil texture (Medium Sandy Silty Loam), Wetness Class (I) and the number of Field Capacity Days (148.65) results in **ALC Grade 1** for Type 1 soils.

Soil Type 1a – Droughtiness Limitation

Discrete areas of this soil type have been identified with a shallower bedrock between c.35-90cm bgl, which has resulted in **ALC Grade 2, 3a** and **3b** due to droughtiness limitation. However, it is noted that approximately 0.5ha of land classed as ALC Grade 2 and 0.8ha of ALC Grade 3a is not managed differently to the wider site area, and there are no visual differences between these areas and the higher graded adjacent land. It is therefore justifiable to group these singular samples of Grade 2 and 3a into the surrounding Grade 1 land. Complete soil logs with corresponding ALC Grades are provided in **Appendix II**.

Soil Type 1b – Wetness Limitation

The combination of the topsoil texture (Sandy Clay Loam), Wetness Class (I) and the number of Field Capacity Days (148.65) results in **ALC Grade 1** for Type 2 soils.

Soil Type 1b – Droughtiness Limitation

Discrete areas of this soil type have been identified with a shallower bedrock between c.35-90cm bgl, which has resulted in **ALC Grade 2, 3a, 3b** due to droughtiness limitation. Complete soil logs with corresponding ALC Grades are provided in **Appendix II**.

Soil Type 1c – Wetness Limitation

The combination of the topsoil texture (Sandy Clay Loam), Wetness Class (III) and the number of Field Capacity Days (148.65) results in **ALC Grade 3a** and **3b** for Type 3 soils. Approximately 0.7ha of this soil type has been identified with the combination of the topsoil texture (Sandy Clay Loam), Wetness Class (II) and the number of Field Capacity Days (148.65) resulting in **ALC Grade 2**. No other overriding limitations has been identified.

6. Conclusions

The ALC grading for the site area is summarised below within **Table 5**, overall findings of this assessment can be found in **Appendix IV**. The table below identifies the grades of the areas of agricultural land present across the site (**Appendix I**).

Table 5: ALC Classification

ALC Grade	Area (Ha)	Percentage
Grade 1	47.3	71.3%
Grade 2	9.00	13.6%
Subgrade 3a	2.70	4.10%
Subgrade 3b	5.30	8.00%
Grade 4	0.00	0.0%
Grade 5	0.00	0.00%
Non-Agricultural	2.00	3.00%
Total BMV	59.0	89.0%
Total Non-BMV	7.30	11.0%
Total Site Area	66.3	100%

Overall Site ALC Grade and Conclusions

The majority of land surveyed as part of this assessment has been identified as **ALC Grade 1**, with areas in the northeast, centrally and in the southeast identified as **ALC Grade 2** (9.00ha), **ALC Grade 3a** (2.70ha) and **ALC Grade 3b** (5.30ha), and 2.00ha centrally identified as **Non-Agricultural**. As such, BMV land has been identified on 89% of the overall site area.

APPENDIX I

SITE PLANS



Legend

- Site Boundary
- Auger Samples
- ALC Grade 1
- ALC Grade 2
- ALC Grade 3a
- ALC Grade 3b
- Non-Agricultural

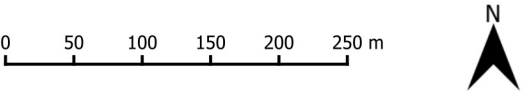
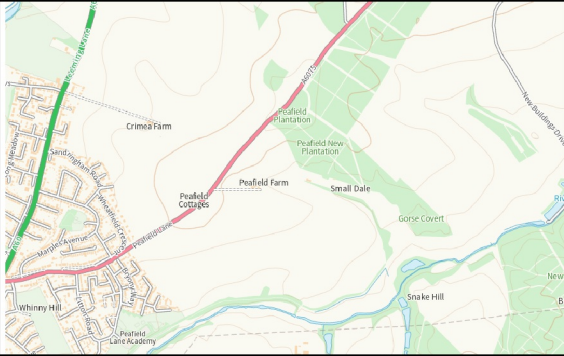


Figure Auger Samples and ALC Grades		
Job Land off Peafield Lane		
Client Mansfield Council		
Figure No. 1	Revision 1	Date 23 March 2026
Drawn by SS	Checked by EH	Scale 1:5,528.048334
Job No. 250905.03		



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Legend

- Site Boundary
- HELAA 50 & 325
- HELAA 48
- HELAA 67
- HELAA 187
- ALC Grade 1
- ALC Grade 2
- ALC Grade 3a
- ALC Grade 3b
- Non-Agricultural

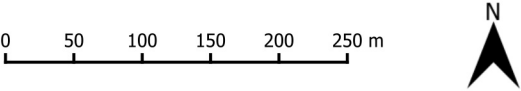
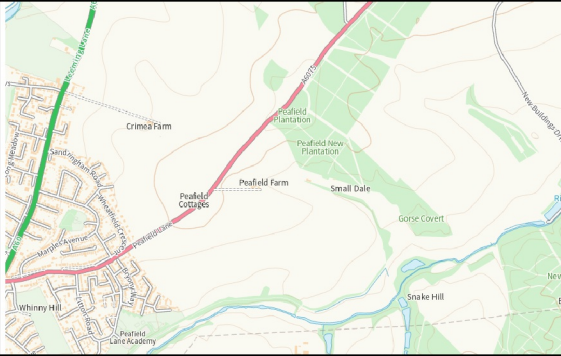


Figure HELAA References and ALC Grades Distribution		
Job Land off Peafield Lane		
Client Mansfield Council		
Figure No. 2	Revision 1	Date 23 March 2026
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Job No. 250905.03		



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Legend

- Site Boundary
- ALC Grade 1
- ALC Grade 2
- ALC Grade 3a
- ALC Grade 3b
- Non-Agricultural

Agricultural_Land_Classification_Provisional_England

- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Grade 5
- Non Agricultural
- Urban

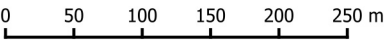
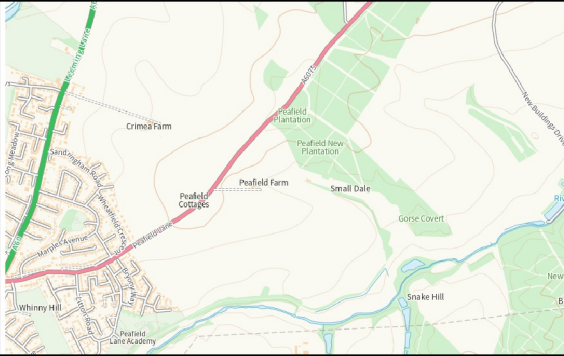


Figure ALC Grades with the Provisional ALC Grades		
Job Land off Peafield Lane		
Client Mansfield Council		
Figure No. 3	Revision 1	Date 23 March 2026
Drawn by SS	Checked by EH	Scale 1:5,528.048334
Job No. 250905.03		



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APPENDIX II

SITE SURVEY LOGS

FCD:148.34

MDWHT:100.6MDPOT:89.65

Auger Sample	Top depth(cm)	Bottom Depth (cm)	Texture	Matrix				Mottles 1				colour	Mottles 2				Stones	Structure	SPL	GLEYING	Figure	Wetness class	Wetness Grade	condition	Droughtiness Grade		Overriding Limitation	
				Hue	value	chroma	colour	Hue	value	chroma	colour		Hue	value	chroma	colour									Wheat	Potatoes	Limitation	
1	0	40	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	40	90	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good					
																100		No	No				good					
2	0	35	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	CSAB	No	No	WC1	I	1	good	3b	3a	3b	Droughtiness Wheat	
																100		No	No				good					
																		No	No				good					
3	0	45	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	45	90	FSZL	2.5YR	4	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	CSAB	No	No				moderate					
	90	120	FS	5YR	5	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	FSAB	No	No				good					
4	0	35	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	35	90	FSZL	2.5YR	4	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	CSAB	No	No				moderate					
	90	120	FS	5YR	5	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	FSAB	No	No				good					
5	0	37	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	37	88	FSZL	2.5YR	4	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	CSAB	No	No				moderate					
	88	120	FS	5YR	5	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	FSAB	No	No				good					
6	0	50	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat	
	50	70	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good					
																100		No	No				good					
7	0	20	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 7	IV	3b	good	3a	2	3b	Wetness Class	
	20	30	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good					
	30	60	SC	2.5YR	5	4	Reddish	10YR	5	6	Ochreous	10YR	5	1	Greyish	5	CP	SPL	No				poor					
8	0	45	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	II	2	good	1	1	2	Wetness Class	
	45	70	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good					
	70	120	SC	2.5YR	5	4	Reddish	10YR	5	6	Ochreous	10YR	5	1	Greyish	5	CP	SPL	No				poor					
9	0	35	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	15	MSAB	No	No	WC1	I	1	good	3b	3a	3b	Droughtiness Wheat	
																100		No	No				good					
																		No	No				good					
10	0	39	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	39	85	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No				good					
	85	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	FSAB	No	No				good					
11	0	30	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	30	90	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No				good					
	90	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	FSAB	No	No				good					
12	0	40	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	40	90	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No				good					
	90	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	FSAB	No	No				good					
13	0	40	FSZL	5YR	4	2	Greyish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	40	75	FSZL	2.5YR	4	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	MSAB	No	No				good					
	75	120	FS	2.5YR	5	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	CSAB	No	No				good					
14	0	45	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	CSAB	No	No	WC1	I	1	good	3a	2	3a	Droughtiness Wheat	
																100		No	No				good					
																		No	No				good					
15	0	45	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	45	120	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good					
																100		No	No				good					
16	0	45	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	1	MSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat	
	45	55	FS	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	15	SG	No	No				good					
																	100		No				No					good
17	0	35	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class	
	35	86	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No				good					
	86	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	FSAB	No	No				good					
	0	40	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No				good					
	40	90	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No				good					

18	90	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	FSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
19	0	35	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	
	35	55	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	MSAB	No	No				good				
	55	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	CSAB	No	No				good	1	1	1	Wetness Class

20	0	35	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	3b	3a	3b	Droughtiness Wheat
																100		No	No				good				
																		No	No				good				
21	0	45	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat
	45	60	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	MSAB	No	No				good				
																100		No	No				good				
22	0	30	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	30	120	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good				
																100		No	No				good				
23	0	35	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	35	120	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good				
																100		No	No				good				
24	0	30	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	30	120	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good				
																100		No	No				good				
25	Non-Agricultural																										
26	0	40	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat
	40	55	FS	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	SG	No	No				good				
																100		No	No				good				
27	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	65	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	65	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
28	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	85	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	85	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
29	0	35	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	35	120	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good				
																100		No	No				good				
30	0	38	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	38	120	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good				
																100		No	No				good				
31	0	33	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	33	120	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good				
																100		No	No				good				
32	Non-Agricultural																										
33	Non-Agricultural																										
34	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	60	MSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	5	MSAB	No	No				good				
	60	100	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	10	MSAB	No	No				good				
35	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	70	MSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	5	CSAB	No	No				good				
	90	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	10	SG	No	No				good				
36	0	40	SCL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	120	SCL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	FSAB	No	No				good				
																		No	No				good				
37	0	50	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat
	50	55	FS	10YR	5	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	SG	No	No				good				
																100		No	No				good				
38	0	35	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	35	70	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	70	95	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
	0	45	MSZL	5YR	4	2	Greyish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No				good				

39	45	85	MSZL	2.5YR	4	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	85	120	MS	2.5YR	5	4	Reddish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	CSAB	No	No				good				
40	0	26	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	26	70	MSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	70	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
41	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	90	MSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	90	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	SG	No	No				good				
42	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	3b	3a	3b	Droughtiness Wheat
															100		No	No	good								
																		No	No				good				
43	0	35	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	3a	2	3a	Droughtiness Wheat
	35	45	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
																100		No	No				good				
44	0	35	SCL	5YR	4	2	Greyish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No	Figure 7	III	3a	good	2	1	3a	Wetness Class
	35	50	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No				good				
	50	80	SC	2.5YR	5	4	Reddish	10YR	5	6	Ochreous	10YR	5	1	Greyish	5	CP	SPL	No				poor				
45	0	45	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	45	80	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	80	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
46	0	35	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	35	75	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	75	110	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
47	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	83	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	83	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
48	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	60	MSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	5	MSAB	No	No				good				
	60	100	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	10	MSAB	No	No				good				
49	0	45	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	45	80	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	80	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
50	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	78	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	78	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
51	0	45	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat
	45	60	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	60	70	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
52	0	30	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	30	75	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	75	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
53	0	45	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	45	90	FSZL	7.5YR	4	3	Brownish	7.5YR	4	6	Ochreous	7.5YR	3	2	-	0	MSAB	No	No				good				
	90	120	FS	5YR	5	6	Brownish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	SG	No	No				good				
54	0	45	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	45	90	MSL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	MSAB	No	No				good				
	90	120	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	FSAB	No	No				good				
55	0	35	FSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat
	35	60	FSZL	7.5YR	4	3	Brownish	7.5YR	4	6	Ochreous	7.5YR	3	2	-	0	MSAB	No	No				good				
																100		No	No				good				
56	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	90	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
	90	120	CS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	CSAB	No	No				good				
57	0	35	FSZL	7.5YR	4	3	Brownish	n/a	n/a	n/a	-	n/a	n/a	n/a	-	5	MSAB	No	No	WC1	I	1	good	2	1	2	Droughtiness Wheat
	35	60	FSZL	7.5YR	6	4	Pale	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	CSAB	No	No				good				
																100		No	No				good				
	0	44	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No				good				
	44	78	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				

58																100		No	No	WC1	I	1	good	1	1	1	Wetness Class
59	0	47	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	
	47	90	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
																100		No	No				good				
60	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	65	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	MSAB	No	No				good				
	65	110	FS	5YR	5	4	Reddish	5YR	5	8	Ochreous	5YR	4	1	Greyish	0	MSAB	No	No				good				
61	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	40	90	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
																100		No	No				good				
62	0	35	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	3b	3a	3b	Droughtiness Wheat
	35	45	MS	10YR	5	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	15	SG	No	No				good				
																100		No	No				good				
63	0	45	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	0	MSAB	No	No	WC1	I	1	good	1	1	1	Wetness Class
	45	87	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	0	CSAB	No	No				good				
																100		No	No				good				
64	0	40	MSZL	10YR	3	2	other	n/a	n/a	n/a	-	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	good	3a	2	3a	Droughtiness Wheat
	40	50	FSZL	10YR	5	4	Brownish	10YR	5	6	Ochreous	10YR	3	2	-	10	MSAB	No	No				good				
																100		No	No				good				

Structure	
MSAB	Medium Subangular Blocky
AB	Angular Blocky
CP	Coarse Prismatic
MSAB	Massive
SAB	Subangular Blocky
CP	Coarse
W	Weak

Stones	
5	Very Slightly Stony
15	Slightly Stony
35	Moderately Stony

Texture	
C	Clay
ZC	Silty Clay
SC	Sandy Clay
CL	Clay Loam
ZCL	Silty Clay Loam
SCL	Sandy Clay Loam
SZL	Sandy Silty Loam
SL	Sandy Loam
LS	Loamy Sand
S	Sand
ZS	Silty Sand
MG	Made Ground
F (sand)	Fine
M (sand)	Medium
C (sand)	Coarse
H (clay)	Heavy
M (clay)	Medium

Rock Type	
Ca	Calcareous

Mottling	
*	No Mottling
X	Fine Grey
O	Fine Ochreous
N	Numerous Mottles
F	Few Mottles
D	Fine Brown

Cell Colours	Reason
	Livestock in field - not accessed
	Woodland/Made Ground/Urban
	Inaccessible areas
	N/A

APPENDIX III

SITE SURVEY PHOTOGRAPHS

Photograph Number	Photograph Description	Photograph
1.	Land at Feafield Lane General view	
2.	General View	
3.	Auger Sample	

Photograph Number	Photograph Description	Photograph
4.	Auger Sample	
5.	Auger Sample	
6.	Auger Sample	

Photograph Number	Photograph Description	Photograph
7.	Topsoil view	

Photograph Number	Photograph Description	Photograph
8.	Subsoil View	

Photograph Number	Photograph Description	Photograph
9.	Pit View	 The photograph shows a vertical soil pit. A yellow measuring tape is held vertically against the left side of the pit, with the 0-inch mark at the top. The soil is dark brown and appears moist. There are some horizontal layers or roots visible within the soil. The top of the pit shows some green grass and a person's hand holding the tape.

APPENDIX IV

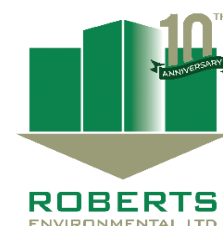
SUMMARY OF FINDINGS

Job Name:	250905.03
Job Number:	Land at Peafield Lane
Date:	23/12/2025
Completed By:	SS

Site Altitude:	87
Centre Grid Ref:	455602 364214

AAR	675.95
ATO	1343.66
FCD	148.34
MDMWHT	100.58
MDMPOT	89.65

	1a	1b	1c
AP WHT	190.00	198.50	162.50
MB WHT	89.42	97.92	61.92
AP POT	142	136.5	122.5
MB POT	52.35	46.85	32.85



Site Limitations Summary			
	1a	1b	1c
Wetness Class	I	I	III
Wetness Grading	1	1	3b
Droughtiness Wheat	2	2	1
Droughtiness Potato	1	1	1
Gradient Limitation	1	1	1
Soil Depth Limitation	1	1	1
Stoniness Limitation	1	1	1
	Overall		
Site Climatic Limitation	1	1	1
Flooding Limitation	1	1	1
Overall Grade	1 & 2	1 & 2	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.

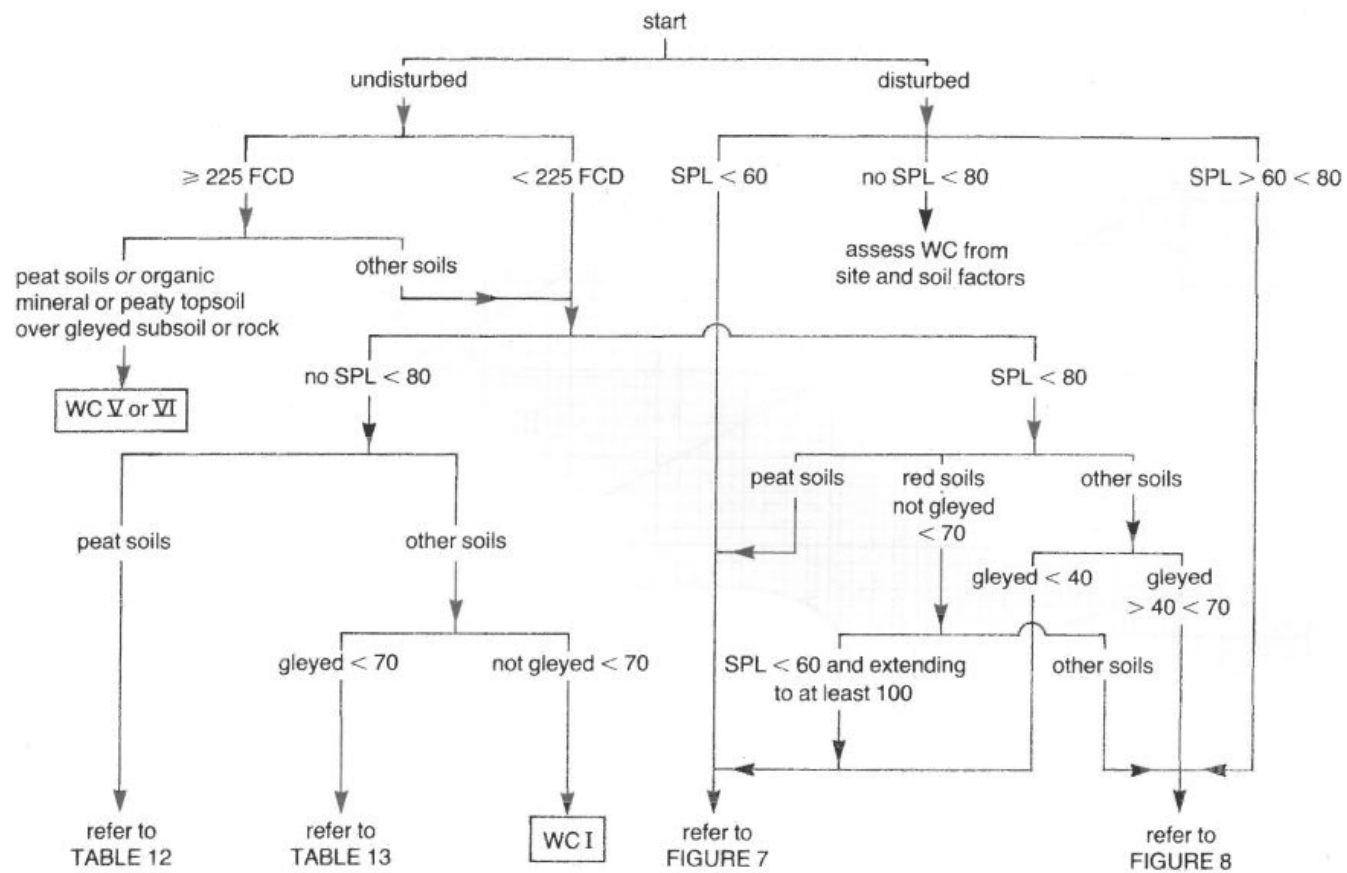


Figure 6. Flow diagram for assessing soil wetness class (WC) from field capacity days (FCD), depth to gleying (in cm) and depth to a slowly permeable layer (SPL, in cm)

Figure 6