



Agricultural Land Classification (ALC) Report

Land at Park Hall Road, Mansfield

March 2026

Mansfield District Council

Reference: 250905.08.AC.02

Agricultural Land Classification (ALC) Report

Land at Park Hall Road,
Mansfield

Client: Mansfield District Council

Reference:	Current Version:	Date:
250905.08.AC.02	Version 2.0	March 2026

Reference:	Previous Versions	Date
250905.08.AC.01	Version 1.0	December 2025

		Checked / Approved by:	
Version 2.0 March 2026	Updated: Chrysta Lois BSc (Hons)	Sofie Stikbakke BSc (Hons)	Emily Broughton BSc (Hons) MSc MEnvSc M. I. Soil Sci.
			
	Position: Graduate Consultant	Position: Consultant	Position: Technical Operations Manager and Principal Geo- Environmental Consultant
Version 1.0 December 2025	Author: Chrysta Lois BSc (Hons)	Emelia Hewett BSc (Hons) MSc	Emily Broughton BSc (Hons) MSc MEnvSc 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 DETAILS2

3. METHODOLOGY3

4. DESK BASED RECONNAISSANCE5

5. INTRUSIVE SURVEY FINDINGS10

6. CONCLUSIONS.....13

Figures

Figure 1: Site Boundaries (highlighted in red) 2

Figure 2: Soils Mapping for the Site and Surrounding Area (site location indicated in red) 7

Figure 3: Flood Risk Present from Rivers and the Sea for the Site (site boundary defined in red) 8

Figure 4: Flood Risk Present from Surface Water for the Site 9

Tables

Table 1: Summary of Agroclimatic Data for the Site 5

Table 2: Summary of Flood Risk for the Site 7

Table 3: Summary of Flood Risk from Environment Agency Data 9

Table 4: Summary of Soils Identified on Site 10

Table 5: Wetness Class Assessment for Soil Types Encountered on Site 11

Table 6: ALC Classification 13

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	Mansfield District Council	
Appointment Details	The Services have been carried out in accordance with the Proposal dated 4 th September and REL's Terms and Conditions of Engagement, (together " the Agreement ") as accepted by the Client on 5 September 2025.	
Site Name	Land at Park Hall Road, Mansfield.	
Site Address	Park Hall Road, Mansfield Woodhouse, Mansfield, NG19 8UB (" 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 Geoindex Web Mapping Service.
		BGS 1: 50,000 scale Provisional Series, Geological Map, England and Wales, 112 (Chesterfield), available on the BGS map portal.
		Google Historic Satellite Imagery.
	Documentation Source	National Library of Scotland Historical Ordnance Survey England and Wales, 1885-1956 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.
		No previous reports, including Post-1988 ALC surveys, are available for the site.
	Site Works	The site works were undertaken by REL in November 2025.

2. Site Details

National Grid Ref.	Approximate centre of the site: 454647 365219
Ground Level Topography	Range 8.5m AOD, average for site: c.71.5m AOD.
Site Area	22.34 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 190 and 376 .
Location	The subject site is located on the northern periphery of Mansfield Woodhouse, 0.17km west of Mansfield Woodhouse Golf Course. The site is bound by Park Hall Road to the west, and residential properties to the south. The Bottoms is situated adjacent to the east of the site, which relates to the flood-prone area associated with the River Maun.



Figure 1: Site Boundaries (highlighted in red)

Current Site Description and Usage	The majority of the site comprises agricultural fields with an equestrian facility present across the southernmost part of the site. A small access road/lane runs from the south-east of the site to the western boundary.
Surrounding Land Uses	The site is bound to the north by a wooded area and agricultural fields. Park Hall Road bounds the site to the west. Park Hall Fishing Lake and 'The Bottoms' watercourse bounds the site to the east, with residential properties present adjacent south of the site. The wider uses are a mix of residential buildings to the south of the site, with small scale commercial buildings located to the west.
Site History	From the earliest mapping dated 1885, the site is shown as agricultural land. The southern half of the site, however, was relatively forested until the 1940s.
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

This site-specific Agricultural Land Classification (ALC) assessment has been undertaken as part of a wider district-wide ALC study, which established the overarching baseline conditions, datasets, and methodological approach across the district. The desk study information presented within this report draws on that district-level assessment and applies it at a site-specific scale to inform the detailed field survey and subsequent ALC grading. This report therefore presents the findings for the site only, while being informed by the consistent district-wide evidence base.

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.

During the site inspection, in order to protect the standing crop on field and avoid causing damage, no inspection pits were excavated on the site. Representative soil information for the soil type encountered has therefore been obtained from Peafield Lane, Mansfield (NG19 9EG), located approximately 1.5km to the southeast, which is considered to be situated within an area of similar geological sequence and soil associations as mapped on *Soils and their Use in Midland and Western England (1984)*, Soil Survey of England and Wales Memoir, and the accompanying 1:250,000 scale soil map, to that identified at the site. On this basis, the use of representative soil information from this location is considered a reasonable and acceptable approach, providing appropriate soil characterisation of the soil type encountered at the site in the absence of direct excavation.

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

Agricultural Land Classification (ALC) provides a framework for assessing the quality of agricultural land and is briefly outlined below. It is a nationally standardised system used to classify land based on its inherent physical characteristics. The grading is determined by considering a range of baseline factors, including climate, topography, soils, and site drainage, with the most limiting factor governing the final classification. These factors are assessed against the requirements of a standard set of reference crops, such as cereals and root crops, to determine how consistently the land can support agricultural production. The presence and severity of any limitation influence the final ALC grade.

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: 454647, 365219)		
Average Annual Rainfall (mm)	AAR	671.18
Accumulated Temperature (°C)	ATO	1358.85
Field Capacity Duration (Days)	FCD	150.49
Moisture Deficit Wheat (mm)	MDWHT	101.59
Moisture Deficit Potatoes (mm)	MDPOT	91.30

The site is identified to have a slightly below average AAR and a slightly above MDWHT when compared to the mapped values for the area North 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 has a calculated average gradient of 1.15°, 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 site is situated within an area of superficial Tidal flat deposits (Clay and Silt).

According to the BGS GeoIndex, there are multiple bedrock geologies found on site. The north, northwest and southwestern most corner of the site, are underlain by the Lenton Sandstone Formation (sandstone). The central, northeastern and southeastern parts of the site are shown to be underlain by the Edlington Formation comprising mudstone and sandstone and the southeastern part of the site is shown to be underlain by the Cadeby Formation of dolostone.

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 site comprise the Whimple 3 Association.

- **Whimple 3 Association (572f)** – Reddish fine loamy or fine silty over clayey soils with slowly permeable subsoils and slight seasonal waterlogging.

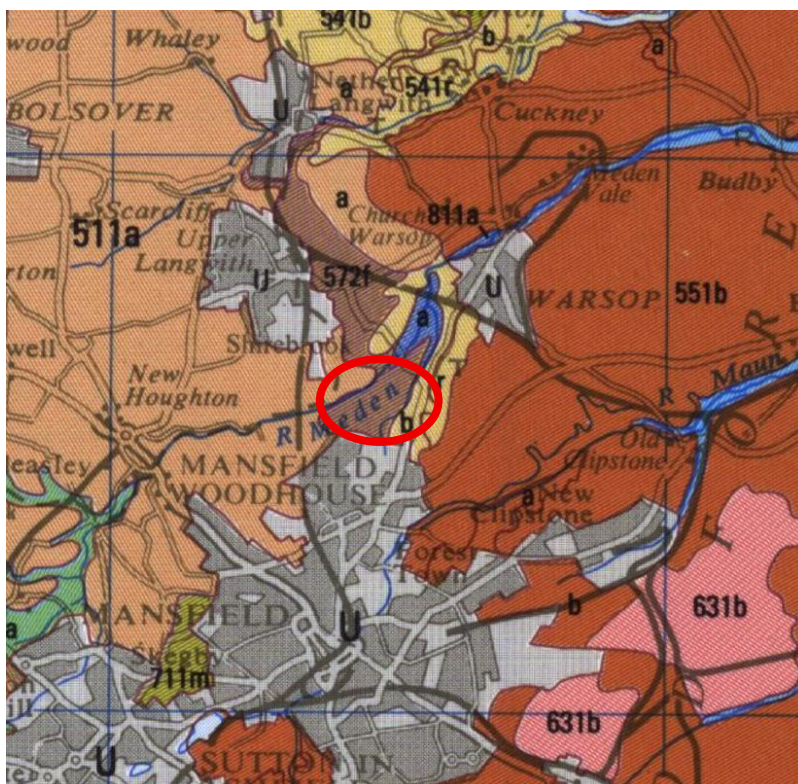


Figure 2: Soils Mapping for the Site and Surrounding Area (site location indicated in red)

Previous Reports

No previous ALC reports are available for the site or adjacent surrounding areas.

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 from Rivers and the Sea for the Site (approximate site boundary defined in red)

The interactive EA Flood Map for Planning on the UK Government website identifies the majority of the site to be within a Flood Zone 1 (Low Probability) area (**Figure 3**). However, the eastern boundary of the site, is shown to be within a Flood Zone 2 (Moderate risk) area where the watercourse 'The Bottoms' is situated adjacent to the site boundary.



Figure 4: Flood Risk Present from Surface Water for the Site (approximate site boundary defined in red)

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).

Table 3: Summary of Flood Risk from Environment Agency Data

ALC Grade	Frequency and Duration
1	Rare (short)
2	Rare (medium)
	Occasional (short)
3a	Rare (long)
	Occasional (medium)
	Frequent (short)
3b	Occasional (long)
	Frequent (medium)
4	Frequent (long)

Localised areas on the eastern boundary of the site are at risk from surface water flooding (**Figure 4**), as well as moderate risk from flooding from rivers. It is likely that the presence of the adjacent water body Park Hall Fishing lake would allow for the drainage of any floodwaters away from the site. Additionally, as these areas are discrete and not representative of the entire site, it is unlikely that the capacity of cultivation of the site is limited, and as such the ALC grade is not limited by flooding.

5. Intrusive Survey Findings

The survey identified One Soil Type across the entire site. Generalised profiles of the soil type encountered have been described as below (**Table 4**) 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 4: Summary of Soils Identified on Site

	Depth (cm)	Texture	Colour	Stones (%)	Mottles	Structure
Soil Type 1	0-32	Medium Clay Loam (MCL)	Very Dark Greyish Brown (10YR 3/2)	10	No	Medium Subangular Blocky
	32-120	Sandy Clay (SC)	Greyish Brown (10YR 5/2)	0	No	Weak Coarse Prismatic

Soil Descriptions

The soils on site were homogenous across the entire site. The soils were observed to have a clay loam topsoil of the Medium textured classification, soil colour was observed as 10YR 3/2, moderate level of stones with no mottling visible. The topsoil extended to a depth of c.32cm

The subsoil was observed c.32-120cm bgl. This soil was identified as a greyish brown sandy clay (10YR 5/2) with numerous fine ochrous mottles. The structure was identified as weak prismatic structure with a firm consistency. Discrete auger samples were observed to have an alternative structure of the medium subangular blocky structure classification. 4 samples of the site were observed with a similar topsoil to the surrounding site, however, were identified with shallow rock at an average depth of c.60cm.

Soil Calcium Carbonate determinations

The soils on site were observed with a negative test for Calcium Carbonate.

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 5** below with a plan of the distribution of the soil types across the site shown in **Appendix I**.

Table 5: Wetness Class Assessment for Soil Types Encountered on Site

Soil Type	Parameters (Figure 6, MAFF)					
	Disturbed	FCD	SPL (depth cm) Justification	Colour	Gleying (depth cm) Justification	Ref
Soil Type 1	No	150.49	At a depth of 32cm, the SPL was identified to be present due to the following characteristics: Sandy Clay (SC) coarse prismatic structure weakly developed less than 0.50% biopores greater than 0.50mm diameter evidence of wetness in the layer; ochreous mottles	Other	Gleying was not identified to be present within the top 120cm.	Figure 8
						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 Interactive Limitations

Soil Type 1 – Wetness Limitation

The combination of the topsoil texture (Medium Clay Loam), Wetness Class (III) and the number of Field Capacity Days (150.49) results in **ALC Grade 3a** for Type 1 soils.

Two anomalous samples were observed. One of these samples was identified with a wider slowly permeable layer indicative of Wetness Class IV and thus ALC grade 3b. Furthermore, another sample was observed with no identifiable slowly permeable layer indicative of Wetness Class 1 and as such giving ALC grade 1. As these samples were surrounded by a large area of homogenous soils and not visibly managed differently from the surrounding arable land, it would be justifiable to group these with the surrounding ALC grades.

Soil Calcium Carbonate determinations

The topsoils (Medium Clay Loam) demonstrated a negative test for calcium carbonate content.

6. Conclusions

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 below identifies the grades of the areas of agricultural land present across the site (**Appendix I**).

Table 6: ALC Classification

ALC Grade	Area (Ha)	Percentage
Grade 1	0.0	0.00%
Grade 2	0.0	0.00%
Subgrade 3a	19.23	86.07%
Subgrade 3b	0.0	0.00%
Grade 4	0.0	0.00%
Grade 5	0.0	0.00%
Non-Agricultural	3.11	13.93%
Total BMV	19.23	86.07%
Total Non-BMV	3.11	13.93%
Total Site Area	22.34	100%

Overall Site ALC Grade and Conclusions

The majority of land surveyed as part of this assessment has been identified as **ALC Grade 3a**, with 3.11ha in the southwest identified as **Non-Agricultural**. As such, BMV land has been identified on 86.07% of the overall site area.

APPENDIX I

SITE PLANS



Legend

- Site Boundary
- Auger Sample
- ALC Grade 3a
- Non-Agricultural

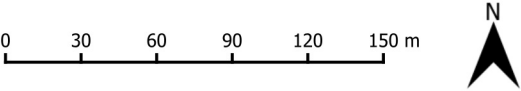


Figure Auger Samples and ALC Grades Distribution		
Job Land at Park Hall road		
Client Mansfield District Council		
Figure No. 1	Revision 1	Date 27 March 2026
Drawn by EH	Checked by EB	Scale 1:3,000
Job No. 250905.08		
DO NOT SCALE. NOT FOR CONSTRUCTION		
Microsoft product screen shot reprinted with permission from Microsoft Corporation. Microsoft Bing logo © Microsoft Corporation 2026.		



Legend

- Site Boundary
- HELAA 190
- HELAA 376
- ALC Grade 3a
- Non-Agricultural

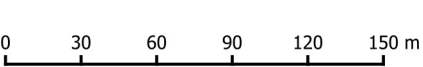


Figure ALC Grades and HELAA References		
Job Land at Park Hall road		
Client Mansfield District Council		
Figure No. 2	Revision 1	Date 27 March 2026
Drawn by EH	Checked by EB	Scale 1:3,000
Job No. 250905.08		
DO NOT SCALE. NOT FOR CONSTRUCTION		
Microsoft product screen shot reprinted with permission from Microsoft Corporation. Microsoft Bing logo © Microsoft Corporation 2026.		



Legend

- Site Boundary
- ALC Grade 3a
- Non-Agricultural

Agricultural_Land_Classification_Provisional_England

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

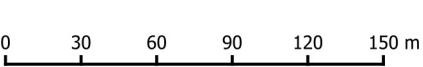


Figure ALC Grades with the Provisional ALC Grades

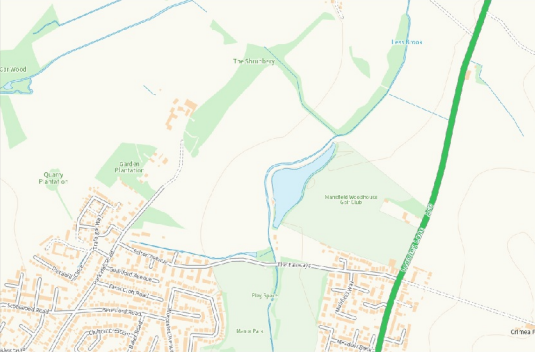
Job Land at Park Hall road

Client Mansfield District Council

Figure No.	Revision	Date
3	1	27 March 2026

Drawn by	Checked by	Scale
EH	EB	1:3,000

Job No.	250905.08
---------	-----------



DO NOT SCALE. NOT FOR CONSTRUCTION

Microsoft product screen shot reprinted with permission from Microsoft Corporation. Microsoft Bing logo © Microsoft Corporation 2026.



APPENDIX II

SITE SURVEY LOGS

FCD: 150.49

MDWHT: 101.6 MDPOT: 91.3

Auger Sample	Top Depth(cm)	Bottom Depth (cm)	Texture	Matrix			colour	Mottles 1			colour	Mottles 2			colour	Stones	Structure	SPL	GLEYING	Figure	Wetness class	Wetness Grade	condition	Droughtiness Grade		Overriding Limitation			
				Hue	value	chroma		Hue	value	chroma		Hue	value	chroma										Wheat	Potatoes				
1	Non-Agricultural																												
	0	30	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class			
2	30	70	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	10YR	6		6	Ochreous				0					MSAB	SPL	No
	Non-Agricultural																												
3	Non-Agricultural																												
	0	30	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class			
4	30	80	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0				MSAB					SPL	No	good
	80	120	SC	2.5YR	4	4	Reddish	n/a	n/a	n/a	n/a	n/a	n/a	-	0	WCP	No	No	Figure 8	III	3a	good	1	1	3a	Wetness Class			
5	0	20	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No				Figure 8					III	3a	moderate
	20	50	SC	10YR	4		4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0	MSAB	SPL		No	good					
6	Non-Agricultural																												
	0	30	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 7	IV	3b	moderate	1	1	3b	Wetness Class			
7	30	120	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0				CP					SPL	No	good
	0	20	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class			
8	20	60	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0				CP					SPL	No	good
	0	20	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class			
9	20	70	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0				MSAB					SPL	No	good
	70	120	SC	5YR	4	6	Brownish	n/a	n/a	n/a	n/a	n/a	n/a	-	0	CP	No	No	Figure 8	III	3a	good	1	1	3a	Wetness Class			
10	0	59	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No				Figure 7					III	3a	moderate
	59	120	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0	MSAB	SPL	No		good						
11	0	40	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 7	III	3a	moderate	1	1	3a	Wetness Class			
	40	120	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	10YR	6		6	Ochreous				0					MSAB	SPL	No
12	0	40	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 7	III	3a	moderate	1	1	3a	Wetness Class			
	40	120	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0				MSAB					SPL	No	good
13	0	40	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class			
	40	80	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0				MSAB					SPL	No	good
	80	120	SC	10YR	5	3	Pale	n/a	n/a	n/a	n/a	n/a	n/a	-	0	WCP	No	No				good							
14	0	20	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	0	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class			
	20	60	SC	10YR	4	4	Brownish	10YR		5		6	Ochreous	n/a	n/a	n/a	-	0				CP					SPL	No	good
15	0	23	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	WC1	I	1	moderate	1	1	1	Wetness Class			
	23	120	SC	10YR	4	4	Brownish	n/a	n/a	n/a	n/a	n/a	n/a	-	0	MSAB	No	No				good							

16	0	50	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 7	III	3a	moderate	1	1	3a	Wetness Class
	50	120	SC	10YR	4	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	MSAB	SPL	No				good				
																		No	No				good				
17	0	40	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 7	III	3a	moderate	1	1	3a	Wetness Class
	40	120	SC	10YR	4	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	MSAB	SPL	No				good				
																		No	No				good				
18	0	30	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class
	30	85	SC	10YR	4	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	MSAB	SPL	No				good				
	85	120	SC	2.5YR	4	4	Reddish	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	0	CP	No	No				good				
19	0	45	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class
	45	79	SC	10YR	4	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	MSAB	SPL	No				good				
	79	120	SC	2.5YR	4	4	Reddish	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	0	CP	No	No				good				
20	0	40	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 7	III	3a	moderate	1	1	3a	Wetness Class
	40	120	SC	10YR	4	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	CP	SPL	No				good				
																		No	No				good				
21	0	28	MCL	10YR	3	2	other	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	10	MSAB	No	No	Figure 8	III	3a	moderate	1	1	3a	Wetness Class
	28	87	SC	10YR	4	4	Brownish	10YR	5	6	Ochreous	n/a	n/a	n/a	-	0	MSAB	SPL	No				good				
	87	120	SC	2.5YR	4	4	Reddish	n/a	n/a	n/a	n/a	n/a	n/a	n/a	-	0	CP	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 Park Hall Road, Mansfield General Site View	
2.	Land at Park Hall Road, Mansfield General Site View	
3.	Land at Park Hall Road, Mansfield General Site View	

Photograph Number	Photograph Description	Photograph
4.	Land at Park Hall Road, Mansfield Site Stone Coverage	
5.	Land at Park Hall Road, Mansfield Pit extracted at Peafield Lane.	

Photograph Number	Photograph Description	Photograph
6.	Land at Park Hall Road, Mansfield Pit extracted at Peafield Lane.	
7.	Land at Park Hall Road, Mansfield Soil Type 1 – Borehole 9.	
8.	Land at Park Hall Road, Mansfield Soil Type 1 – Borehole 10.	
9.	Land at Park Hall Road, Mansfield Soil Type 1 – Topsoil Structure.	

Photograph Number	Photograph Description	Photograph
10.	Land at Park Hall Road, Mansfield Soil Type 1 – Subsoil Structure.	

APPENDIX IV

SUMMARY OF FINDINGS

Job Name:	Park Hall Road
Job Number:	250905.08
Date:	23/12/2025
Completed By:	CL



Site Altitude:	73
Centre Grid Ref:	454647 365219

AAR	671.18
ATO	1358.85
FCD	150.49
MDMWHT	101.59
MDMPOT	91.30

Soil Type 1	
AP WHT	149.16
MB WHT	47.57
AP POT	109.16
MB POT	17.86

Site Limitations Summary	
	Soil Type 1
Wetness Class	III
Wetness Grading	3a
Droughtiness Wheat	1
Droughtiness Potato	1
Gradient Limitation	1
Soil Depth Limitation	1
Stoniness Limitation	1
	Overall
Site Climatic Limitation	1
Flooding Limitation	1
Overall Grade	1

APPENDIX V

TERMINOLOGY

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.

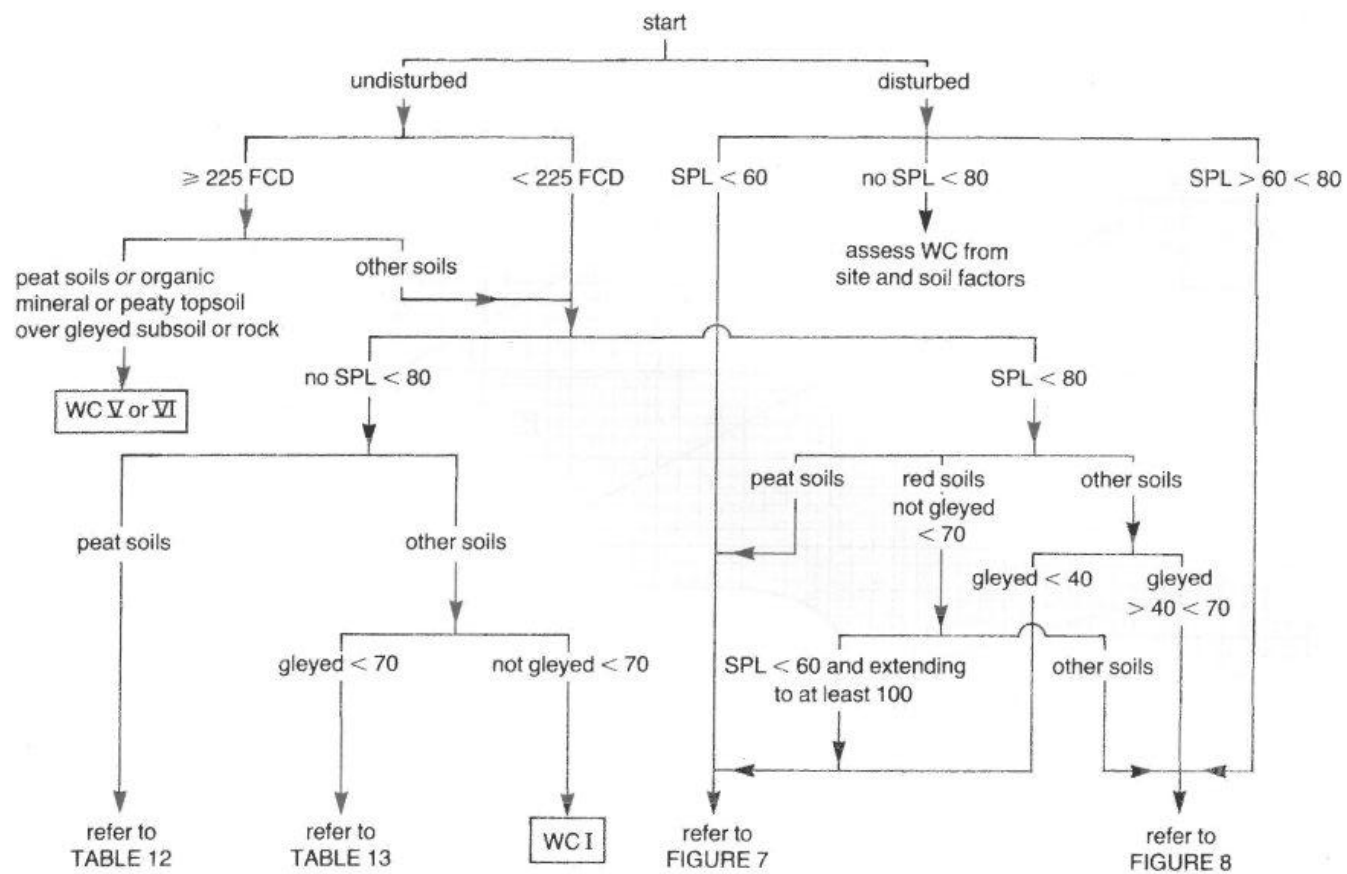


Figure 6. Flow diagram for assessing soil wetness class (WC) from field capacity days (FCD), depth to gleying (in cm) and depth to a slowly permeable layer (SPL, in cm)

Figure 6