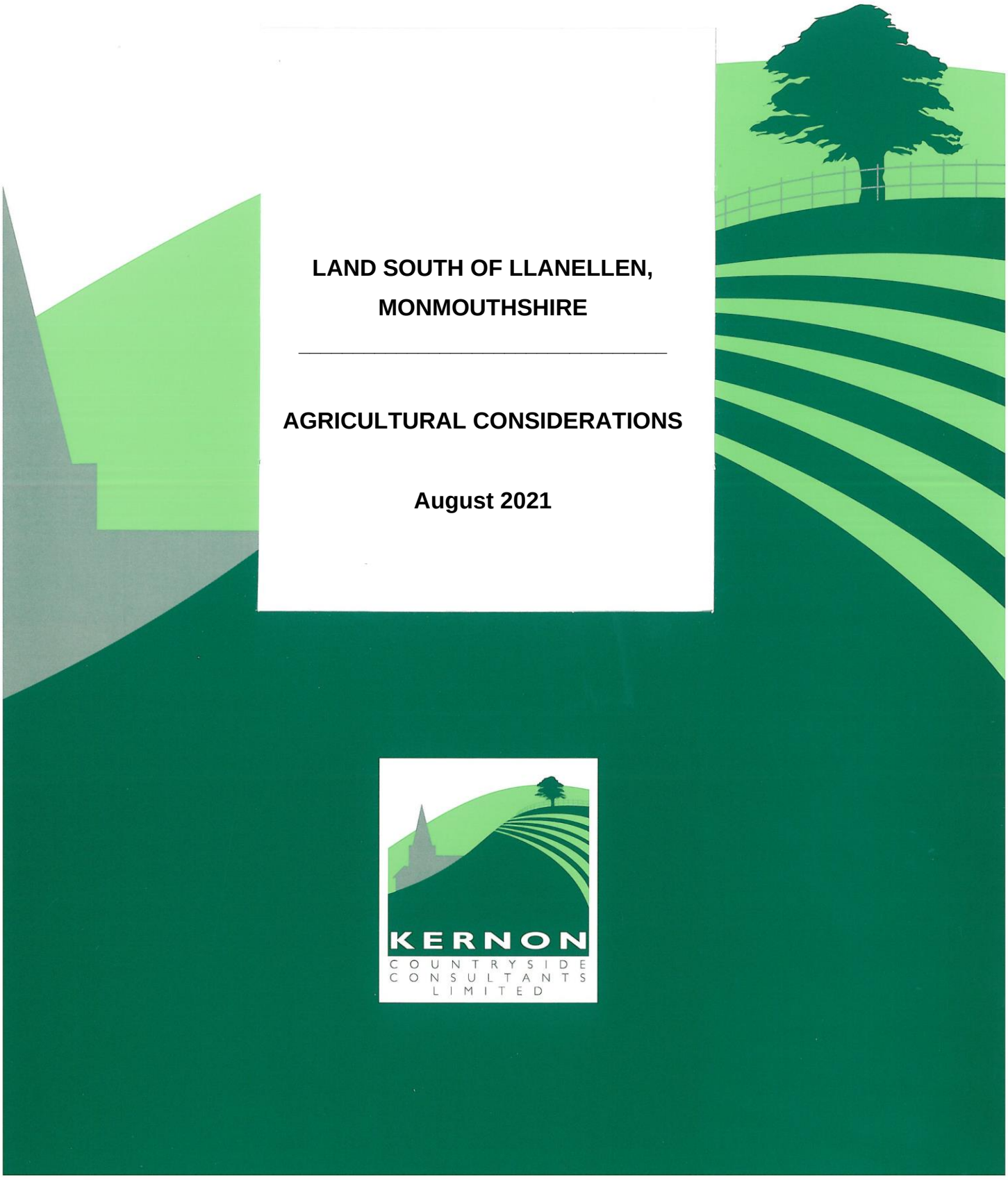
LAND SOUTH OF LLANELLEN, MONMOUTHSHIRE

AGRICULTURAL CONSIDERATIONS

August 2021



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KCC1 Agricultural Land Classification

1 INTRODUCTION

1.1 This report sets out the results of an Agricultural Land Classification (ALC) survey over approximately 5.6 ha of land on the urban edge of Llanellen, and assesses the implications of the ALC results in the context of relevant planning policy.

1.2 It is proposed to develop part of an agricultural field lying between the southern edge of the settlement of Llanellen, and the former farm buildings of Llanellen Court Farm, for residential development.

1.3 The proposed development site extends to approximately 5.6 ha, and forms part of a grassland field let for horse grazing, plus a field east of the former farm buildings.

1.4 This report:

- describes the site and the proposals in section 2;
- sets out the relevant planning policy in section 3;
- and section 4 describes the results of the ALC survey, and sets those results in context with land quality locally and assesses the implications in terms of planning policy.

1.5 This report has been prepared by Kernon Countryside Consultants Ltd. We specialise in assessing the effects of development proposals on agricultural land and businesses.

2 THE SITE AND THE PROPOSALS

2.1 It is proposed to develop approximately 5.6 ha of agricultural land for residential development.

2.2 The land lies on the edge of Llanellen , as shown edged red below.

Insert 1: The Development Boundary (approximately)

2.3 The proposed site forms part of a sloping grassland field, shown below.

Insert 2: The Site (from Google Streetview)

2.4 The former poultry buildings to the south of the site are being converted to close care residential apartments under planning consents DC/2010/00981 (May 2012) and DC/2015/00983 (April 2017).

2.5 All of the other former agricultural buildings have also been converted or are in non-agricultural use.

3 PLANNING POLICY OF RELEVANCE

Planning Policy Wales

3.1 Planning Policy Wales: Edition 11 was published in February 2021, and sets out policy governing "**the best and most versatile agricultural land**" defined as that in Grades 1, 2 and 3a of the Agricultural Land Classification (MAFF, 1988[1])

3.2 This land is not precluded from development. However paragraph 3.58 advises as follows:

> "**When considering the search sequence and in development plan policy and development management decisions considerable weight should be given to protecting such land from development, because of its special importance. Land in grades 1, 2 and 3a should only be developed if there is an overriding need for the development and either previously developed land or land in lower agricultural grades is unavailable, or available lower grade land has an environmental value recognised by a landscape, wildlife, historic or archaeological designation which outweighs the agricultural considerations**".

3.3 Paragraph 3.58 then goes on to advise as follows:

> "**If land in grades 1, 2 or 3a does need to be developed, and there is a choice between sites of different grades, development should be directed to land of the lowest grade**".

Local Plan

3.4 The adopted Monmouthshire Local Development Plan (February 2014) does not provide a policy, but advises as follows at paragraph 6.2.25:

> "**Given the importance of agriculture to Monmouthshire's rural economy it is recognised that there is a need to protect the best and most versatile agricultural land from inappropriate development. PPW sets out national development control policy on conserving the best and most versatile agricultural land**".

[1] Agricultural Land Classification of England and Wales: revised guidelines and criteria for grading the quality of agricultural land, MAFF, October 1988.

4 LAND QUALITY CONSIDERATIONS

4.1 This section of the report considers:

i) the land quality of the site;

ii) the land quality of the wider area;

iii) and the implications in terms of planning policy.

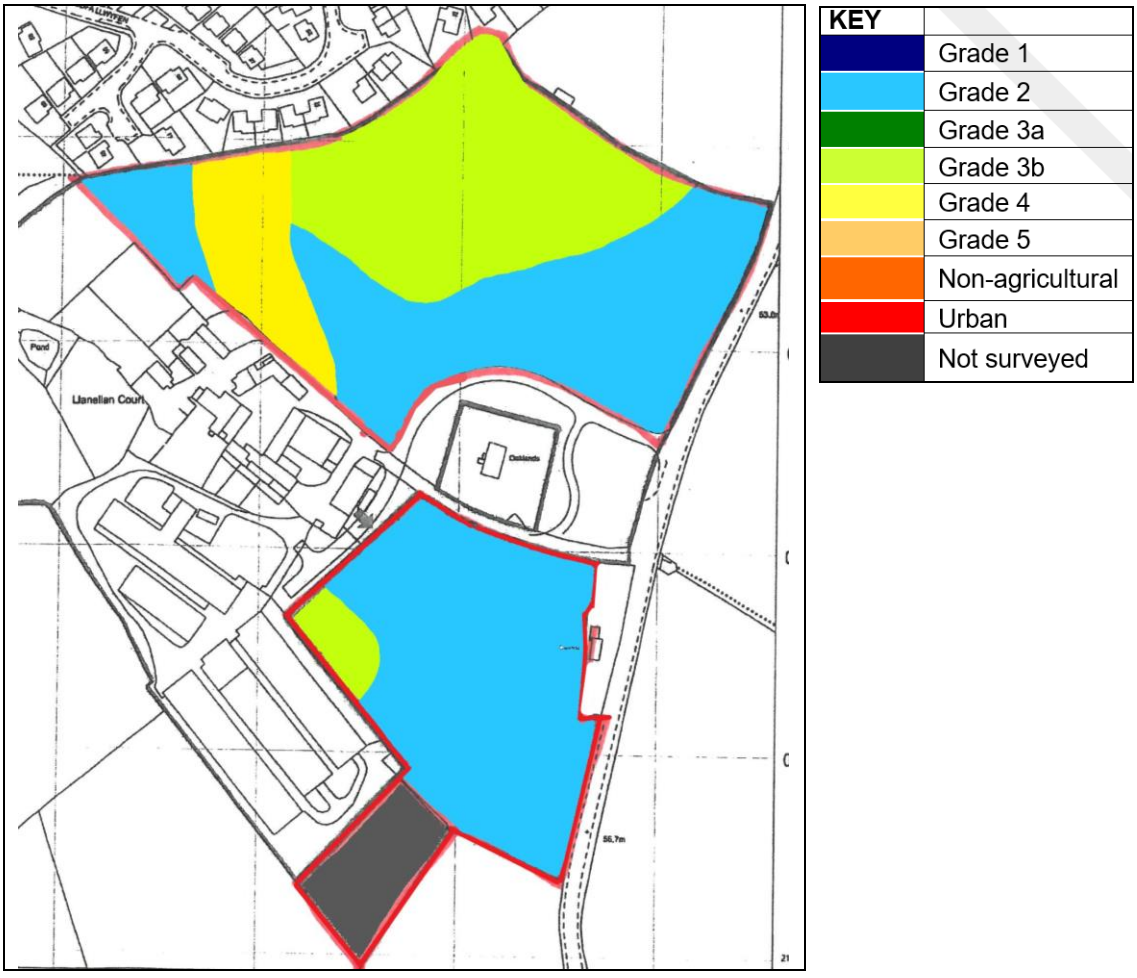
Agricultural Land Quality

4.2 The site is shown on the Predictive Agricultural Land Classification Map v2 (2020) as falling into Grade 2 quality. Therefore a detailed ALC survey is required.

4.3 A detailed ALC survey was carried out in November 2018, and the land was graded according to the ALC guidelines.

4.4 The results for the application site are set out in **Appendix KCC1**. These identify that the 5.6 ha site comprises a complex mixture of Grade 2, Subgrade 3b and Grade 4. The results are set out in detail in the Appendix, with an extract from the ALC plan reproduced below.

Insert 4: Extract from the ALC Plan



4.5 The development site comprises the following.

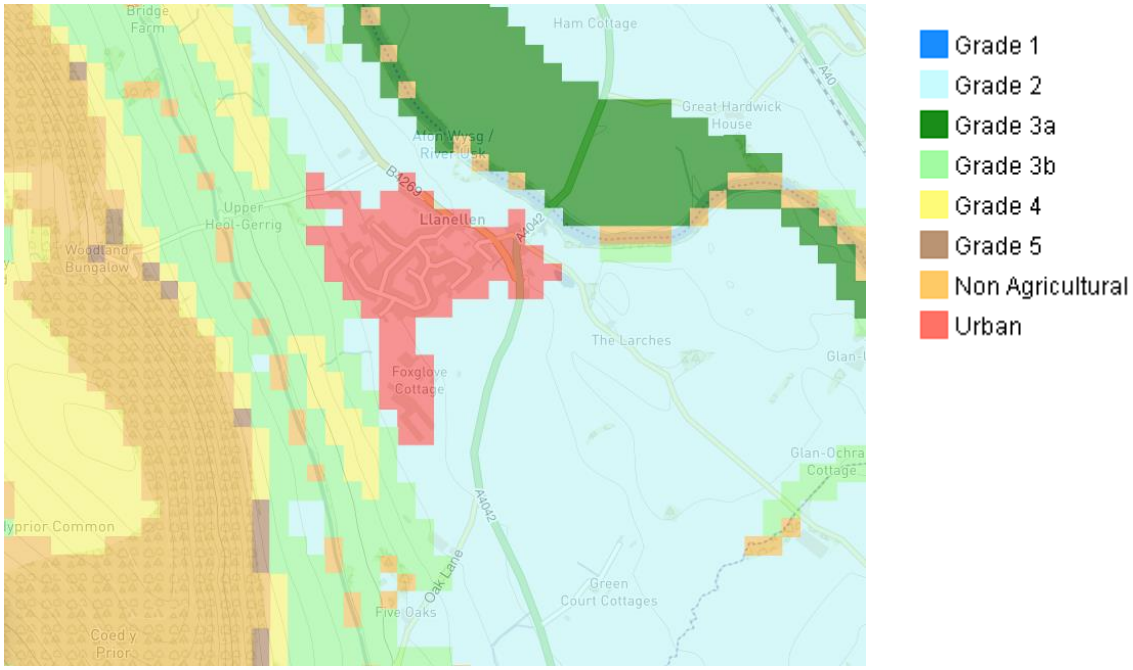
Table 1: ALC Results

Grade	Description	Area (ha)	Proportion (%)
2	Very good	3.2	57
3b	Moderate	1.6	29
4	Poor	0.5	9
NS	Not surveyed	0.3	5
Total		5.6	100

Land Quality Locally

4.6 The land quality around the settlement of Llanellen is shown below. The predictive map (version 2) shows Grade 2 on the urban edge, with Subgrade 3a further to the east. To the west, where the land rises steeply, Subgrade 3b is predicted.

Insert 5: Predictive ALC Llanellen



Policy Implications

4.7 PPWE11 advises that BMV land should be developed only if there is an overriding need for development. Whether or not there is a need for development is a planning judgement that goes beyond the remit of this assessment.

4.8 However in weighing the importance of the loss of BMV land in this case, it is important to recognise that in practical terms the small patch of 0.7 ha of BMV land in the northern field is incapable of exploitation to its capacity. There is a small area of BMV within the site, adjoining land of Subgrade 3b and Grade 4 quality.

4.9 The southern field is mostly Grade 2.

4.10 Within the northern field the poorer quality land will dictate how the field can be farmed. The site forms part of a grassland field lying between the village and the former farmyard (now dwellings and close-care-flats). Given the complex land pattern it would be impractical to farm the field in multiple ways and so exploit the Grade 2 land. Effectively the Grade 2 land is incapable of being farmed as BMV land.

Conclusions

4.11 Accordingly in terms of the land quality we conclude:

- part of the northern field, a small area of Grade 2, comprises land of BMV quality, 0.7 ha in extent, adjacent to Subgrade 3b and Grade 4 quality land;
- accordingly there is no potential to separately exploit that small area of Grade 2. The land is, in practical agricultural terms, not of BMV quality;
- even if it were PPWE11 does not prohibit the development of BMV agricultural land. It requires that, if land of BMV quality does need to be developed, development should be directed to land of the lowest grade;
- the southern field is mostly Grade 2;
- most of the land to the south, east and north of Llanellen is predicted to also be of Grade 2;
- and in the context of the available information for the area, this site represents some of the poorest quality land available.

Appendix KCC1

Agricultural Land Classification

AGRICULTURAL LAND CLASSIFICATION

Survey Methodology

1 The land was subject to an agricultural land classification survey on the 14th of November 2018 and has been graded according to the current agricultural land classification guidelines and criteria for England and Wales (MAFF 1988[2]).

2 The soil resources were determined from 7 inspection sites using a spade and a hand auger to a maximum depth of 120 cm where possible. Normally the location of auger bores follows the follows the Ordnance Survey grid at 100m intervals to avoid bias in selection unless obstacles such as ditches or hedges intervened. However the size and shape of the Site necessitated that some auger bores were not aligned with the OS 100m grid so as to provide maximum coverage.

3 To help support hand texturing in the field where topsoil texture is important for defining the Grade it is common practice to select representative topsoil samples for analysis.

Factors Affecting Land Quality

4 At this Site agricultural land quality is affected by the interaction of topsoil texture and wetness, slope and stoniness.

5 **Climate** affects the grading of land through its influence on the potential for agricultural uses and the cost and level of production. The relationship between accumulated temperature (January to June) and rainfall sits on the boundary between Grade 1 and 2 (Figure 1, pg 6, MAFF 1988) so limits land quality at this Site to Grade 1/2. Climate also limits land quality at this Site through the interaction of rainfall with soil texture.

6 The key climatic variables for this site are provided by the Met Office (1989)[3] based on a 5 km grid. The climatic figures for a point near the centre of the Site are given in Table 1, from nearby 5 km grid points using interpolating algorithms.

[2] Agricultural Land Classification of England and Wales: Revised Guidelines and Criteria for Grading the Quality of Agricultural Land', October, 1988. The Ministry of Agriculture, Fisheries and Food (MAFF) was incorporated within the Department for Environment, Food and Rural Affairs (Defra) in June 2001

[3] Meteorological Office (1989). Climatological data for Agricultural Land Classification. HMSO

Table 1: Climate and Altitude Data

Grid reference	SO30301050
Altitude	55m AOD
Average annual rainfall	1058mm
Accumulated temperature >0^{o}C (Jan-June)	1476 degree days
Moisture deficit, wheat	79mm
Moisture deficit, potatoes	66mm
Field capacity period	224 days
Best grade on climate	Grade 1/2

7 Annual rainfall is relatively high at 1058 mm, typical of western and upland Britain. Temperature, represented by the accumulated temperature above 0^{o}C between January and June, indicates relatively warm conditions. Plant water demand is relatively high and the field capacity period, that period when the soils are at or above field capacity is high at around 224 days. Climate at this Site imposes some direct limitation upon land quality but also interacts with soil characteristics.

8 **Geology and soils**. The British Geological Society (BGS) website shows the area to be mainly underlain by Devonian rocks of the Maughans Formation which consists of argillaceaous rocks and sandstone. The whole Site is overlain by drift deposits composed of sands and gravels and loamy river alluvium.

9 The Soil Survey publication 'Soils and their use in Wales'[4], gives a very general guide to the soils at the Site and states that they comprises deep well drained coarse loamy and sandy soils, locally over gravel. The soils form the Wick 1 Association (Wetness Class I). Also at this Site, but not recorded in the Soils and their use in Wales due to the limited extent are loamy soils affected by fluctuating groundwater that have been correlated with the Enbourne soil series (Wetness Class III).

10 At this Site two samples were collected for analysis. The results are given in Table 1 below. The sample was collected from 0-25 cm depth as stipulated in MAFF 1988 consequently analysis may not match the textures for topsoil given in **Appendix KCC2** where two contrasting layers (horizons) have been collected within the 25cm depth criteria.

[4] Rudeforth et al (1984), Soils and their use in Wales. Bull. Soil Surv. Gt. Br. No11.

Table 2: Topsoil Sample Analytical Results

Determinand	Site 5	Site 7
Sand %	32	48
Silt %	46	35
Clay %	22	17
Textural Class	Medium Clay Loam	Sandy Silt Loam

Limitations

11 Climate limits the Site to Grade 1/2 with the Field Capacity Period of 224 on the margin of the cut off between soil wetness grading (176-225 and >225, Table 6 pg 17 MAFF 1988).

12 The presence of stones in the topsoil limits a small part of the Site to Subgrade 3b. It is estimated that there are more than 10% by volume of stones >6 cm as shown in the photograph below.

Photograph 1: stones >6 cm

13 On low ground covered by river alluvium the soils are affected by fluctuating groundwater and the interaction of soil texture makes this area Subgrade 3b. Standing water was common at the time of survey.

14 Land on slopes greater than 7 degrees was recognised and gradient was clarified by measurement with a clinometer. Slope was measured at two sites and shown to be 12 degrees giving Grade 4. Locally at the crest and base of the steeper slope gradient between 7 and 11 degrees giving Subgrade 3b but these strips were small and have been included with the more widespread Grade 4.

15 **Other limitations.** There are no limitations to agricultural land quality associated with erosion, flood risk or microrelief.

Agricultural Land Classification

16 The survey identifies Grade 2, Subgrade 3b and Grade 4. Grade 2 includes areas that have slight climate and texture and wetness limitations and where on the cusp of grade 1 are considered best represented by grade 2. Where soils occur on low lying ground where they are wet Subgrade 3b occurs. In a small area where the topsoil is sufficiently stony Subgrade 3b is also mapped. In the northwest steep slopes give Grade 4. Above the slope is a small area designated Grade 2 based upon an unrecorded auger bore.

17 A small area of land in the south of the Site was not surveyed as it was covered by spoil, pieces of concrete and other foreign material. However in its natural state it is expected to be similar to either bore 2 or 3.

18 The distribution of grades is shown as an approximate percentage in Table 3 below.

Table 3: ALC Grades as a Proportion of Agricultural Land

ALC Grade	Area (ha)	Area (%)
1 Excellent	0	0
2 Very Good	3.2	57
3a Good	0	0
3b Moderate	1.6	29
4 Poor	0.5	9
5 Very Poor	0	0
Unsurveyed	0.3	5
Non-agricultural	0	0
Total	5.6	100

19 The distribution of the ALC grade is shown on **Plan KCC2657/02**.

Attachment A

Summary of Auger Bore Data

Summary of Auger Bore Data

Descriptive terms given here are standard terms given in the Soil Survey Field Handbook (1997) with standard colour terms taken from the Munsell Color Book

Inspection Site Data

Site No.	Depth (cm)	Soil Colour * Matrix	Mottles	Texture	Stones (%)	Wetness Class**	Limitation	ALC Grade
1	0-11 11-60 60-72 Stopped by stones	10YR3/2 7.5YR3/4 7.5YR4/4		mSL mSL LmS	10 15 15	I	Texture and Wetness and Climate	**2**
2	0-18 18-38 38-53 Stopped by stones	7.5YR3/2 7.5YR3/4 7.5YR4/4		mSL mSL mSL	12 12 18	I	Stoniness and Climate	**2**
3	0-20 Stopped by stones	7.5YR3/2		mSL	20	I	Stoniness	**3b**
4	0-18 18-45 Stopped by stones	10YR3/3 7.5YR3/2		mSL mSL	12 18	I	Slope	**4**
5	0-20 20-60 60-120	10YR4/2 10YR4/4 7.5YR5/6	10YR5/6 10YR5/2 10YR6/2	MCL SCL SCL	3	IV	Texture and Wetness	**3b**
6	0-20 20-48 48-80 80-120	7.5YR3/3 7.5YR4/4 5YR4/4 7.5YR4/4	 5YR4/2 	mSL mSL MZCL mSL	8 12 6 8	II	Texture and Wetness and Climate	**2**
7	0-20 20-70 70-120	7.5YR3/2 7.5YR4/4 7.5YR5/4	 7.5YR5/8	SZL SZL MCL	8 6 12	II	Texture and Wetness and Climate	**2**

Texture definitions

ZC Silty Clay, **HZCL** Heavy Silty Clay Loam, **MCL** Medium Clay Loam, **MZCL** Medium Silty Clay Loam and **SCL** Sandy Clay Loam.

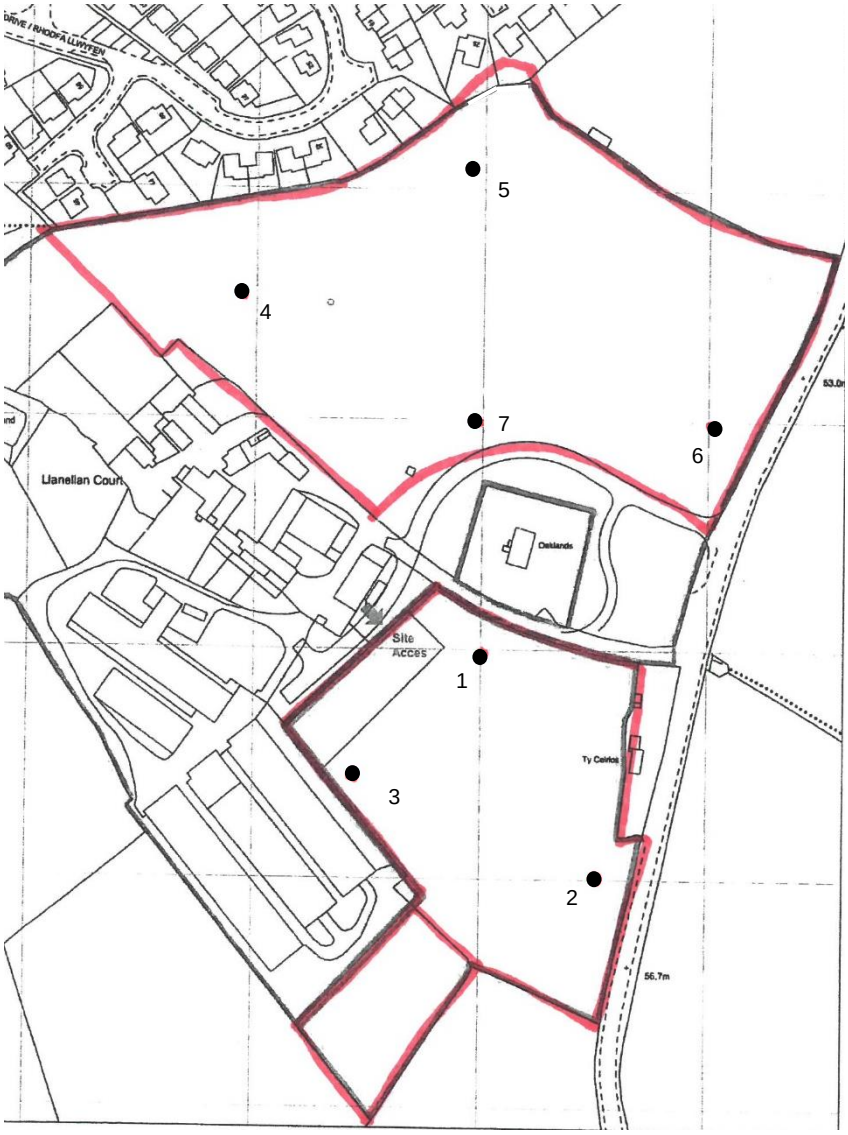
Fe/Mn Indicates the presence of Manganiferous concentrations denoting slight waterlogging.

*** Soil Colour** Code for Munsell Color, Munsell Color Company Inc., Baltimore, Maryland 21218, U.S.A.

**** Wetness Class** see definitions in the Soil Survey Field Handbook (1997).

Plan KCC2657/01

Auger Point Plan



KEY

- Auger sample location

PLAN	**KCC2657/01**		
TITLE	**Auger Points Plan**		
SITE	Llanellen Court		
CLIENT	Morspan pension Scheme		
NUMBER	**KCC2657/01 12/18 se**		
DATE	December 2018	**SCALE**	NTS

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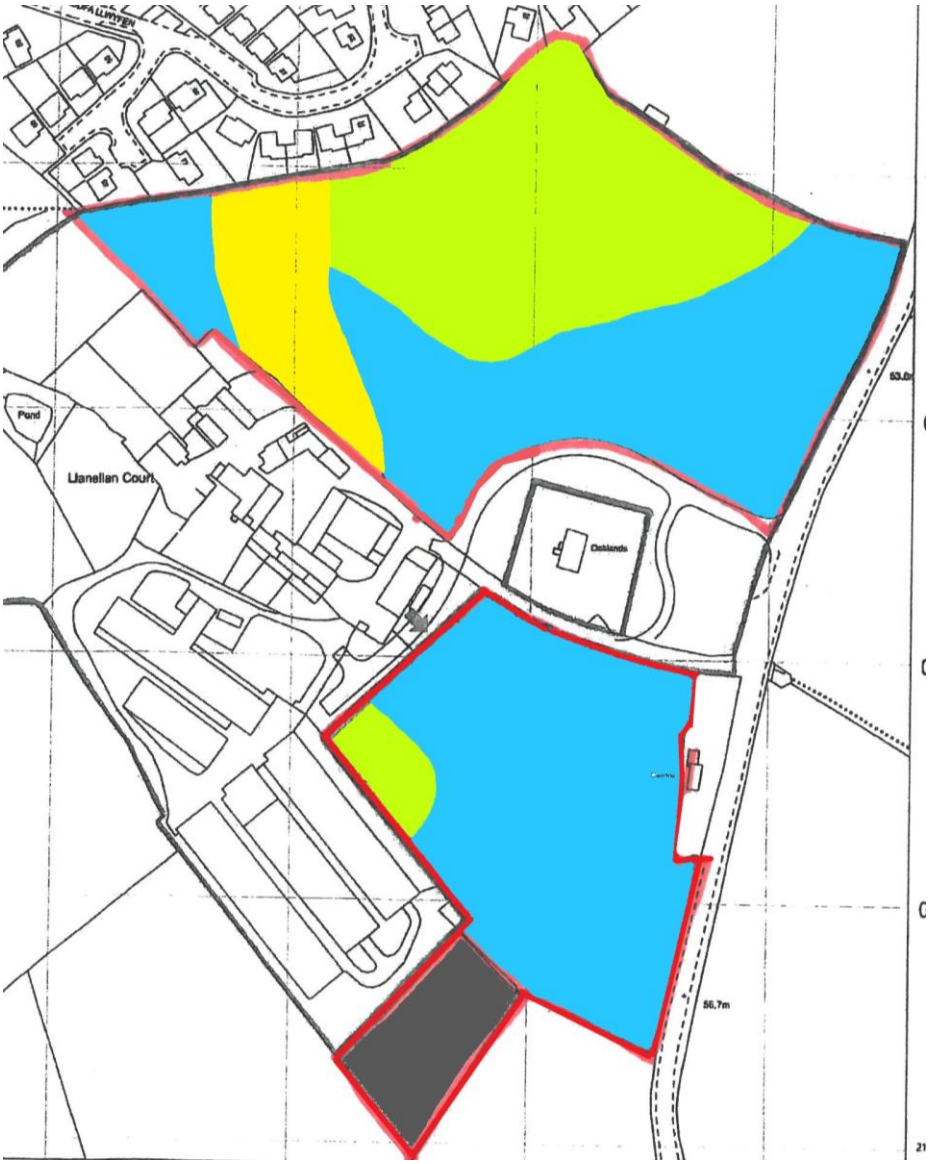
Plan KCC2657/02

Agricultural Land Classification



KEY		Ha	%	PLAN	KCC2657/01		
	Grade 1			TITLE	Agricultural Land Classification		
	Grade 2	3.2	57	SITE	Llanellen Court		
	Grade 3a			CLIENT	Morspan Pension Scheme		
	Grade 3b	1.6	29	NUMBER	KCC2657/01 12/18se		
	Grade 4	0.5	9	DATE	December 2018	SCALE	NTS
	Grade 5			KERNON COUNTRYSIDE CONSULTANTS LTD GREENACRES BARN, PURTON STOKE, SWINDON, WILTSHIRE, SN5 4LL Tel 01793 771 333 Email: info@kernon.co.uk This plan is reproduced from the Ordnance Survey under copyright license 100015226		
	Non-agricultural						
	Urban						
	Not surveyed	0.3	5				

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